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GRADUATE SCHOOL

The Graduate School

2023 - 2024 Bulletin • Volume 126 • August 2023

Purpose of this Publication

This publication provides a description of those programs and activities of Baylor University which are indicated in the title and text. It is not an offer to make a contract.

The administration and faculty of Baylor University believe that the educational and other programs of Baylor University, including those described herein, are effective and valuable, and that they provide skills and/or understanding in keeping with the subject matter of the program.

The ultimate results of programs offered, however, in terms of achievement, employment, professional licensing, or other measure, are also dependent on factors outside the programs, such as the personality and energy of the students, governmental or institutional regulations, and market conditions. Therefore, except as specifically stated herein, Baylor University makes no representation or contract that following a particular course or curriculum will result in specific achievement, employment or qualification for employment, admission to degree programs, or licensing for particular professions or occupations.

It is sometimes necessary or appropriate to change the programs offered. Baylor University retains the right to terminate or change any and all aspects of its educational and other programs at any time without prior notice.

Notice of Nondiscriminatory Policy

Baylor University complies with all applicable federal and state nondiscrimination laws, and does not engage in prohibited discrimination on the basis of race, color, nationality or ethnic origin, gender, age, disability or veteran status in either employment or the provision of services. The University is governed by a predominantly Baptist Board of Regents and is operated within the Christian-oriented aims and ideals of Baptists. Baylor is also affiliated with the Baptist General Convention of Texas, a cooperative association of autonomous Texas Baptist churches. As a religiously-controlled institution of higher education, Baylor University is exempted from compliance with some provisions of certain civil rights laws, including some provisions of Title IX of the Education Amendments of 1972.

Equal Access to University Educational Programs

Baylor University provides equal access to all University educational programs to every qualified student. However, if any student requires special personal services or equipment, the student will be responsible for the expenses thereof. This policy includes the expense of providing personal tutors, personal attendants, medical technicians, and so forth. The Office of Access and Learning Accommodation (OALA) will assist such a student in communicating with the proper community or governmental agency to secure any available financial assistance to meet his or her needs.

Directory Information

Directory information is that information that is customarily made public without the written consent of the student. However, under the provisions of the Family Educational Rights and Privacy Act of 1974, a student may ask Baylor University not to disclose directory information by making written notice to the Office of the Registrar. Requests for nondisclosure will be honored by the university until notified in writing that information should no longer be withheld. **Directory information includes: name, address, telephone number, e-mail address, dates of attendance, level and classification, university ID card photograph, previous institution(s) attended, field(s) of study, awards, scholarships, honors, degree(s) conferred and date(s), full-time/part-time status, earned hours, expected graduation date or degree candidacy, thesis and dissertation titles and advisors, past and present participation in officially recognized sports and activities, physical factors of athletes (e.g. age, height, weight), and date and place of birth.**

Legal Notice

If you are applying for admission to a program that may prepare you for an occupational license and/or if you later decide to change to such a program, Texas law requires that Baylor notify you of your potential ineligibility to obtain a license due to prior criminal convictions. For more information visit https://www.baylor.edu/admissions/index.php?id=948617 (https://www.baylor.edu/admissions/?id=948617).

Student Aid Information

Financial aid programs available to undergraduate students include merit and need-based scholarships, grants, Federal Work-Study, federal educational loans, and alternative loans through various private lenders. Students interested in consideration for financial aid should complete the Free Application for Federal Student Aid (FAFSA) online at www.studentaid.gov (http://fafsa.gov). Incoming students interested in consideration for university need-based scholarships should complete the CSS Profile online at www.cssprofile.org (https://cssprofile.collegeboard.org/?excmpid=vt-00231) during their incoming year. Visit the One Stop Student Financial Aid Office webpage at https://onestop.web.baylor.edu/ for additional information regarding the financial aid application process.

The provisions of this catalog do not constitute a contract, expressed or implied, between Baylor University and any applicant, student, student's family, faculty, or staff member. Baylor University reserves the right to withdraw courses at any time, or change fees, tuition, rules, calendar, curricula, degree programs, degree requirements, graduation procedures, and any other requirement affecting students. Changes will become effective at the time the proper authorities so determine, and the changes will apply to both prospective students and those already enrolled. This catalog is a general information publication only and it is not intended to nor does it contain all regulations that relate to students.

General Information

- Mission Statement (https://catalog.baylor.edu/graduate-school/general-information/mission-statement/)
- Historical Highlights of Baylor University (https://catalog.baylor.edu/graduate-school/general-information/historical-highlights-baylor-university/)
- University Leadership (https://catalog.baylor.edu/graduate-school/general-information/university-leadership/)
  - Board of Regents (https://catalog.baylor.edu/graduate-school/general-information/university-leadership/board-regents/)
  - Administration (https://catalog.baylor.edu/graduate-school/general-information/university-leadership/administration/)

Graduate Degrees Offered

Overview

Baylor University offers graduate degrees in five cities in Texas; Fairfield, California; Las Vegas, Nevada; Tacoma, Washington; and West Point, New York. The Waco campus offers thirty-two Doctor of Philosophy degrees, five doctoral-level professional degrees, twenty-two Master of Arts degrees, fifteen Master of Science degrees, twenty-one master's-level professional degrees, and eleven joint degrees. Dallas, Texas is the site for the Doctor of Nursing Practice. The United States Army Medical Center of Excellence, located at Joint Base San Antonio – Fort Sam Houston, in San Antonio, Texas, offers two individual masters degrees (Nutrition, MHA), one joint degree (MBA/MHA), and two doctoral degrees (DNP, DPT). We also offer five doctorate degrees at Brooke Army Medical Center in San Antonio, two doctorate degrees at Madigan Army Medical Center in Tacoma, Washington as well as William Beaumont Army Medical Center in El Paso, Texas. The Carl R. Darnall Army Medical Center in Killeen, Texas; David Grant Medical Center, Travis Air Force Base in Fairfield, California; Mike O'Callaghan Military Medical Center, Nellis Air Force Base in Las Vegas, Nevada; and the United States Military Academy in West Point, New York, each offer one doctoral degree.

The Graduate School encourages faculty to invest in the lives of gifted graduate students, equipping them to pass on a vision of inquiry, scholarship, teaching, and service. Students participate in classroom tutorial, collegial modes of learning, and in systematic independent inquiry, in a setting that allows them to see scholars at work as an important means of learning the scholar's art.

Students may not pursue two or more graduate degrees concurrently unless the degrees are part of a University approved "Joint Degree" program, also called "dual degree" program. In "Joint Degree" programs, since both degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive either degree. Additionally, the University offers accelerated bachelor's/master's programs.

Waco, Texas

Doctor of Philosophy Degrees

- Anthropology
- Biology
- Chemistry
- Church Music
- Communication Sciences and Disorders
- Computer Science
- Curriculum and Teaching
- Ecological, Earth and Environmental Sciences
- Educational Psychology
- Electrical and Computer Engineering

- English
- Entrepreneurship
- Environmental Science
- Exercise and Nutrition Sciences
- Geosciences
- Health Services Research
- Higher Education Studies and Leadership
- History
- Information Systems
- Mathematics
- Mechanical Engineering
- Philosophy
- Physics
- Political Science
- Preaching
- Psychology
- Public Health
- Religion
- School Psychology
- Social Work
- Sociology
- Statistics

Professional Doctoral Degrees

- Doctor of Education (Educational Administration (K-12 Educational Leadership) and Learning and Organizational Change[1])
- Doctor of Musical Arts
- Doctor of Occupational Therapy[1]
- Doctor of Physical Therapy
- Doctor of Psychology

[1] The program is offered in an online/hybrid format only.

Master of Arts Degrees

- American Studies
- Biology
- Classics
- Communication
- Curriculum & Instruction
- Earth Science
- Education Psychology
- English
- Film & Digital Media
- History
- International Relations
- Journalism[1]
- Museum Studies
- Philosophy
- Physics
- Political Science
- Psychology[3]
- Religion
- School Leadership[2]
- Sociology
- Spanish
- Theatre Arts

[1] The program is offered in both an on-campus format and an online/hybrid format.
[2] The program is offered in an online/hybrid format only.
[3] See special conditions in Psychology section.

Master of Science Degrees

- Biology
- Business Analytics[1]
- Chemistry
- Communication Sciences and Disorders[1]
- Computer Science[1]
- Environmental Science
- Exercise Physiology
- Geosciences
- Interdisciplinary Studies
- Mathematics
- Nutrition Sciences
- Physics
- School Psychology
- Sport Pedagogy
- Statistics

[1] The program is offered in both an on-campus format and an online/hybrid format.

Professional Master's Degrees

- Master of Accountancy
- Master of Arts in Teaching
- Master of Athletic Training
- Master of Business Administration[1]
- Master of Engineering
- Master of Environmental Studies
- Master of Fine Arts
- Master of International Journalism
- Master of Music
- Master of Public Health[1]
- Master of Public Policy and Administration
- Master of Science in Biomedical Engineering
- Master of Science in Clinical Psychology[2]
- Master of Science in Economics
- Master of Science in Education[3]
- Master of Science in Electrical and Computer Engineering
- Master of Science in Information Systems
- Master of Science in Mechanical Engineering
- Master of Science in Medical Science
- Master of Taxation
- Education Specialist

[1] The program is offered in both an on-campus format and an online/hybrid format.
[2] See special conditions in Psychology section.
[3] See School of Education for majors.

Joint Degrees

- Master of Arts (Curriculum and Instruction)/Master of Divinity
- Master of Business Administration/Juris Doctor
- Master of Business Administration/Master of Divinity
- Master of Business Administration/Master of Engineering
- Master of Business Administration/Master of Science in Business Analytics
- Master of Business Administration/Master of Science in Information Systems
- Master of Business Administration/Master of Social Work
- Master of Music (Church Music)/Master of Divinity
- Master of Public Policy and Administration/Juris Doctor
- Master of Science in Education (Curriculum and Instruction)/Master of Divinity
- Master of Taxation/Juris Doctor

Accelerated UG/GR Programs

- Bachelor of Arts for Select Majors[1]/Master of Arts in Museum Studies
- Bachelor of Arts in Art History/Master of Arts in Teaching
- Bachelor of Arts in Biochemistry/Master of Arts in Teaching
- Bachelor of Arts in Chemistry/Master of Arts in Teaching
- Bachelor of Arts in Classics/Master of Arts in Classics
- Bachelor of Arts in Communication/Master of Arts in Communication
- Bachelor of Arts in English/Master of Arts in Teaching
- Bachelor of Arts in Environmental Studies/Master of Arts in Teaching
- Bachelor of Arts in History/Master of Arts in Teaching
- Bachelor of Arts in International Studies/Master of Arts in Teaching
- Bachelor of Arts in Mathematics/Master of Arts in Teaching
- Bachelor of Arts in Political Science/Master of Arts in Teaching
- Bachelor of Arts in Religion/Master of Arts in Teaching
- Bachelor of Arts in Studio Art/Master of Arts in Teaching
- Bachelor of Arts in University Scholars/Master of Arts in Teaching
- Bachelor of Business Administration/Master of Accountancy
- Bachelor of Business Administration/Master of Science in Economics
- Bachelor of Business Administration/Master of Taxation
- Bachelor of Fine Art/Master of Arts in Teaching
- Bachelor of Science/Master of Athletic Training
- Bachelor of Science in Applied Mathematics/Master of Arts in Teaching
- Bachelor of Science in Biochemistry/Master of Arts in Teaching
- Bachelor of Science in Biology/Master of Arts in Teaching
- Bachelor of Science in Biology/Master of Science in the Biology of Global Health
- Bachelor of Science in Chemistry/Master of Arts in Teaching
- Bachelor of Science in Communication Sciences and Disorders Deaf Education/Master of Arts in Teaching
- Bachelor of Science in Electrical and Computer Engineering/Master of Science in Biomedical Engineering
- Bachelor of Science in Electrical and Computer Engineering/Master of Science in Electrical and Computer Engineering
- Bachelor of Science in Electrical and Computer Engineering/Master of Engineering
- Bachelor of Science in Engineering/Master of Science in Biomedical Engineering
- Bachelor of Science in Engineering/Master of Engineering
- Bachelor of Science in Environmental Health Science/Master of Public Health
- Bachelor of Science in Environmental Science/Master of Arts in Teaching
- Bachelor of Science in Mathematics/Master of Arts in Teaching
- Bachelor of Science in Mechanical Engineering/Master of Science in Biomedical Engineering
- Bachelor of Science in Mechanical Engineering/Master of Science in Mechanical Engineering
- Bachelor of Science in Mechanical Engineering/Master of Engineering
- Bachelor of Science in Public Health/Master of Public Health
- Bachelor of Science in Statistics/Master of Science in Statistics
- Bachelor of Science in Education/Master of Arts in Teaching
- Bachelor of Science in Education/Master of Science (Sport Pedagogy)
- Bachelor of Science in Education All Level Special Education/Master of Arts in Teaching
- Bachelor of Science in Education Elementary Education/Master of Arts in Teaching
- Bachelor of Science in Education Elementary Education with Supplemental Gifted and Talented/Master of Arts in Teaching
- Bachelor of Science in Education Middle School Education/Master of Arts in Teaching
- Bachelor of Science in Education Recreation and Leisure Services/Master of Arts in Teaching
- Bachelor of Science in Education Secondary Education/Master of Arts in Teaching

[1] For undergraduate majors in American Studies, Anthropology, Art and Art History, Journalism, or History who decide that they wish to apply their undergraduate knowledge to work in museums, the department offers a joint bachelor and master degree.

Dallas, Texas

Louise Herrington School of Nursing

- Doctor of Nursing Practice[1]

[1] The program is offered in an online/hybrid format only.

Various Locations

U.S. Army Medical Center of Excellence [1]

San Antonio, Texas - Joint Base San Antonio-Fort Sam Houston, Brooke Army Medical Center

- Master of Health Administration
- Master of Health Administration/Master of Business Administration (joint degree)
- Master of Science (Nutrition)
- Doctor of Nursing Practice (Anesthesia Nursing)
- Doctor of Physical Therapy
- Doctor of Science in Occupational Therapy
- Doctor of Science in Physical Therapy
- Doctor of Science in Physician Assistant Studies (Emergency Medicine, Orthopaedics, General Surgery)

El Paso, Texas - Fort Bliss, William Beaumont Army Medical Center

- Doctor of Science in Physician Assistant Studies (Emergency Medicine, Orthopaedics)

Killeen, Texas - Fort Hood, Carl R. Darnall Army Medical Center

- Doctor of Science in Physician Assistant Studies (Emergency Medicine)

Tacoma, Washington - Joint Base Lewis-McChord, Madigan Army Medical Center

- Doctor of Science in Physician Assistant Studies (Emergency Medicine, Orthopaedics)

Fairfield, California - Travis Air Force Base, David Grant Medical Center

- Doctor of Science in Physician Assistant Studies (Orthopaedics)

Las Vegas, Nevada - Nellis Air Force Base, Mike O'Callaghan Military Medical Center

- Doctor of Science in Physician Assistant Studies (Emergency Medicine)

West Point, New York - United States Military Academy, Keller Army Community Hospital

- Doctor of Science in Physical Therapy

[1] These programs are for specifically targeted Federal personnel.

Curriculum of Departments and Institutes of Instruction

All departments listed in the following pages offer graduate work in the major field and some offer a minor except those that offer a minor only. Several departments list the requirements needed to complete only a minor in their area. Where prerequisite courses are listed, these courses or their equivalent must be included in the undergraduate preparation for graduate study. Such prerequisite courses do not count for graduate credit.

- College of Arts & Sciences (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/)
  - American Studies (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/american-studies/)
  - Anthropology (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/anthropology/)
  - Asian Studies (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/asian-studies/)
  - Biology (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/biology/)
  - Chemistry and Biochemistry (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/chemistry-biochemistry/)
  - Classics (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/classics/)
  - Communication (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/communication/)
  - Institute for Ecological, Earth, and Environmental Sciences (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/institute-ecological-earth-environmental-sciences/)
  - English (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/english/)
  - Environmental Science (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/environmental-science/)
  - Film and Digital Media (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/film-digital-media/)
  - Geosciences (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/geosciences/)
  - History (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/history/)
  - Interdisciplinary Studies (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/interdisciplinary-studies/)
  - Journalism, Public Relations and New Media (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/journalism-public-relations-new-media/)
  - Latin American Studies (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/latin-american-studies/)
  - Mathematics (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/mathematics/)
  - Museum Studies (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/museum-studies/)
  - Philosophy (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/philosophy/)

- Doctor of Occupational Therapy, OTD (p. 74)
- Post-Professional Doctor of Occupational Therapy, PP-OTD (p. 78)

- Diana R. Garland School of Social Work (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/diana-r-garland-school-social-work/)
  - Social Work, Ph.D. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/diana-r-garland-school-social-work/social-work-phd/)

Hankamer School of Business

Associate Dean for Graduate Programs: Patsy Norman

Admission

1. See general requirements.
2. Applicants for admission to graduate study in business make application to the Graduate School. Applications are forwarded to the Hankamer School of Business where they are evaluated by the Associate Dean for Graduate Programs. Applications are returned to the Dean of the Graduate School for final evaluation.
3. Applicants must have a record of undergraduate study and experience that is predictive of success in graduate study.
4. Applicants who do not have a bachelor's degree in Business Administration may be required to take BL 5104 Business Foundations - Business Law.
5. Students enrolled in the integrated BBA/MAcc and BBA/MTax degree programs must meet all requirements for admission to graduate school except the requirement for the bachelor's degree. Students should apply to graduate school during their senior year. (See Undergraduate Catalog for Accounting Major.)
6. Either the GRE or GMAT exam is required for admission to the MBA program. Full Time MBA students without a minimum of two years of full-time work experience are required to complete an internship course. All Full Time MBA students in the healthcare administration specialization are required to complete a two-credit hour healthcare residency.
7. The primary criterion for evaluating students applying to the Executive Master of Business Administration (Executive MBA) is successful managerial or professional work experience. The GMAT or GRE examination is not required. In special circumstances, however, the GMAT or GRE examination may be required at the discretion of the admission committee. Applicants should contact the Director of the Executive MBA program for requirements specific to their situation.
8. The Online MBA requires a complete work history with start and end dates, accomplishments, and skills acquired including any managerial experience. For students with four years of supervisory leadership, or project management experience, the GRE/GMAT may be waived as an admission requirement.
9. Applicants to the Online MBA whose undergraduate degree is not in business or not a business degree from an AACSB-accredited institution must take additional business foundation courses, increasing the total hours required for completion from forty-eight to sixty.
10. International students who are required to take the Test of English must attain one of the following scores:
    a. Test of English as a Foreign Language (TOEFL) - a minimum score of 600 (paper-based), 250 (computer-based), or 100 (internet-based) is required.
    b. International English Language Testing System (IELTS) - a minimum score of 7.0 is required.
    c. Duolingo: - a minimum score of 125 on the Duolingo exam is required.

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  - General Business Concentration (MBA) (p. 14)
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- Joint Juris Doctor/Master of Business Administration (p. 28)
- Joint Juris Doctor/Master of Business Administration-Healthcare Administration (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/hankamer-school-

Master of Business Administration (MBA)

The Master of Business Administration degree is delivered in different formats tailored to meet the student's career aspirations and schedule.

The full-time MBA is a broad-based curriculum that integrates across functional areas and provides multiple opportunities for students to apply classroom material in real-world situations. The program consists of fifty-three or fifty-four hours of course work over seventeen months that includes four hours of Business Frameworks, thirty-six core hours and twelve elective hours with a required international component. The full-time MBA is delivered on campus in Waco. Students in the full-time MBA can choose to pursue concentrations in Entrepreneurship & Corporate Innovation, Business Analytics, and Cyber Security. A specialization in Healthcare Administration is also available.

The Executive MBA is designed for the mid-career professional seeking to expand career opportunities. The collaborative learning environment produces business leaders with recognized integrity, superior theoretical knowledge, and practical skills of modern global business. The EMBA consists of forty-eight hours of course work over 21 months that includes active learning experiences in Washington, D.C. and one international trip. The EMBA is delivered in Dallas. In addition to the Executive MBA, five concentrations are available for Executive MBA students. Students electing an Executive MBA with a concentration will complete between 48-50 credit hours depending on the selected concentration.

The Online MBA is an accelerated program that can be completed in 12-16 months. The same acclaimed faculty as on campus teach the online courses that are delivered in seven-week modules with an asynchronous format. The OMBA helps students leverage their graduate education and professional experience to further their career while continuing to work full-time. The OMBA consists of forty-eight hours of coursework that is delivered online. An additional 12 hours of coursework is required for non-BBA degree holders.

Admission

See Hankamer School of Business (p. 13) for admissions requirements.

General Business Concentration (MBA)

The general Master of Business Administration degree is awarded after the successful completion of the requirements listed below.

A thesis option to the MBA degree is available. Students interested in this option should see the Associate Dean for Graduate Programs in the Business School.

All course work must be in graduate level courses.

Resident study of at least nine months at Baylor University is required. Not more than six hours of work may be transferred from another college

or university. No credit will be given for work done by extension or correspondence, or for courses counted already toward a bachelor's or another master's degree.

All MBA candidates must earn an average grade of "B" (3.0) or higher in all courses. If course substitutions are made for any of these core courses, the substituted course grade is included in the average. Students not having an overall average of 3.0 or higher in the core courses are required to repeat one or more of the courses in which a grade below "B" was earned in order to increase their average to 3.0. When a core course is repeated, the new grade substitutes for the old grade in the core calculated GPA. In some cases, more advanced work may be prescribed in place of the course on which a grade below "B" was earned. Both the original grade and the new grade for a repeated course will be included in the overall GPA for graduation purposes.

Early in the semester in which the degree is to be awarded, candidates must complete an application for graduation found in BearWeb. Instructions for this form can be found on the Graduate School website.

Code	Title	Hours
Required Framework Course		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Select one course from the following:		3
MIS 5342	Business Intelligence	
MIS 5345	Decision Making Using Excel	
MIS 5346	Data Warehousing	
MIS 5355	Management of Information Systems	
ISEC 5305	Seminar in Information Security Foundations	
Other Requirements		
1-hour internship required for students without 2 years of full-time work experience		1
Total of 12 hours of electives or in combination of above		12
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**53**

Business Analytics Concentration (MBA)

The MBA Concentration in Business Analytics provides graduate students within the Hankamer School of Business exposure to concepts and techniques critical to success in the area of business analytics. The purpose of the Graduate Concentration in Business Analytics will enable graduate students to gain the skills necessary to understand and interpret big data and business analytics.

Admission to the Business Analytics Concentration is contingent on admission into the Master of Business Administration (see requirements under Business School Admissions).

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Business Analytics Courses		
MIS 5342	Business Intelligence	3
MIS 5340	Database Management Systems	3
MIS 5343	Seminar in Data Visualization	3
Select two courses from the following:		6
ECO 5347	Econometric Theory and Methods	
ECO 5349	Causal Inference and Research Design	
ECO 5351	Data Science I	
ECO 5352	Data Science II	
MIS 5322	Advanced Python for Analytics	
MIS 5346	Data Warehousing	
MKT 5398	Directed Studies in Marketing	
Other MBA Requirements		
1-hour internship required for students without 2 years of full-time work experience		1
Students with more than 2 years can choose to take an elective.		
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		

BL 5104	Business Foundations - Business Law	(1)
Total Hours		**53**

Cyber Security Concentration (MBA)

The MBA Concentration in Cyber Security provides graduate students within the Hankamer School of Business exposure to 'best practice' concepts, techniques and methodologies critical to insuring data security in corporate/organizational environments. Furthermore, it is targeted towards addressing recent calls from the academic literature and professional journals to treat cyber security as a strategic organizational function rather than a back-office technical function. The purpose of the Concentration is to provide business graduate students with the necessary skills to develop and/or manage organizational processes, strategies, methodologies, and technologies designed to mitigate risks to the confidentiality, integrity, and availability of organizational data and information-related resources for preparation to take cyber-security related management positions in industry and/or consulting practices.

Admission to the Cyber Security Concentration is contingent on admission into the Master of Business Administration (see requirements under Business School Admissions).

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Cyber Security Courses		
ISEC 5305	Seminar in Information Security Foundations	3
ISEC 5320	Cyber Security Technology Factors	3
Select two courses from the following:		6
ISEC 5310	Cyber Security Human Factors: Ethics, Integrity, Practices, Policies, and Procedures	
ISEC 5330	Cybersecurity Policy and Planning	
ISEC 5340	Cyber Warfare, Threats, Vulnerabilities and Countermeasures	
Other MBA Requirements		
Select one of the following:		1-2
1-hour internship required for students without 2 years of full-time work experience		
Students with more than 2 years can choose to take an elective.		
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**50-51**

Entrepreneurship and Corporate Innovation Concentration (MBA)

The MBA Concentration in Entrepreneurship and Corporate Innovation provides graduate students within the Hankamer School of Business exposure to concepts and techniques critical to success in the area of entrepreneurship and corporate innovation. The purpose of this Concentration will enable graduate students to gain the skills necessary to lead value creation innovation in both corporate and start up environments. Initiatives may include both process design/improvement as well as product design/improvement..

Admission to the Entrepreneurship and Corporate Innovation Concentration is contingent on admission into the Master of Business Administration (see requirements under Business School Admissions).

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Select one MIS course from the following:		3
MIS 5342	Business Intelligence	
MIS 5345	Decision Making Using Excel	
MIS 5346	Data Warehousing	
MIS 5355	Management of Information Systems	
Entrepreneurship and Corporate Innovation Courses		
ENT 5329	Entrepreneurial Finance	3

ENT 5342	Corporate Entrepreneurship: Initiating and Sustaining Innovation	3
ENT 5322	Accelerated Ventures Leadership	3
ENT 5341	Technology Entrepreneurship	3
or MGT 5331	Project Management	
Other MBA Requirements		
Select one of the following:		1
1-hour internship required for students without 2 years of full-time work experience		
Students with more than 2 years can choose to take an elective.		
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**53**

Healthcare Administration Specialization (MBA)

Academic Director: Charles North
Administrative Director: Forest Kim
Associate Dean for Graduate Business Programs: Patsy Norman

The Master of Business Administration, Healthcare Administration Specialization provides those who possess a passion for serving others with the requisite quantitative and qualitative skills to prepare them for early career executive positions in health industry organizations. Healthcare administrators are integral to the management of medical organizations including health systems, hospitals, provider practices, consulting firms, insurance companies, and long-term care facilities. Today's healthcare leaders must be prepared to lead and manage dynamic, complex organizations with a servant's heart, a commitment to their communities, and a strong business acumen. The Healthcare Administration Specialization is designed to combine the quantitative strengths of the MBA and the specialized curriculum focused on the healthcare industry with an emphasis on experiential learning and principle-centered leadership.

An integral part of the Healthcare Administration Specialization is the administrative residency. All students are required to complete the residency and placements are made recognizing that placing the right student with the right preceptor at the right site is vital to a successful residency. During the nine-month experience in progressive healthcare organizations located across the United States, students develop a mentoring relationship with their preceptor, observe and develop understanding of the organization's mission, structure and operations, and apply and test the theory and tools acquired in the didactic curriculum.

At the end of the residency, students will return to campus for a capstone course which will include opportunities for sharing their residency experiences, to engage in a case analysis, and to complete comprehensive oral examinations. Professional development is another key element of the program. During the 21-month program, students will be introduced to professional organizations providing lifelong education programs and networking opportunities and will be given the opportunity to attend a major national or state health education event. Through the Executive Leadership in Healthcare series, students will be exposed to senior leaders with diverse backgrounds and serving in a variety of sectors within healthcare.

Admission to the MBA Healthcare Administration Specialization is contingent on admission to the Master of Business Administration (see requirements under the Business School Admissions).

Healthcare Administration Specialization

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
MIS 5355	Management of Information Systems	3
MIS 5345	Decision Making Using Excel	3
Healthcare Aministration Specialization Courses		
HPA 5001	Executive Leadership in Healthcare Administration I	0
HPA 5002	Executive Leadership in Healthcare Administration II	0
HPA 5003	Executive Leadership in Healthcare Administration III	0
HPA 5120	Principles and Methods of Healthcare Delivery System Research	1
HPA 5121	Current Issues in Healthcare Administration	1
HPA 5126	Social Issues in Healthcare Administration	1
HPA 5180	Healthcare Finance Lab	1
HPA 5310	Healthcare Administration	3
HPA 5330	Healthcare Law and Ethics	3
HPA 5350	Health Economics	3
HPA 5367	Managerial Epidemiology	3
HPA 5380	Healthcare Finance	3
HPA 5V90	Healthcare Administrative Internship	2
Total Hours		**58**

Healthcare Administration Specialization - Pre-Clinical Track (PCT) (MBA)

The Master of Business Administration, Healthcare Administration Specialization, Pre-Clinical Track (PCT), is intended for students who wish to complete an MBA with a healthcare specialization the year prior

to attending an advanced clinical degree program (MD, DO, PA, DPT, DDS, PharmD, etc). Applicants with a strong likelihood of admission to an advanced clinical degree program will be considered for admission. Students in the PCT will complete nearly all requirements of the traditional Healthcare Administration Specialization (see above) with one key exception. PCT students will not complete the administrative residency, rather will receive their clinical orientation in their respective advanced clinical training program. PCT students will complete a capstone course and participate in comprehensive oral examinations in their final semester.

Students will gain several distinct advantages from the proposed Pre-Clinical Track. First, they will benefit from a cohesive health care-focused educational environment. Students completing this track will be getting the best of Baylor in terms of graduate educational programming, given that they will have been a part of some of the University's most elite and successful programs to date. Moreover, the completion of the Pre-Clinical track will allow them to clearly signal strong and highly unique credentials when applying to advanced clinical degree programs (e.g., medical school, dental school). Given the difficulty in securing a clinical education spot, this unique degree combination could significantly enhance their rate of acceptance to these degree programs as well as their ability to access higher rated programs (i.e., receive admission to the most elite institutions). This will simultaneously build a pipeline of future clinical leaders, which are strongly needed in the US health care system. Of note, the time and curriculum constraints of most advanced clinical programs do not allow for nurturing leadership skills or an understanding of the business side of healthcare. Therefore, the creation of a program specifically designed to create future Christian clinical and health care industry leaders fits ideally with Baylor's mission and current strategic plan and targets a narrow window of opportunity within the students' academic training.

Admission to the Healthcare Administration Pre-Clinical Track is contingent on admission into the Master of Business Administration (see requirements under Business School Admissions).

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
MIS 5355	Management of Information Systems	3
Healthcare Aministration - Pre-Clinical Track Specialization Courses		
HPA 5001	Executive Leadership in Healthcare Administration I	0
HPA 5002	Executive Leadership in Healthcare Administration II	0
HPA 5003	Executive Leadership in Healthcare Administration III (Lean Six Sigma (Black Belt))	0
HPA 5126	Social Issues in Healthcare Administration	1
HPA 5180	Healthcare Finance Lab	1
HPA 5310	Healthcare Administration	3
HPA 5330	Healthcare Law and Ethics	3
HPA 5350	Health Economics	3
MIS 5345	Decision Making Using Excel	3
HPA 5380	Healthcare Finance	3
HPA 5395	U.S. Healthcare Directions	3
Total Hours		**54**

Business Administration Minor

Minor in Business Administration

For a graduate minor in business, students must complete any four graduate level business courses (including the required prerequisites). These courses must be completed in no less than three separate disciplines.

Business Analytics Graduate Concentration

Concentration in Business Analytics

The Graduate Concentration in Business Analytics provides graduate students within the Hankamer School of Business exposure to concepts and techniques critical to success in the area of business analytics. The purpose of the Graduate Concentration in Business Analytics will enable graduate students to gain the skills necessary to understand and interpret big data and business analytics.

Admission into the concentration is contingent upon admission into the MBA, MSIS, MAcc, MTax, or the MSEco programs.

The Concentration requirements are as follows:

Code	Title	Hours
Business Analytics Courses [1]		
QBA 5330	Business Analytics for Decision Making	3
MIS 5340	Database Management Systems	3
MIS 5342	Business Intelligence	3
MIS 5343	Seminar in Data Visualization	3
Select two courses from the following:		6
ECO 5347	Econometric Theory and Methods	
ECO 5349	Causal Inference and Research Design	
ECO 5351	Data Science I	
ECO 5V98	Special Studies in Economics (Data Science II)	
MIS 5322	Advanced Python for Analytics	
MIS 5346	Data Warehousing	
MKT 5398	Directed Studies in Marketing	
Total Hours		**18**

[1] Substitutions may be made with prior Advisor Approval.

Cyber Security Graduate Concentration

Concentration in Cyber Security

The Graduate Concentration in Cyber Security provides graduate students within the Hankamer School of Business exposure to 'best practice' concepts, techniques and methodologies critical to insuring data security in corporate/organizational environments. Furthermore, it is targeted towards addressing recent calls from the academic literature and professional journals to treat cyber security as a strategic organizational function rather than a back-office technical function. The purpose of the Concentration is to provide business graduate students with the necessary skills to develop and/or manage organizational processes, strategies, methodologies, and technologies designed to mitigate risks to the confidentiality, integrity, and availability of organizational data and information-related resources for preparation to take cyber-security related management positions in industry and/or consulting practices.

Admission into the concentration is contingent upon admission into the MBA, MSIS, MAcc, MTax, or MSEco programs.

The Concentration requirements are as follows:

Code	Title	Hours
MIS Courses		
MIS 5335	Information Systems Analysis and Design	3
MIS 5340	Database Management Systems	3
MIS 5355	Management of Information Systems	3
Cyber Security Courses [1]		
ISEC 5305	Seminar in Information Security Foundations	3
ISEC 5320	Cyber Security Technology Factors	3
Select two courses from the following:		6
ISEC 5310	Cyber Security Human Factors: Ethics, Integrity, Practices, Policies, and Procedures	
ISEC 5330	Cybersecurity Policy and Planning	
ISEC 5340	Cyber Warfare, Threats, Vulnerabilities and Countermeasures	
Total Hours		**21**

[1] Substitutions may be made with prior Advisor Approval.

Entrepreneurship and Corporate Innovation Graduate Concentration

Concentration in Entrepreneurship and Corporate Innovation

The Graduate Concentration in Entrepreneurship and Corporate Innovation provides graduate students within the Hankamer School of Business exposure to concepts and techniques critical to success in the area of entrepreneurship and corporate innovation. The purpose of this Concentration will enable graduate students to gain the skills necessary to lead value creation innovation in both corporate and start up environments. Initiatives may include both process design/improvement as well as product design/improvement.

Admission into the Concentration is contingent upon admission into the MBA, MSIS, MAcc, MTax, or MSEco programs.

The Concentration requirements are as follows:

Code	Title	Hours
Entrepreneurship & Corporate Innovation Courses [1]		
MGT 5385	Strategic Management and Business Policy	3
ENT 5329	Entrepreneurial Finance (Fall Only)	3
ENT 5342	Corporate Entrepreneurship: Initiating and Sustaining Innovation	3
ENT 5322	Accelerated Ventures Leadership	3
Select one course from the following:		3
ENT 5341	Technology Entrepreneurship	
MGT 5331	Project Management (Fall Only)	
Total Hours		**15**

[1] Substitutions may be made with prior Advisor Approval.

Executive Master of Business Administration (EMBA)

The Master of Business Administration degree (Executive Program – EMBA) is designed for full-time working professionals who hold management-level positions with their respective firms. Admission requires a personal interview before the graduate business admissions committee. For admission requirements, see requirements under Business School Admissions.

The Executive Master of Business Administration program has the following session start and end dates:

Fall 2022: 8/14/22 – 12/14/22
Spring 2023: 12/30/22 - 5/11/23
Summer 2023: 5/15/23 - 8/10/23

The EMBA is a "lock-step" (sequentially ordered) set of course offerings. Students enter either in fall or spring and progress through the program together. The Baylor EMBA program is offered one weekend each month in Dallas, TX. The EMBA Program requires 21 months for completion and consist of the following:

Executive MBA Core Curriculum

Code	Title	Hours
BUS 5201	In-Residence: Leading in the 21st Century	2
MGT 5311	Leading with Integrity	3
QBA 5330	Business Analytics for Decision Making	3
ECO 5315	Microeconomic Theory and Business Decisions	3
MIS 5152	The Innovative Tech Leader	1
BL 5201	Business Law: Application and Strategy	2
ACC 5305	Financial Accounting	3
FIN 5260	Financial Decision Making	2
FIN 5263	Managing for Value Creation	2

MGT 5136	Global Human Capital Leadership	1
ACC 5320	Managerial Accounting	3
MGT 5320	Manufacturing and Service Operations	3
MKT 5310	Seminar in Marketing Strategy	3
MGT 5406	Global Strategy: Building and Sustaining Competitive Advantage	4
Total Hours		**35**

Executive Master of Business Administration

Code	Title	Hours
Executive MBA Core		
Complete all courses listed under Executive MBA Core Curriculum		35
Required Courses		
MGT 5340	Negotiation and Conflict Resolution	3
BUS 5302	In Residence: Government, Business, and Societal Impact	3
MGT 5307	In Residence: Global Strategy: Building & Sustaining Competitive Advantage	3
ECO 5110	Key Global Economic and Strategic Issues	1
FIN 5220	Private Equity Investing	2
BUS 5V98	Special Studies in Business (Leading a Culture of Innovation)	1
Total Hours		**48**

Executive Master of Business Administration Concentrations

- Healthcare Administration Concentration (EMBA) (p. 20)

The EMBA program in collaboration with the Online MBA Program (OMBA) offers the following four concentrations. The EMBA program with one of these concentrations includes 38 hours of core courses plus 12 hours of concentration courses for a total 50 credit hours.

- Cybersecurity Technology & Strategy Concentration (EMBA) (p. 20)
- Executive Presence & Communication Concentration (EMBA) (p. 21)
- International Trade and Supply Chain Management Concentration (EMBA) (p. 21)
- Strategic Marketing Concentration (EMBA) (p. 21)

Healthcare Administration Concentration (EMBA)

Concentration in Healthcare Administration

The EMBA with a concentration in Healthcare Administration is a "lock-step" (sequentially ordered) set of course offerings. Students enter either in the fall or spring and progress through the program together, with all healthcare students taking the same courses. The program is completed within 21 months and consists of the following courses.

Code	Title	Hours
BUS 5201	In-Residence: Leading in the 21st Century	2
MGT 5311	Leading with Integrity	3
QBA 5330	Business Analytics for Decision Making	3
ECO 5315	Microeconomic Theory and Business Decisions	3
MGT 5340	Negotiation and Conflict Resolution	3
HPA 5150	Aligning IT Healthcare Enterprises	1
HPA 5250	Analysis of Healthcare Economic Conditions	2
BUS 5302	In Residence: Government, Business, and Societal Impact	3
ACC 5305	Financial Accounting	3
FIN 5260	Financial Decision Making	2
BUS 5V98	Special Studies in Business (Leading a Culture of Innovation)	1
FIN 5263	Managing for Value Creation	2
HPA 5220	Healthcare Law: Application and Strategy	2
MGT 5136	Global Human Capital Leadership	1
HPA 5280	Healthcare Financial Management	2
ACC 5320	Managerial Accounting	3
HPA 5230	Healthcare Operations	2
HPA 5320	Marketing Strategy for Healthcare Professionals	3
MGT 5406	Global Strategy: Building and Sustaining Competitive Advantage	4
MGT 5307	In Residence: Global Strategy: Building & Sustaining Competitive Advantage	3
Total Hours		**48**

Cybersecurity Technology & Strategy Concentration (EMBA)

Concentration in Cybersecurity Technology & Strategy (CYST)

Code	Title	Hours
Executive MBA Core		
Complete all courses listed under Executive MBA Core Curriculum		35
Required Courses		
MGT 5340	Negotiation and Conflict Resolution	3
BUS 5V98	Special Studies in Business (Leading a Culture of Innovation)	1
Cyber Security & Technology Strategy Concentration Courses		
ISEC 5405	Cyber Security Fundamentals (taken online)	4
ISEC 5430	Enterprise Cyber Security Planning and Policy: A Strategic Approach (taken online)	4
MIS 5152	The Innovative Tech Leader (listed under Executive MBA core curriculum)	(1)
BUS 5302	In Residence: Government, Business, and Societal Impact	3
Experiential Learning (Optional) [1]		
MGT 5307	In Residence: Global Strategy: Building & Sustaining Competitive Advantage	
Total Hours		**50**

[1] Additional fees apply

Executive Presence & Communication Concentration (EMBA)

Concentration in Executive Presence & Communication (EXPC)

Code	Title	Hours
Executive MBA Core		
Complete all courses listed under Executive MBA Core Curriculum		35
Additional Course		
BUS 5302	In Residence: Government, Business, and Societal Impact	3
Executive Presence & Communication Concentration Courses		
MGT 5340	Negotiation and Conflict Resolution	3
BUS 5V98	Special Studies in Business (Leading a Culture of Innovation)	1
BUS 5460	Communicating With Data	4
BUS 5490	Strategic Communication (taken online)	4
Experiential Learning (Optional) [1]		
MGT 5307	In Residence: Global Strategy: Building & Sustaining Competitive Advantage	
Total Hours		**50**

[1] Additional fees apply

International Trade and Supply Chain Management Concentration (EMBA)

Concentration in International Trade and Supply Chain Management (ISCM)

Code	Title	Hours
Executive MBA Core Curriculum		
Complete all courses listed under Executive MBA Core Curriculum		35
Required Courses		
MGT 5340	Negotiation and Conflict Resolution	3
MGT 5307	In Residence: Global Strategy: Building & Sustaining Competitive Advantage	3
International Trade and Supply Chain Management Concentration Courses		
MGT 5445	Global Supply Chain Strategy (taken online)	4
BL 5445	Global Trade Compliance Strategy (taken online)	4
MGT 5320	Manufacturing and Service Operations (listed under Executive MBA core curriculum)	(3)
BUS 5V98	Special Studies in Business (Leading a Culture of Innovation)	1
Experiential Learning (Optional) [1]		
BUS 5302	In Residence: Government, Business, and Societal Impact	
Total Hours		**50**

[1] Additional fees apply

Strategic Marketing Concentration (EMBA)

Concentration in Strategic Marketing (STMK)

Code	Title	Hours
Executive MBA Core		
Complete all courses listed under Executive MBA Core Curriculum		35
Required Courses		
MGT 5340	Negotiation and Conflict Resolution	3
BUS 5302	In Residence: Government, Business, and Societal Impact	3
Strategic Marketing Concentration Courses		
MKT 5440	Strategic Brand Management (taken online)	4
MKT 5460	Marketing Analytics (taken online)	4
MKT 5310	Seminar in Marketing Strategy (listed under Executive MBA core curriculum)	(3)
BUS 5V98	Special Studies in Business (Leading a Culture of Innovation)	1
Experiential Learning (Optional) [1]		
MGT 5307	In Residence: Global Strategy: Building & Sustaining Competitive Advantage	
Total Hours		**50**

[1] Additional fees apply

Online Master of Business Administration (OMBA)

The Master of Business Administration degree (Online Program - OMBA) is an accelerated online option designed for working professionals. Students can complete their MBA in as few as 12 months with 48 credit hours. The Online MBA offers the same acclaimed faculty and education as on campus experiences and provides multiple opportunities for students to immediately apply classroom material in real-world situations.

Additional admissions requirements can be found under the Business School Admissions.

The general Master of Business Administration degree is awarded after the successful completion of the requirements listed below. A thesis option to the MBA degree is available, but not required. Students interested in this option should see the Associate Dean for Graduate Programs in the Business School.

All Online MBA students must maintain a minimum overall grade point average of 3.0 during each semester (a semester consists of both terms in summer, fall, or spring). Any Online MBA student whose overall grade point average falls below a 3.0 during the semester, will be placed

on probation for the next eight semester hours of course work (see Probation in the General Information section).

No work may be transferred from another college or university. No grade below a "C" is acceptable in a required course. If a grade of "C-", "D+", "D", "D-", or "F" is made in a required course, the student must repeat the course and earn a grade of "C" or higher. When a course is repeated, both the original grade and the new grade for a repeated course will be included in the overall GPA for graduation purposes. To graduate, all Online MBA students must have a minimum overall grade point average of 3.0.

Early in the semester in which the degree is to be awarded, candidates must file an Intent to Graduate form with the Graduate School in compliance with graduation requirements.

The program consists of six terms each year, two in the summer, two in the fall and two in the spring. All MBA courses are offered twice per year.

Core Requirements

Core Courses required for all OMBA degree plans (each course is four hours credit):

Code	Title	Hours
Core Courses		
ACC 5420	Managerial Accounting	4
ECO 5415	Economics for Managers	4
FIN 5460	Fundamentals of Applied Business Finance	4
MGT 5410	Managing For Higher Performance	4
MGT 5420	Operations Management	4
MGT 5485	Strategic Management and Business Policy	4
MIS 5450	Management of Information Systems	4
QBA 5435	Business Statistics	4
Total Hours		**32**

General MBA

Code	Title	Hours
Core Requirements		
Complete all the courses listed under Core Requirements		32
General MBA		
BUS 5421	Ethical Leadership	4
MGT 5402	Negotiation	4
Select one Communication course from the following:		4
BUS 5460	Communicating With Data	
BUS 5490	Strategic Communication	
MKT 5480	Crisis Communication Management	
Select one Marketing course from the following:		4
MKT 5410	Strategic Marketing Planning	
MKT 5440	Strategic Brand Management	
MKT 5460	Marketing Analytics	
Total Hours		**48**

Online Master of Business Administration Concentrations and Certificates

Students may choose more than one concentration or take extra courses; however, your total number of hours for your degree will increase by the added courses. Courses will not be substituted in lieu of required courses.

Cyber Security Concentration (OMBA)

Concentration in Cyber Security (GYSE)

Code	Title	Hours
Core Requirements		
Complete all the courses listed under Core Requirements		32
Required Courses		
Select one Communication course from the following:		4
BUS 5460	Communicating With Data	
BUS 5490	Strategic Communication	
MGT 5402	Negotiation	
MKT 5480	Crisis Communication Management	
Select one Marketing course from the following:		4
MKT 5410	Strategic Marketing Planning	
MKT 5440	Strategic Brand Management	
MKT 5460	Marketing Analytics	
Cyber Security Concentration requires the following three courses:		
ISEC 5405	Cyber Security Fundamentals	4
ISEC 5430	Enterprise Cyber Security Planning and Policy: A Strategic Approach	4
MIS 5450	Management of Information Systems (which is listed as a core course)	(4)
Total Hours		**48**

Executive Communication Concentration (OMBA)

Concentration in Executive Communication (EXCO)

Code	Title	Hours
Core Requirements		
Complete all the courses listed under Core Requirements		32
Required Courses		
Select one Marketing course from the following:		4
MKT 5410	Strategic Marketing Planning	
MKT 5440	Strategic Brand Management	
MKT 5460	Marketing Analytics	

Select three Executive Communication Concentration courses from the following:		12
BUS 5460	Communicating With Data	
BUS 5490	Strategic Communication	
MGT 5402	Negotiation	
MKT 5480	Crisis Communication Management	
Total Hours		**48**

Global Trade and Supply Chain Management Concentration (OMBA)

Concentration in Global Trade and Supply Chain Management (GSCM)

Code	Title	Hours
Core Requirements		
Complete all the courses listed under Core Requirements		32
Required Courses		
Select one Communication course from the following:		4
BUS 5460	Communicating With Data	
BUS 5490	Strategic Communication	
MGT 5402	Negotiation	
MKT 5480	Crisis Communication Management	
Select one Marketing course from the following:		4
MKT 5410	Strategic Marketing Planning	
MKT 5440	Strategic Brand Management	
MKT 5460	Marketing Analytics	
Global Trade and Supply Chain Management Concentration requires the following three courses:		
BL 5445	Global Trade Compliance Strategy	4
MGT 5445	Global Supply Chain Strategy	4
MGT 5420	Operations Management (which is listed as a core course)	(4)
Total Hours		**48**

Marketing Concentration (OMBA)

Concentration in Marketing (MKT)

Code	Title	Hours
Core Requirements		
Complete all the courses listed under Core Requirements		32
Required Courses		
Select one Communication course from the following:		4
BUS 5460	Communicating With Data	
BUS 5490	Strategic Communication	
MGT 5402	Negotiation	
MKT 5480	Crisis Communication Management	
Select three Executive Communication Concentration courses from the following:		12
MKT 5410	Strategic Marketing Planning	
MKT 5440	Strategic Brand Management	
MKT 5460	Marketing Analytics	
MKT 5480	Crisis Communication Management	
Total Hours		**48**

Online Master of Business Administration Certificates

Overview

Master of Business Administration Certificates allow students to

1. Improve their skills in their current occupation by developing expertise in advanced topics,
2. Acquire knowledge to pursue careers, and
3. Explore emerging fields before committing to the Master in Business Administration degree that requires more courses.

Each for-credit certificate contains three graduate courses (equivalent to 12 graduate credits) that are normally part of the curriculum for a 48-credit Master of Business Administration degree program and can be completed in as little as 6 months. Applicants must meet the same requirements for admission to the for-credit certificates as the Online MBA degree. After successful completion of a graduate certificate, students may decide to continue and complete the Online MBA degree. For OMBA alumni who may have completed a required course as part of their OMBA degree, another course will be approved to meet the 12-credit requirement for the certificate.

Certificates are available in the following areas:

Cyber Security

Code	Title	Hours
ISEC 5405	Cyber Security Fundamentals	4
ISEC 5430	Enterprise Cyber Security Planning and Policy: A Strategic Approach	4
MIS 5450	Management of Information Systems	4

Executive Communication

Code	Title	Hours
BUS 5460	Communicating With Data	4
BUS 5490	Strategic Communication	4
MGT 5402	Negotiation	4

Global Trade and Supply Chain Management

Code	Title	Hours
BL 5445	Global Trade Compliance Strategy	4
MGT 5445	Global Supply Chain Strategy	4
MGT 5420	Operations Management	4

Marketing

Code	Title	Hours
MKT 5410	Strategic Marketing Planning	4
MKT 5440	Strategic Brand Management	4
MKT 5460	Marketing Analytics	4

Certificates will be awarded and mailed at the conclusion of each semester during degree certification.

Joint Master of Business Administration/Master of Divinity

Associate Dean for Graduate Business Programs: Patsy Norman
Associate Dean for Truett Seminary: Dennis Tucker

The MBA/MDiv joint degree is designed to prepare ministers who can implement financial strategies, transform organizational behavior, and ensure financial integrity in their congregations and/or non-profit organizations. Students interested in a career requiring complementary skills in both business and Ministry may complete the Master of Divinity and MBA degrees concurrently. By proper course selection of courses, students can save up to 35 hours compared to the normal requirements of the two separate degrees. Students should consult with advisors in both the seminary and business to determine the best sequence of courses.

Admission

Students must apply and be accepted separately into both programs. The GMAT or GRE exam is required for the MBA degree. Additional admissions requirements for the MBA can be found under the Business School Admissions.

Requirements

Candidates for the joint MBA/Master of Divinity degree must complete 38 core hours for MBA and 78 core hours for Master of Divinity. By proper selection of course work, it may be possible to reduce the requirements of the joint degree by up to 35 hours compared to the normal requirements of the two degrees completed separately. Since both degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive either degree. Students are encouraged to contact appropriate advisors in each program for further details.

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
MIS Requirement		
Select one course from the following:		3
MIS 5342	Business Intelligence	
MIS 5345	Decision Making Using Excel	
MIS 5346	Data Warehousing	
MIS 5355	Management of Information Systems	
Other Requirements		
Students who do not have an undergraduate degree in Business Administration are required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**38**

Joint Master of Business Administration/Master of Engineering

Associate Dean for Graduate Business Programs: Patsy Norman
Graduate Directors in Engineering: Ian Gravagne and Douglas E. Smith

Students interested in a career requiring complementary skills in both business and engineering may complete the Master of Engineering and MBA degrees concurrently. By proper selection of courses, students can save up to 21 hours in the joint degree compared to the individual requirements of the two separate degrees. Students should consult with advisors in both engineering and business to determine the best sequence of courses.

Master of Engineering students from industry may, with approval of their advisor, select a project that is relevant to their work responsibilities.

Admission

Students must apply and be accepted separately into both programs. The MBA degree requires either the GMAT or GRE exams. Additional admissions requirements for the MBA can be found under the Business School Admissions.

Requirements

Candidates for the joint Master of Engineering/MBA degree must complete 37 hours for MBA and 15 core engineering hours. In addition, the student must complete an additional 15 hours of electives. By proper selection of electives it may be possible to reduce the requirements of the joint degree by up to 21 hours compared to the normal requirements of the two degrees completed separately. This efficiency is achieved by proper selection of business electives for the 15 business course credits allowed for the Master of Engineering program and by a six-credit reduction of the MBA elective requirements reflecting recognition of the additional graduate work in completing the Master of Engineering. Since both degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive either degree. Students are encouraged to contact appropriate advisors in each program for further details.

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required MBA Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3

ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
MIS Requirement		
Select one course from the following:		3
MIS 5342	Business Intelligence	
MIS 5345	Decision Making Using Excel	
MIS 5346	Data Warehousing	
MIS 5355	Management of Information Systems	
Core Engineering		
Select 15 semester hours from Core Engineering courses		15
Required ME Electives		
Select 15 semester hours from ME Elective courses		15
Other Requirements		
Students who do not have an undergraduate degree in Business Administration are required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**70**

Joint Master of Business Administration/Master of Science in Information Systems

Students interested in expanding their breadth of business knowledge while concurrently obtaining an in-depth knowledge of information systems may be interested in pursuing the MBA and MSIS degrees concurrently. Within the MSIS degree program, students have the opportunity to develop a program of study that will help them achieve their specific career goals. Prior background in information systems or computer science is not required for admission.

Admission

Students must apply and be accepted separately into both programs. Additional admissions requirements for the MBA can be found under the Business School Admissions.

Requirements

Students receive twelve hours of credit toward their elective requirement for the MBA upon the successful completion of the required MSIS courses and nine hours of credit toward their MSIS upon the successful completion of the required MBA courses. Thus, MBA/MSIS students complete twenty-seven hours of information systems courses and 47 hours of business courses for a total of seventy-one hours for students pursuing the non-thesis track and sixty-five hours for those pursuing the thesis track. Since both degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive either degree.

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required MBA Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MIS 5355	Management of Information Systems	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Other MBA Requirements		
1-hour internship required for students without 2 years of full-time work experience. Students with more than 2 years can choose to take an elective.		1
Total of 6 hours of Graduate Business electives or in combination of above		6
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Required MSIS Courses		
Complete the following depending on chosen track:		18-24
MIS 5355	Management of Information Systems	
All MSIS students must demonstrate competency in four core content areas; programming, systems analysis and design, database, and information security. This competency may be shown by previous course work (for those with an undergraduate degree in information systems or computer science) or by completion of specific courses as part of their MSIS program.		
MIS 5301	Seminar in Object-Oriented Business Programming	
MIS 5315	NET Systems Development	
MIS 5317	Seminar in Java Development	
MIS 5322	Advanced Python for Analytics	
MIS 5335	Information Systems Analysis and Design	
MIS 5340	Database Management Systems	
ISEC 5305	Seminar in Information Security Foundations	
Students on the non-thesis track with less than 2 years of full-time work experience will be required to take:		
MIS 5V95	Internship in Information Systems	
Thesis track students are not required to complete an internship.		

In addition, six hours of MIS or ISEC electives will be chosen in consultation with your MSIS advisor; for thesis students, six hours of MIS, ISEC, or business electives will be chosen.	
Any course taken cannot count both toward the 47 hours of business courses and 27 (non-thesis) or 21 (thesis) MIS hours.	
Total Hours	**65-71**

Joint Master of Business Administration/ Master of Science in Information Systems Concentrations

- Business Analytics Concentration (MBA/MSIS) (p. 26)
- Cyber Security Concentration (MBA/MSIS) (p. 26)
- Entrepreneurship and Corporate Innovation Concentration (MBA/MSIS) (p. 27)

Business Analytics Concentration (MBA/MSIS)

Concentration in Business Analytics

The Graduate Concentration in Business Analytics provides graduate students within the Hankamer School of Business exposure to concepts and techniques critical to success in the area of business analytics. The purpose of the Graduate Concentration in Business Analytics will enable graduate students to gain the skills necessary to understand and interpret big data and business analytics.

Admission to the Business Analytics Concentration is contingent on admission into the Master of Business Administration and the Master of Science in Information Systems degrees. Additional admissions requirements can be found under the Business School Admissions.

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Business Analytics Courses		
MIS 5342	Business Intelligence	3
MIS 5340	Database Management Systems	3
MIS 5343	Seminar in Data Visualization	3
Select two courses from the following:		6
ECO 5347	Econometric Theory and Methods	
ECO 5349	Causal Inference and Research Design	
ECO 5351	Data Science I	
ECO 5352	Data Science II	
MIS 5322	Advanced Python for Analytics	
MIS 5346	Data Warehousing	
MKT 5398	Directed Studies in Marketing	
Required MSIS Courses (Non-thesis)		
MIS 5355	Management of Information Systems	3
All MSIS students must demonstrate copetency in four core content areas; programming, systems analysis and design, database, and information security. This competency may be shown by previous course work (for those with an undergraduate degree in information systems or computer science) or by completion of specific courses as part of their MSIS program.		15
MIS 5301	Seminar in Object-Oriented Business Programming	
MIS 5315	NET Systems Development	
MIS 5317	Seminar in Java Development	
MIS 5322	Advanced Python for Analytics	
MIS 5335	Information Systems Analysis and Design	
MIS 5340	Database Management Systems	
ISEC 5305	Seminar in Information Security Foundations	
Other MBA Requirements		
1-hour internship required for students without 2 years of full-time work experience		1
Students with more than 2 years can choose to take an elective.		
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**71**

Cyber Security Concentration (MBA/MSIS)

Concentration in Cyber Security

The Graduate Concentration in Cyber Security provides graduate students within the Hankamer School of Business exposure to 'best practice' concepts, techniques and methodologies critical to insuring data security in corporate/organizational environments. Furthermore, it is targeted towards addressing recent calls from the academic literature and professional journals to treat cyber security as a strategic organizational function rather than a back-office technical function. The purpose of the Concentration is to provide business graduate students with the necessary skills to develop and/or manage organizational processes, strategies, methodologies, and technologies designed to mitigate risks to the confidentiality, integrity, and availability of organizational data and information-related resources for preparation to take cyber-security related management positions in industry and/or consulting practices.

Admission to the Cyber Security Concentration is contingent on admission into the Master of Business Administration and the Master of Science in Information Systems degrees. Additional admissions requirements can be found under the Business School Admissions.

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Cyber Security Courses		
ISEC 5330	Cybersecurity Policy and Planning	3
Select two courses from the following:		6
ISEC 5310	Cyber Security Human Factors: Ethics, Integrity, Practices, Policies, and Procedures	
ISEC 5320	Cyber Security Technology Factors	
ISEC 5340	Cyber Warfare, Threats, Vulnerabilities and Countermeasures	
Required MSIS Courses (Non-thesis)		
MIS 5355	Management of Information Systems	3
All MSIS students must demonstrate copetency in four core content areas; programming, systems analysis and design, database, and information security. This competency may be shown by previous course work (for those with an undergraduate degree in information systems or computer science) or by completion of specific courses as part of their MSIS program.		
MIS 5301	Seminar in Object-Oriented Business Programming	3
MIS 5315	NET Systems Development	3
or MIS 5317	Seminar in Java Development	
MIS 5335	Information Systems Analysis and Design	3
MIS 5340	Database Management Systems	3
ISEC 5305	Seminar in Information Security Foundations	3
Other MBA Requirements		
1-hour internship required for students without 2 years of full-time work experience		1
Students with more than 2 years can choose to take an elective.		
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**65**

Entrepreneurship and Corporate Innovation Concentration (MBA/MSIS)

Concentration in Entrepreneurship and Corporate Innovation

The Graduate Concentration in Entrepreneurship and Corporate Innovation provides graduate students within the Hankamer School of Business exposure to concepts and techniques critical to success in the area of entrepreneurship and corporate innovation. The purpose of this Concentration will enable graduate students to gain the skills necessary to lead value creation innovation in both corporate and start up environments. Initiatives may include both process design/improvement as well as product design/improvement.

Admission to the Entrepreneurship and Corporate Innovation Concentration is contingent on admission into the Master of Business Administration and the Master of Science in Information Systems degrees. Additional admissions requirements can be found under the Business School Admissions.

The Degree requirements are as follows:

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5111	Professional Career Development for First Semester Graduate Students	1
BUS 5112	Professional Career Development for Second Semester Graduate Students	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
Entrepreneurship and Corporate Innovation Courses		
ENT 5329	Entrepreneurial Finance	3
ENT 5342	Corporate Entrepreneurship: Initiating and Sustaining Innovation	3
ENT 5322	Accelerated Ventures Leadership	3

ENT 5341	Technology Entrepreneurship	3
or MGT 5331	Project Management	
Required MSIS Courses (Non-thesis)		
MIS 5355	Management of Information Systems	3
All MSIS students must demonstrate copetency in four core content areas; programming, systems analysis and design, database, and information security. This competency may be shown by previous course work (for those with an undergraduate degree in information systems or computer science) or by completion of specific courses as part of their MSIS program.		21
MIS 5301	Seminar in Object-Oriented Business Programming	
MIS 5315	NET Systems Development	
MIS 5317	Seminar in Java Development	
MIS 5322	Advanced Python for Analytics	
MIS 5335	Information Systems Analysis and Design	
MIS 5340	Database Management Systems	
ISEC 5305	Seminar in Information Security Foundations	
Three hours of MIS or ISEC electives will be chose in consultation with your MSIS advisor.		
Other MBA Requirements		
1-hour internship required for students without 2 years of full-time work experience		1
Students with more than 2 years can choose to take an elective.		
Students who do not have an undergraduate degree in Business Administration will be required to take the following:		
BL 5104	Business Foundations - Business Law	(1)
Total Hours		**74**

Joint Juris Doctor/Master of Business Administration

Associate Dean of the Law School: Matt Cordon
Associate Dean for Graduate Business Programs: Patsy Norman

Students interested in a career requiring complementary skills in both law and business may complete the JD and MBA degrees concurrently. Law courses substitute for electives in the MBA curriculum described in this catalog, and business courses substitute for twelve quarter hours (one quarter) in the JD curriculum. Completing the combined program effectively "saves" one semester and one quarter of study. Students should consult with advisors in both the Law School and Business School to determine the best sequence of courses.

Admission

Students must apply and be accepted separately into both programs. Therefore, the GMAT or GRE is required for the MBA application and LSAT exam is required for the Law School application. Additional admissions requirements for the MBA can be found under the Business School Admissions.

Requirements

Students receive twelve hours credit toward their JD upon the successful completion of the MBA required courses and credit toward their elective requirement for the MBA upon successful completion of Law School course work. Thus, JD/MBA students complete 114 quarter hours of law and thirty-seven semester hours of graduate business. Since both degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive either degree.

The following lists the required MBA courses for the joint degree.

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5390	Management Communication	2-3
or BUS 5111 & BUS 5112	Professional Career Development for First Semester Graduate Students and Professional Career Development for Second Semester Graduate Students	
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
MIS Requirement		
Select one course from the following:		3
MIS 5342	Business Intelligence	
MIS 5345	Decision Making Using Excel	
MIS 5346	Data Warehousing	
MIS 5355	Management of Information Systems	
Total Hours		**37-38**

Joint Master of Business Administration/Master of Social Work

Associate Dean for Graduate Business Programs: Patsy Norman
Associate Dean for Academic Affairs: Melody Zuniga

The MBA/MSW joint degree is designed to educate leaders who are prepared to effectively implement financial strategies, transform organizational behavior, and activate marketing strategies to sustain and improve human services organizations. The joint degree will groom social work and business administration graduates to serve as administrators, executive directors, and innovators in human service organizations. In addition, the MSW/MBA will equip and encourage graduates to develop human service organizations nationally and internationally, serving in developing countries or underserved urban areas where human needs are great and resources are scarce. Students interested in a career requiring complementary skills in both business and Social Work may complete the Master of Social Work and MBA degrees concurrently. By proper selection of courses, students can save up to 29 hours compared to the normal requirements of the two separate degrees. Student should consult

with advisors in both social work and business to determine the best sequence of courses.

Admission

Students must apply and be accepted separately into both programs. The GMAT or GRE exam is required for the MBA degree. The Master of Social Work offers two degree plans, the Advanced Standing for those who have completed a BSW degree from an accredited program or the Standard for those without the BSW degree. Additional admissions requirements can be found under the Business School Admissions.

Requirements

Candidates for the joint MBA/Master of Social Work degree must complete 38 core hours for MBA and 51 core hours for Social Work if admitted to Social Work under the standard degree plan or 29 core Social Work hours if admitted under the advanced degree plan. By proper selection of course work, it may be possible to reduce the requirements of the joint degree by up to 29 hours compared to the normal requirements of the two degrees completed separately. Since both degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive either degree. Students are encouraged to contact appropriate advisors in each program for further details.

The Master of Social Work catalog may be found here: https://www.baylor.edu/social_work/index.php?id=956644 (https://www.baylor.edu/social_work/?id=956644)

Code	Title	Hours
Required Framework Courses		
BUS 5401	Business Frameworks	4
Required MBA Core Courses		
ACC 5300	Accounting Tools for Management Decision Making	3
BUS 5101	Focus Firm I	1
BUS 5390	Management Communication	3
ECO 5340	Economic Tools for Management Decision Making	3
FIN 5360	Seminar in Corporate Finance	3
MGT 5310	Management of Organizational Behavior	3
MGT 5320	Manufacturing and Service Operations	3
MGT 5325	Leadership in the Global Marketplace	3
MGT 5385	Strategic Management and Business Policy	3
MKT 5310	Seminar in Marketing Strategy	3
QBA 5330	Business Analytics for Decision Making	3
MIS Requirement		
Select one course from the following:		3
MIS 5342	Business Intelligence	
MIS 5345	Decision Making Using Excel	
MIS 5346	Data Warehousing	
MIS 5355	Management of Information Systems	
Core Social Work		
Select one plan from the following:		32-60
Standard degree plan (60 sem. hrs.)		
Advanced degree plan (32 sem. hrs.)		

Students who do not have an undergraduate degree in Business Administration are required to take:

BL 5104	Business Foundations - Business Law	(1)
Total Hours		**70-98**

Master of Accountancy, M.Acc.

Director of Graduate Accounting Programs and Advisor: Tim S. Thomasson
Associate Dean for Graduate Business Programs: Patsy Norman

The Master of Accountancy program provides students with the technical background and professional skills necessary for successful careers in public accounting, industry, and government. The program consists of eighteen semester hours of accounting course work, and fifteen semester hours of business electives, for a total of thirty-three semester hours. Other than these general requirements there are no specified courses within the degree program, allowing each student to tailor a program to meet his or her specific career objectives.

The Master of Accountancy degree also assists students in meeting the requirements of the Texas Public Accountancy Act of 1991 and similar professional certification requirements in other states. The Act requires that a candidate for the Uniform Certified Public Accountant Examination after September 1, 1997, show completion of a baccalaureate or graduate degree program with completion of courses recognized by the Texas State Board of Accountancy reflecting no fewer than 150 semester hours.

Admission

A baccalaureate degree with a major in accounting, or its equivalent, is required. The application for admission is processed in the same manner as other graduate business programs; all applicants must submit a GMAT score. Applicants receiving (or have received) their baccalaureate degree from Baylor University, with a major in Accounting, do not have to submit a GMAT score. International applicants must submit a TOEFL, IELTS, or Duolingo score unless their baccalaureate degree is from an accredited U.S. university. Additional admissions requirements can be found under the Business School Admissions.

Requirements

Curriculum for the Master of Accountancy Degree

All course selections must have the approval of the Director of Graduate Accounting Programs.

Requirement	Hours
Graduate Accounting Courses	18
Graduate Business Electives	15
Total Graduate Hours	**33**

All MAcc candidates must earn an average grade of “B” (3.0) or higher in eighteen hours of graduate accounting courses. Students not having an overall average of 3.0 or higher in these courses are required to repeat one or more of the courses in which a grade below “B” was earned in order to increase their average to 3.0. When an accounting course is repeated, the new grade substitutes for the old grade in the calculated accounting GPA. In some cases, more advanced work may be prescribed in place of the course on which a grade below “B” was earned. Both the original grade and the new grade for a repeated course will be included in the overall GPA for graduation purposes.

Joint Bachelor of Business Administration/Master of Accountancy

Director of Graduate Accounting Programs and Advisor: Tim S. Thomasson
Associate Dean for Graduate Business Programs: Patsy Norman

Students pursuing a Bachelor of Business Administration degree with a major in accounting may complete the BBA and MAcc degrees concurrently. Under the joint program, up to seven semester hours of undergraduate electives are waived for up to seven semester hours of graduate business electives. Since both degrees are awarded simultaneously and some undergraduate elective hours may be waived, generally all requirements in both programs must be completed in order to receive either degree.

Admission

Students must apply and be accepted into the Master of Accountancy program during their senior year. Students should consult with the Director of Graduate Accounting Programs to determine the appropriate timing of actual enrollment in the Master of Accountancy program. Additional admissions requirements can be found under the Business School Admissions.

Requirements

Curriculum for the BBA/MAcc Joint Degree

Requirement	Hours
Undergraduate Arts and Sciences	39-45
Undergraduate Business Core	50
Undergraduate Accounting Major	18
Undergraduate Elective	As needed
Chapel (2 semesters)	N/A
Total Undergraduate	**117 (at least)**

Note: After completion of all requirements for Arts and Sciences, the undergraduate business core, and the undergraduate accounting major, a student must take elective hours, if needed, to reach a total of 117 undergraduate hours. Hours taken towards additional majors or minors can count as electives for this purpose. Accordingly, a student may end up with more than 117 undergraduate hours.

Curriculum for the BBA/MAcc Joint Degree

All course selections must have the approval of the Director of Graduate Accounting Programs.

Requirement	Hours
Graduate Accounting Courses	18
Graduate Business Electives	15
Total Graduate Hours	33
Total Combined Program	**150 (at least)**

All BBA/MAcc candidates must earn an average grade of "B" (3.0) or higher in eighteen hours of graduate accounting courses. Students not having an overall average of 3.0 or higher in these courses are required to repeat one or more of the courses in which a grade below "B" was earned in order to increase their average to 3.0. When an accounting course is repeated, the new grade substitutes for the old grade in the calculated accounting GPA. In some cases, more advanced work may be prescribed in place of the course on which a grade below "B" was earned. Both the original grade and the new grade for a repeated course will be included in the overall GPA for graduation purposes.

Master of Taxation, M.Tax.

Director of Graduate Accounting Programs and Advisor: Tim S. Thomasson
Associate Dean for Graduate Business Programs: Patsy Norman

The Master of Taxation program seeks to provide students the technical background in taxation and related fields required for employment with public accounting firms, government agencies, or industry and commercial businesses. The program emphasizes an understanding of all major areas of tax authority, including the Internal Revenue Code, Treasury Regulations, administrative (IRS) interpretations, and judicial sources of tax law. This program should enable students to enter the accounting and tax profession prepared to analyze and to solve a variety of complex tax and business problems.

The Master of Taxation degree also assists students in meeting the requirements of the Texas Public Accountancy Act of 1991 and similar professional certification requirements in other states. The Act requires that a candidate for the Uniform Certified Public Accountant Examination after September 1, 1997, show completion of a baccalaureate or graduate degree program with completion of courses recognized by the Texas State Board of Accountancy reflecting no fewer than 150 semester hours.

Admission

A baccalaureate degree with a major in accounting, or its equivalent, is required. The application for admission is processed in the same manner as other graduate business programs; all applicants must submit a GMAT score. Applicants receiving (or have received) their baccalaureate degree from Baylor University, with a major in Accounting, do not have to submit a GMAT score. International applicants must submit a TOEFL, IELTS, or Duolingo score unless their baccalaureate degree is from an accredited U.S. university. Additional admissions requirements can be found under the Business School Admissions.

Requirements

Curriculum for the Master of Taxation Degree

Code	Title	Hours
ACC 5361	Corporate Taxation	3
ACC 5362	Partnership and S Corporation Taxation	3
ACC 5364	International Taxation	3
ACC 5365	Advanced Individual Taxation	3
ACC 5370	Tax Research	3
Graduate Accounting Elective		3
Graduate Business Electives [1]		15
Total Hours		**33**

[1] All business electives must have the approval of the Director of Graduate Accounting Programs.

All MTax candidates must earn an average grade of "B" (3.0) or higher in eighteen hours of graduate accounting courses. Students not having an overall average of 3.0 or higher in these courses are required to repeat one or more of the courses in which a grade below "B" was earned in

order to increase their average to 3.0. When an accounting course is repeated, the new grade substitutes for the old grade in the calculated accounting GPA. In some cases, more advanced work may be prescribed in place of the course on which a grade below "B" was earned. Both the original grade and the new grade for a repeated course will be included in the overall GPA for graduation purposes.

Joint Bachelor of Business Administration/Master of Taxation

Director of Graduate Accounting Programs and Advisor: Tim S. Thomasson
Associate Dean for Graduate Business Programs: Patsy Norman

Students pursuing a Bachelor of Business Administration degree with a major in accounting may complete the BBA and MTax degrees concurrently. Under the joint program, up to seven semester hours of undergraduate business electives are waived for up to seven semester hours of graduate business electives. Since both degrees are awarded simultaneously and some undergraduate elective hours may be waived, all requirements in both programs must be completed in order to receive either degree.

Admission

Students must apply and be accepted into the Master of Taxation program during their senior year. Students should consult with the Director of Graduate Accounting Programs to determine the appropriate timing of actual enrollment in the Master of Taxation program. Additional admissions requirements can be found under the Business School Admissions.

Requirements

Curriculum for the BBA/MTax Joint Degree

Requirement	Hours
Undergraduate Arts and Sciences	39-45
Undergraduate Business Core	50
Undergraduate Accounting Major	18
Undergraduate Elective	As needed
Chapel (2 semesters)	N/A
Total Undergraduate	**117 (at least)**

Note: After completion of all requirements for Arts and Sciences, the undergraduate business core, and the undergraduate accounting major, a student must take elective hours, if needed, to reach a total of 117 undergraduate hours. Hours taken towards additional majors or minors can count as electives for this purpose. Accordingly, a student may end up with more than 117 undergraduate hours.

Curriculum for the BBA/MTax Joint Degree

All course selections must have the approval of the Director of Graduate Accounting Programs.

Code	Title	Hours
Required Courses		
ACC 5361	Corporate Taxation	3
ACC 5362	Partnership and S Corporation Taxation	3
ACC 5364	International Taxation	3
ACC 5365	Advanced Individual Taxation	3
ACC 5370	Tax Research	3
Graduate Accounting Elective		3
Graduate Business Elective		15
Total Combined Program 150 (at least)		
Total Hours		**33**

All MTax candidates must earn an average grade of "B" (3.0) or higher in eighteen hours of graduate accounting courses. Students not having an overall average of 3.0 or higher in these courses are required to repeat one or more of the courses in which a grade below "B" was earned in order to increase their average to 3.0. When an accounting course is repeated, the new grade substitutes for the old grade in the calculated accounting GPA. In some cases, more advanced work may be prescribed in place of the course on which a grade below "B" was earned. Both the original grade and the new grade for a repeated course will be included in the overall GPA for graduation purposes.

Accounting Data and Analytics Certificate

Students enrolled in either the Master of Accountancy or Master of Taxation programs, including joint degrees, can also earn the Certificate in Accounting Dara and Analytics.

Code	Title	Hours
Required Courses		
ACC 5312	Data and Analytics in Accounting [1]	3
ACC 5330	Seminar in Auditing and Assurance Services [1,2]	3
ACC 5350	Advanced Auditing Analytics [2,3]	3
QBA 5330	Business Analytics for Decision Making	3
Select one course from the following:		3
MIS 5342	Business Intelligence	
MIS 5343	Seminar in Data Visualization	
MIS 5345	Decision Making Using Excel	
Total Hours		**15**

1. ACC 5312 Data and Analytics in Accounting must be taken prior to or concurrently with ACC 5330 Seminar in Auditing and Assurance Services.
2. ACC 5330 Seminar in Auditing and Assurance Services must be taken prior to ACC 5350 Advanced Auditing Analytics.
3. Upon approval by the Director of Innovation in Accounting Data & Analytics, a student may substitute ACC 5395 Internship in Accounting, Internship in Accounting, for ACC 5350 Advanced Auditing Analytics. Approval will be based on review of a student's involvement in advanced data analytics projects during the internship. To document data and analytics projects during the internship, the student should follow the requirements established by the Director of Accounting Internships.

Requirements

The following requirements must be met to complete the certificate:

- Students in the program must also complete either the Master of Accountancy or Master of Taxation graduate degree programs in the

Hankamer School of Business to be awarded the Graduate Certificate in Accounting Data and Analytics upon graduation.

- Students must earn no less than a B in each course for this certificate to be awarded the graduate certificate.

Joint Juris Doctor/Master of Taxation

Associate Dean of the Law School: Matt Cordon
Director of Graduate Accounting Programs: Tim S. Thomasson
Associate Dean for Graduate Business Programs: Patsy Norman

Students interested in a tax career requiring complementary skills in both law and tax accounting may complete the JD and MTax degrees concurrently. Law courses substitute for twelve semester hours of course work (one semester) in the MTax curriculum and accounting courses substitute for twelve quarter hours of course work (one quarter) in the JD curriculum. Completing the combined program effectively "saves" one semester and one quarter of study. Students must consult with advisors in both the Law School and Business School to determine course substitutions and the best sequence of courses.

Admission

Students must apply and be accepted separately into both programs. Therefore, both the GMAT and LSAT exams are required. International applicants must submit a TOEFL, IELTS, or Duolingo score unless their baccalaureate degree is from an accredited U.S. university. Additional admissions requirements can be found under the Business School Admissions

Requirements

Students receive twelve hours of credit toward their JD upon the successful completion of the required MTax courses and twelve hours of credit toward their elective requirement for the MTax upon successful completion of Law School course work. Thus, JD/MTax students complete 114 quarter hours of law and twenty-one semester hours of graduate tax. Since both degrees are awarded simultaneously, all requirements in both schools must be completed in order to receive either degree.

While completing the JD curriculum, students concurrently enroll in the following classes:

Curriculum for the JD/MTax Joint Degree

Code	Title	Hours
Required Courses		
ACC 5361	Corporate Taxation	3
ACC 5362	Partnership and S Corporation Taxation	3
ACC 5364	International Taxation	3
ACC 5365	Advanced Individual Taxation	3
ACC 5370	Tax Research	3
Graduate Business Electives [1]		6
Total Hours		**21**

[1] Must be approved by the Director of Graduate Accounting Programs.

Economics

Department of Economics

Chairperson: Jim Henderson
Graduate Program Director: Finley Edwards

Description of Degree Programs

The Department of Economics offers the Master of Science in Economics. This degree program prepares students for doctoral training in economics and related disciplines and for employment in the private and public sectors in the U.S. and abroad. The program includes core economics and field courses, modern statistical techniques, and tools of data science. Students can choose electives to follow a data science track, a financial economics track or an international/development economics track. Applicants do not need an undergraduate degree in economics to be admitted, although evidence of strong analytical skills is required.

Admission Guidelines

Applicants must hold a bachelor's degree from an accredited college or university unless they are current Baylor undergraduates applying for the Joint BBA/MS program. Applicants are admitted on the basis of undergraduate record, GRE or GMAT score, and letters of recommendation. International students are also required to take either the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or Duolingo exam unless the applicant has a degree conferred by a U.S. accredited higher education institution. In addition, before admission, applicants must have taken the following undergraduate economics courses, or their equivalents: ECO 3306 Intermediate Microeconomic Analysis and ECO 3307 Intermediate Macroeconomic Analysis (i.e., intermediate microeconomics and intermediate macroeconomics), or fifteen hours of economics. Applicants are also strongly advised to complete undergraduate courses in calculus and statistics before the course of study begins. Additional admissions requirements can be found under the Business School Admissions.

- Economics, M.S. (p. 32)
- Joint Bachelor of Business Administration/Master of Science in Economics (p. 33)
- Economics Minor (p. 34)
- Health Research and Policy, Ph.D. (p. 34)

Economics, M.S.

Master of Science in Economics

Degree Requirements

Students may earn the Master of Science in Economics by fulfilling the requirements of one of the two options detailed below:

Thesis Option

Code	Title	Hours
Requirements		
Complete 24 hours of course work including the following:		24
ECO 5001	Research Seminar	
ECO 5002	Research Seminar	
ECO 5310	Macroeconomic Analysis in the Global Economy	

ECO 5315	Microeconomic Theory and Business Decisions	
ECO 5347	Econometric Theory and Methods	
ECO 5349	Causal Inference and Research Design	
or ECO 5351	Data Science I	
Thesis		6
Eighteen hours of course work must be in economics (prefixed by ECO), and 15 of these 18 hours must be at the 5000-level		
18 hours of course work, whether within or outside of economics, must be at the 5000-level		
Only those 4000-level courses approved for graduate credit will count toward the degree's requirements [1]		
Total Hours		**30**

[1] i.e., courses that appear in the Graduate Catalog

Non-thesis Option

Code	Title	Hours
Requirements		
Complete 36 hours of course work including the following:		36
ECO 5001	Research Seminar	
ECO 5002	Research Seminar	
ECO 5310	Macroeconomic Analysis in the Global Economy	
ECO 5315	Microeconomic Theory and Business Decisions	
ECO 5343	History of Economic Thought	
ECO 5347	Econometric Theory and Methods	
ECO 5349	Causal Inference and Research Design	
or ECO 5351	Data Science I	
Twenty-four hours of course work must be in economics (prefixed by ECO), and 15 of these 24 hours must be at the 5000-level		
24 hours of course work, whether within or outside of economics, must be at the 5000-level		
Only those 4000-level courses approved for graduate credit will count toward the degree's requirements [1]		
Total Hours		**36**

[1] i.e., courses that appear in the Graduate Catalog

Joint Bachelor of Business Administration/Master of Science in Economics

Students pursuing a Bachelor of Business Administration degree with a major in economics may complete the BBA and MS in Economics (thesis option) programs concurrently. This joint program does not reduce the number of semester hours required in either degree and does not allow double counting of hours. However, it provides greater flexibility in course scheduling, may reduce the time required to complete the two degrees, and may allow more efficient use of financial aid. The BBA in Economics (and any additional undergraduate majors) will be awarded simultaneously with the MS in Economics upon completion of all degree requirements. Students who decide to withdraw from the joint program will be allowed to finish the BBA program, but will not be allowed to re-enter the joint degree program at a later date.

Admission

Interested students should engage in early degree planning and may apply for the joint program upon completion of 90 semester hours of credit. Applicants must be making good progress in the BBA program, must be majoring in economics, and must have an economics GPA of 3.5 or higher prior to applying for the program. Admission decisions will be based on the prior undergraduate record, GRE scores, and two letters of recommendation from professors in economics or related disciplines. Additional admissions requirements can be found under the Business School Admissions.

Requirements

Code	Title	Hours
Requirements		
Undergraduate Arts and Sciences		41-53
Undergraduate Business Core		50
Undergraduate Economics Minor		15
Undergraduate Electives (as needed)		6
Chapel (2 semesters)		N/A
Total Undergraduate Minimum - 124 sem. hrs.		
Graduate Economics Core		
ECO 5001	Research Seminar	0
ECO 5002	Research Seminar	0
ECO 5310	Macroeconomic Analysis in the Global Economy	3
ECO 5315	Microeconomic Theory and Business Decisions	3
ECO 5347	Econometric Theory and Methods	3
ECO 5349	Causal Inference and Research Design	3
or ECO 5351	Data Science I	
Graduate Electives [1]		12
Thesis		6
Total Hours		**142-154**

[1] Course selections must be approved by the Economics Graduate Program Director.

Note: *For Baylor Business Fellows, the undergraduate portion will be adjusted to the requirements of that program*.

At least eighteen hours of graduate course work must be in economics (courses prefixed by ECO), and 15 of these hours (not including thesis hours) must be at the 5000-level. Additionally, 18 hours of overall course work (in or out of economics) must be at the 5000-level. Only 4000-level courses approved for graduate credit will count toward the degree requirements. BBA/MS in Economics candidates must maintain a GPA of 3.0 or higher in their graduate economics courses. Students in this program must complete the version of the MS in Economics that includes a thesis requirement. The minimum duration of the joint program is four years.

Economics Minor

The graduate program in economics is also offered as a minor in various master's and doctoral programs. If a minor in economics is selected by a student enrolled in another graduate program, it must be approved by the Graduate Program Director in the Department of Economics. To qualify for a minor in economics, the student must complete at least three 5000-level economic courses.

Health Research and Policy, Ph.D.

Department Chair: Jim Henderson
Program Directors: Scott Cunningham and Michael Richards
Associate Dean for Graduate Programs: Patsy Norman

Program Description

The purpose of Baylor University's Ph.D. program in Health Services Research & Policy is to train the next generation of scholars to integrate the disciplines of economics, statistics, and epidemiology to study and move forward health care delivery and health policy. Graduates will be prepared to collaborate with other contributors to improve the health and health care of individuals and populations around the world. The growing role of data analytics in all facets of health and health care has increased the need for professionals who can provided rigorous, methodologically-sound solutions to the many challenges facing business and industry leaders as well as policymakers.

Our faculty have expertise and established publication records in these areas and are capable of training new researchers who are committed to improving health care through making its delivery more efficient and more equitable. The program prepares scholars for research-driven careers in academia, health care delivery systems, provider entities, insurance and other health care companies, policy think tanks and organizations, and government positions.

The curriculum is highly quantitative, and successful candidates will be awarded the MS in Economics (thesis track) after the requirements for that degree are satisfied. Students will engage in research projects with Baylor University faculty throughout their PhD experience.

Admissions Requirements

Applicants must have a degree from an accredited university or college and must meet all general admission requirements of Baylor's Graduate School for admission to Ph.D. level studies. Successful applicants will provide strong evidence of the ability to conduct quantitative research and to communicate research findings effectively. Prerequisites for admission include two semesters of calculus (three preferred) and one semester of statistics (more than one preferred). The admission decision is based on a holistic review of an applicant's previous academic record, GRE scores, research experience, two letters of recommendation that speak to the applicant's existing research experience and potential for future research work, and applicant essays.

Curriculum

The PhD in Health Services Research & Policy is a 60-hour degree program designed to be completed in four years. The program is also designed for students to meet the requirements for the Master of Science in Economics by the end of the second year.

Code	Title	Hours
Health Services Research Required Courses		
HSR 6315	Health Economics & Policy: Demand	3
HSR 6320	Health Economics & Policy: Supply	3
HSR 6325	(HSR 6325:: Advanced Casual Inference)	3
Economics Required Courses		
ECO 5315	Microeconomic Theory and Business Decisions	3
ECO 5310	Macroeconomic Analysis in the Global Economy	3
ECO 5347	Econometric Theory and Methods	3
ECO 5349	Causal Inference and Research Design	3
ECO 5001	Research Seminar	0
ECO 5002	Research Seminar	0
Economics Electives		
Selected courses are to be agreed upon by the student and the program Directors. Qualifying electives must be at the 5000 level or above. Recommended electives include:		12
ECO 5351	Data Science I	
ECO 5352	Data Science II	
ECO 5317	Contemporary Government and Business Relations	
ECO 5320	The Economics of Government	
ECO 5314	Seminar in Behavioral and Experimental Economics	
MS Thesis		
ECO 5V99	Thesis	6
Additional Elective Courses		
Any 5000-6000 level courses with program Directors' approval. Recommended subjects include: Health Policy and Administration (HPA), Public Health (PUBH), Sociology (SOC), and Statistics (STA)		9
Dissertation		
Dissertation Proposal (1-3 hours)		3
Dissertation (9-11 hours)		9
Total Hours		**60**

Program Completion Requirement

A student will be recognized as a candidate for the doctoral degree only after having completed the required and elective Economics coursework as well as the thesis to earn the MS in Economics, completed all residence and departmental requirements except for the dissertation, and received approval by the Dean of the Graduate School for their formal application for admission to candidacy for the degree. Candidates will then undergo the dissertation proposal process. As is customary, after having completed the dissertation research, the candidate must successfully make an oral defense of the dissertation.

Entrepreneurship

Department of Entrepreneurship

Department Chair: Peter Klein
Program Director: Matthew Wood
Associate Dean for Graduate Programs: Patsy Norman

- Entrepreneurship, Ph.D. (p. 35)

Entrepreneurship, Ph.D.

Program Description

The Ph.D. in Entrepreneurship is a research-based degree drawing on classic and modern literature in economics, sociology, psychology, political science, history, statistics, and other disciplines. It equips students to investigate the great questions confronting entrepreneurs, policymakers, and other actors. Students work closely with faculty mentors in developing an appreciation for theory, research methods, and the publication process. The doctoral program is personalized to reflect the intellectual interests of the students while capitalizing on the strengths of Baylor's entrepreneurship faculty. Students work directly with faculty mentors to produce and publish research, and the program aims to place graduates in faculty positions at highly ranked universities and similar institutions. The Ph.D. in Entrepreneurship uniquely emphasizes excellence in teaching and does so in a way that is consistent with Christian principles of stewardship. This includes required courses in pedagogy along with a mentorship plan that builds teaching skills. While the primary focus is entrepreneurship, students also receive training in strategic management and organization theory. The Department of Entrepreneurship is also home to the Baugh Center for Entrepreneurship and Free Enterprise, which studies the effects of public policy and institutions on entrepreneurship. Baylor University provides tuition remission for all admitted students. The Hankamer School of Business and the Department of Entrepreneurship provide a competitive annual stipend to doctoral students, as well as support in attending key conferences in entrepreneurship. Competitive summer research grants are available from the Baugh Center for Entrepreneurship to support research interests of doctoral students.

Admission Requirements

Applicants must hold a bachelor's degree from an accredited university or college. A Masters Degree from an accredited university or college is preferred. An acceptable score on the GMAT or GRE is required. Applicants must adhere to the general admissions requirements of Baylor's Graduate School for admission to Ph.D. level graduate studies. In general, applicants should meet the common body of knowledge (CBK) requirements for business degrees. CBK is sometimes referred to as business core courses. Students not meeting the CBK requirements can satisfy this requirement by satisfactorily completing the Integrated Management Seminars (BUS 5401 Business Frameworks and BUS 5602 Business Foundations II) and by completing MGT 5310 Management of Organizational Behavior.

Curriculum

The Entrepreneurship Ph.D. is a full-time, four-year, residential program. The first two years involve 36 hours of formal coursework, with the rest comprising independent research, teaching, and other activities. Besides required courses in entrepreneurship theory and research methods students take EDL 6302 Teaching and Learning in Higher Education. Teaching and Learning in Higher Education to develop an understanding of curricular issues, course development and content, teaching techniques, and learning theories. Upon completion of this course, students undergo a teaching apprenticeship during the second year of the program. During the third year in the program, students transition from apprentice to instructor of record for one course per semester. Admission to doctoral candidacy requires passing a comprehensive qualifying examination. Students also enroll in summer research practicums (6 hours) and complete three hours of prospectus research. After admission to candidacy, students complete nine hours of dissertation work. Completion of the program requires the production and defense of a dissertation on an important issue in entrepreneurship theory, history, policy, or practice, under the supervision of a faculty advisor and committee.

Code	Title	Hours
Entrepreneurship Required Courses		
ENT 6320	Seminar in Entrepreneurship	3
EDL 6302	Teaching and Learning in Higher Education	3
ECO 5349	Causal Inference and Research Design	3
ENT 6310	Seminar in Strategic Management	3
ENT 6340	Seminar in Research Methods	3
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	3
ENT 6330	Theoretical Perspectives in Strategy and Entrepreneurship	3
MIS 6320	Quantitative Methods in Information Systems Research	3
ENT 6350	Seminar in Organization Theory	3
MIS 6350	Conducting Effective Literature reviews: A Doctoral Seminar for pre-Dissertation Students	3
Research Practicum		
ENT 6V98	Entrepreneurship Research Practicum	6
Electives		6
Dissertation Credit		
ENT 6V00	Dissertation Proposal and Prospectus	3
ENT 6V99	Dissertation	9
Total Hours		**54**

Degree Plan

A formal degree plan will be developed in consultation with the advisor/committee. The recommended course sequence is as follows:

Course	Title	Hours
Year 1		
Fall		
ENT 6320	Seminar in Entrepreneurship	3
EDL 6302	Teaching and Learning in Higher Education	3
ENT 6340	Seminar in Research Methods	3
	Hours	**9**
Spring		
ENT 6350	Seminar in Organization Theory	3
MIS 6320	Quantitative Methods in Information Systems Research	3
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	3
	Hours	**9**
Summer		
ENT 6V98	Entrepreneurship Research Practicum	3
	Hours	**3**

Year 2		
Fall		
ENT 6330	Theoretical Perspectives in Strategy and Entrepreneurship	3
ECO 5349	Causal Inference and Research Design	3
Elective		3
	Hours	**9**
Spring		
ENT 6310	Seminar in Strategic Management	3
MIS 6350	Conducting Effective Literature reviews: A Doctoral Seminar for pre-Dissertation Students	3
Elective		3
	Hours	**9**
Summer		
ENT 6V98	Entrepreneurship Research Practicum	3
	Hours	**3**
Year 3		
Fall		
ENT 6V00	Dissertation Proposal and Prospectus	3
	Hours	**3**
Spring		
ENT 6V99	Dissertation	3
	Hours	**3**
Year 4		
Fall		
ENT 6V99	Dissertation	3
	Hours	**3**
Spring		
ENT 6V99	Dissertation	3
	Hours	**3**
	Total Hours	**54**

Program Completion Requirement

Students will be recognized as candidates for the doctoral degree only after having

1. passed the written comprehensive exam,
2. completed all residence and departmental requirements except the dissertation and
3. received approval by the Dean of the Graduate School of their formal application for admission to candidacy for the degree.

The comprehensive exam will take place during the summer following each student's second year of study. The comprehensive exam is written and will cover material from the five core ENT required courses (ENT 6310 Seminar in Strategic Management, ENT 6320 Seminar in Entrepreneurship, ENT 6330 Theoretical Perspectives in Strategy and Entrepreneurship, ENT 6340 Seminar in Research Methods, and ENT 6350 Seminar in Organization Theory) and three required quantitative methods courses (EDP 6360 Experimental Design I, EDP 6362 Applied Multiple Regression/Correlation Analysis in Education and MIS 6320 Quantitative Methods in Information Systems Research or approved equivalents). The candidate must also complete and defend successfully the dissertation at an oral examination.

School of Education

Dean: Shanna Hagan-Burke

Graduate programs in the School of Education seek to prepare students for professional roles in teaching, administration, school psychology, quantitative methods, gifted and talented, special education, applied behavior analysis, learning and development, and related areas. Each program emphasizes the development of an eclectic understanding of the educational process as well as a competency in a specific area. The balance between theory/research and practice leads to the development of a professional who can adapt to a variety of educational situations and effectively implement educational programs. Students will demonstrate not only high levels of academic ability but outstanding interpersonal skills, motivation, and dedication to the profession. Graduate degrees in the School of Education are offered through the School and the Departments of Curriculum and Instruction, Educational Leadership, and Educational Psychology.

The School of Education offers the

- Master of Arts in Teaching (M.A.T.).

The Department of Curriculum and Instruction offers the

- Master of Arts (M.A.),
- Master of Science in Education (M.S.Ed.),
- Doctor of Education (Ed.D.),
- Doctor of Philosophy (Ph.D.),
- Joint Master of Arts (M.A.) and Master of Divinity (M.Div.), and the
- Joint Master of Science in Education (M.S.Ed.) and Master of Divinity (M.Div.)

The Department of Educational Leadership offers the

- Master of Science in Education (M.S.Ed.),
- the Doctor of Education (Ed.D.), and
- the Doctor of Philosophy (Ph.D.).

The Department of Educational Psychology offers the

- Master of Arts (M.A.),
- the Master of Science in Education (M.S.Ed.),
- the Education Specialist (Ed.S.), and
- the Doctor of Philosophy (Ph.D.).

Admission

The general procedures for admission to graduate study are listed earlier in the Graduate Catalog. All applications for admission must be processed through the Graduate School and then forwarded to the appropriate department's Graduate Program Director in the School of Education for recommendation. The "major" on the application should list the department or certification area in which the student intends to study.

Applicants should consult the individual department sections in the School of Education for specific test requirements. The GRE General Test (or, where allowed by the department, GMAT) is required of most students applying for admission to any level of graduate study, including non-degree, in the School of Education. Scores must be received before any action will be taken on the application and before any coursework may be taken. The GRE is not required for admission into the Doctor of Education

(Ed.D.) in Learning and Organizational Change in the department of Curriculum and Instruction.

GPAs that are predictive of success are required for full admission without restrictions on the student's graduate work. In addition to these academic variables, students are evaluated on the basis of their writing skills and their background strengths, including the strength of their undergraduate institution and academic program, the diversity of their undergraduate experiences, and their professional experiences. A student's application may be strengthened by his/her professional development, diversity, and career focus. Specific criteria have been established to evaluate each of these categories, and an admissions committee makes the final decision concerning a student's admission.

Master of Arts and Master of Science in Education

The Master of Arts in Education requires a total of 30-36 semester hours, including the satisfactory completion of a thesis.

The Master of Science in Education requires the completion of a minimum of thirty-six semester hours of graduate work, twenty-one of which must be from a single department or in a specific certification program, and eighteen of which must be 5000 level or above. Departments may require more than the minimum, particularly for degrees related to certification or licensure. Please see the section of the catalog that describes departmental programs. The Department of Curriculum and Instruction offers the following programs: Specializations in informal education, instructional technology, language and literacy, math education, media literacy, science education, social studies education, urban education, and other content teaching fields. The Department of Educational Psychology offers the following programs: master of arts and master of science in education with specializations in assessment, research and statistics, learning and development, special education, gifted and talented, applied behavior analysis, and quantitative methods.

Master of Arts in Teaching

The Master of Arts in Teaching requires the completion of thirty-six semester hours of graduate work leading to teacher certification. Certification and the Master of Arts in Teaching degree may be pursued concurrently. Please see the section of the catalog that describes M.A.T. certification program options. The M.A.T. may be pursued as a joint degree program, with undergraduate seniors completing graduate-level work as part of their undergraduate degree program, if approved by their home department.

Master of Arts/Master of Divinity Master of Science in Education/Master of Divinity

The Master of Arts/Master of Divinity and the Master of Science in Education/Master of Divinity joint degrees link the faculties, resources, and education of two of Baylor's premier schools, School of Education and George W. Truett Theological Seminary. The program offers students an education that prepares them for careers in local congregations, in denominational leadership, in private school teaching and administration, or in some combination of these.

Education Specialist

The Educational Specialist degree (Ed.S.) is for students seeking a degree in school psychology. The basis of this degree is for students to study no less than 60 hours of graduate coursework in school psychology. The degree requires a full-year (minimum of 1200 hours) internship that aligns with the accrediting organizations in school psychology (i.e., National Association of School Psychologist, or the American Psychological Association). At the termination of the period of study, students must pass a comprehensive special field examination. Upon completion of the program, which includes passing the examination, the faculty of the School of Education will recommend that the University present the students with an Educational Specialist degree.

Doctor of Education

Admission requirements for the Doctor of Education Degree (Ed.D.) in the Departments of Curriculum and Instruction and Educational Leadership are outlined earlier in the Graduate Catalog.

Delivered by the Department of Curriculum & Instruction, the Doctor of Education Degree (Ed.D.) in Learning and Organizational Change prepares students to apply essential principles of education to manage the dynamics of organizational change. The program is designed for experienced educators and other professionals in learning and development roles interested in leading and managing positive change in school systems, corporations, governmental or non-governmental agencies, and community programs. The Ed.D. in Learning and Organizational Change is a 54-credit program that can be completed in 36 months or on a flexible schedule. The program consists of two on-campus immersion experiences and an innovative Problem of Practice dissertation.

Students may enroll in the Department of Educational Leadership upon completion of admission requirements and acceptance into the K-12 Education Leadership program. Preparation for Texas Superintendent Certification is part of the program; however, the primary intent of the degree is to prepare professionals with in depth understanding of leadership skills and knowledge important in leadership functions. Candidates are expected to learn to effectively frame and develop solution options for challenging complex problems of practice facing executive leadership in K-12 education. A minimum of sixty-five semester hours beyond the master's degree is required for completion of the program. The supervisory committee based upon the student's prior preparation and the student's performance on written and oral examinations will determine the total number of hours required above the minimum. At least thirty-three hours of work must be completed in the educational leadership—management core, twelve hours in disciplined inquiry, three hours in persuasive communication, and eleven hours in clinical experience and six hours in dissertation. Students may wish to also pursue an additional emphasis in a special 12-hour professional specialty/cognate area outside of K-12 leadership, with the approval of the committee, to support their major work.

Doctor of Philosophy

Students pursuing a Ph.D. in Educational Psychology are those interested in becoming instructors in higher education settings and competent researchers. Students pursuing a Ph.D. in School Psychology are those interested in becoming applied psychologists and competent scientist-practitioners who pursue academic careers or roles in schools, clinics, or other health service settings. Students must meet the admission requirements outlined earlier in the Graduate Catalog and must also meet the Department of Educational Psychology entrance requirements.

These requirements for the Doctor of Philosophy (Ph.D.) are outlined in more detail within the program descriptions in the Department of Educational Psychology. Students pursuing a Ph.D. in Curriculum and Teaching are those interested in becoming teachers, researchers, and leaders in the theories and practices that comprise the disciplines and sub-disciplines of curriculum and pedagogy. Students must meet the admission requirements outlined in more detail in the Department of Curriculum and Instruction section.

Master of Arts in Teaching with Teaching Certification

M.A.T. Graduate Program Director: Suzanne M. Nesmith

One graduate degree program is offered through the School of Education: Master of Arts in Teaching (M.A.T.).

The Master of Arts in Teaching (M.A.T.) is a School-wide residential program offering teacher certification. Based on Baylor's national award-winning teacher-education model, the M.A.T. provides thorough preparation through a program rich in faculty-guided field-based experiences.

Baylor undergraduates may pursue the M.A.T. as a joint degree program, with Baylor seniors taking up to 12 hours of graduate-level work as part of their undergraduate degree program, if approved by their home department. Students much first be admitted to the Graduate School and the M.A.T. program. Upon completion of the M.A.T., students will receive the bachelor's degree and M.A.T. simultaneously. If taking full advantage of the option, students could graduate within 12 months of their originally scheduled baccalaureate graduation. The M.A.T. is also available to graduates of Baylor and other universities as a stand-alone post-baccalaureate master's program offering initial and additional teacher certification.

Admission

To be fully admitted to the program, applicants must be accepted both by the Baylor Graduate School and the School of Education as an M.A.T. candidate. A passing score on the diagnostic TExES content exam (state certification exam) is also required for full admission as a candidate in the School of Education M.A.T. Educator Preparation Program.

Admission to the program is competitive and based on the following criteria:

1. Completed applications (Graduate School and School of Education)
2. Overall GPA of 2.75
3. Content Area GPA of 2.75
4. Completed content-specific coursework for middle and secondary education certifications
   a. 24 hours in content field with at least 12 of these hours at the upper level (junior or senior level coursework)
5. Interview
6. Writing sample (personal statement)
7. Passing score on diagnostic TExES (Texas Examinations of Educator Standards) content exam in teaching area
   a. For those seeking middle and secondary education certification, you must complete and earn a passing score on the diagnostic exam in your designated teaching area prior to admission to the M.A.T. program.
   b. For those seeking EC-6 Elementary certification, Twice Exceptionalities certification, or All Level Special Education certification, you must complete the diagnostic exam for all 5 core subject exams and earn a passing score on at least 3 of the 5 exams, with one of the passing scores being on the mathematics core subject exam. Additionally, all scores will be examined to determine the need for additional review, preparation, and retesting prior to admission to the M.A.T. program.

Certificate and Endorsement Programs

Certification and the Master of Arts in Teaching degree may be pursued concurrently.

Certification is through the State Board for Educator Certification and the awarding of a graduate degree from Baylor University does not mean the individual has been certified. For further information on certification, please contact the School of Education or the State Board for Educator Certification.

Certificate Options

- Twice Exceptionalities (All-Level Special Education and Gifted-Talented Supplemental certifications)
- Special Education (All-Level Special Education certification)
- Elementary (EC-6) Education (Early Childhood – Grade 6 General Education certification)
- Middle Grades Education (Grades 4-8 content-specific certification)
- Secondary Education (Grades 7-12 content-specific certification / 6-12 for physical science certification)

Content Areas (Middle and Secondary Education)

- Art
- Business and Finance
- English (English Language Arts and Reading)
- French
- History
- Life Science
- Mathematics
- Physical Science
- Physics/Mathematics
- Science
- Social Studies
- Spanish

- Twice Exceptionalities Certification - M.A.T. Degree Plan (p. 39)
- Special Education Certification - M.A.T. Degree Plan (p. 39)
- Elementary (EC-6) Education Certification - M.A.T. Degree Plan (p. 39)
- Middle Grades Education Certification - M.A.T. Degree Plan (p. 40)
- Secondary Education Certification - M.A.T. Degree Plan (p. 40)

Twice Exceptionalities Certification - M.A.T. Degree Plan

(All-Level Special Education and Gifted-Talented Supplemental certifications)

Only available as an initial certification.

Code	Title	Hours
Required Courses for MAT		
Complete required courses for MAT		
Required Courses for Certification Program		
EDP 5332	Human Growth and Development	3
EDP 5366	Psychology of Exceptional Children	3
EDU 5377	Applied Behavior Analysis	3
EDP 5361	Challenging Behavior and Developmental Disabilities	3
EDU 5650	Teaching Associate: Special Ed and Twice Exceptionalities	6
EDU 5371	Assessment of Students with Exceptionalities	3
EDU 5652	Internship: Special Education with Gifted Education	6
EDU 5354	Curriculum Differentiation	3
EDU 5374	Literacy for Learners with Exceptionalities	3
Gifted Education Elective		3
Total Hours		**36**

Special Education Certification - M.A.T. Degree Plan

(All-Level Special Education certification)

Only available as an initial certification.

Code	Title	Hours
Required Courses for MAT		
Complete required courses for MAT		
Required Courses for Certification Program		
EDP 5332	Human Growth and Development	3
EDP 5366	Psychology of Exceptional Children	3
EDU 5377	Applied Behavior Analysis	3
EDP 5361	Challenging Behavior and Developmental Disabilities	3
EDU 5650	Teaching Associate: Special Ed and Twice Exceptionalities	6
EDP 5379	(EDP 5379:: Education of Students with Mod/Severe)	3
EDU 5374	Literacy for Learners with Exceptionalities	3
EDU 5371	Assessment of Students with Exceptionalities	3
EDP 5662	Internship Special Education	6
EDU 5354	Curriculum Differentiation	3
Total Hours		**36**

Elementary (EC-6) Education Certification - M.A.T. Degree Plan

(Early Childhood through Grade 6 General Education certification)

Code	Title	Hours
Required Courses for MAT		
Complete required courses for MAT		
Required Courses for Certification Program		
EDC 5392	Issues in Diversity	3
EDC 5332	Mathematics in the Elementary Grades	3
EDC 5360	Advanced Elementary Science Curriculum	3

EDC 5300	Advanced Elementary Social Studies Methods	3
EDC 5304	Reading Intervention for Students	3
TED 4312	Methods of Teaching English as a Second Language	3
EDC 5690	Teaching Associate EC-6	6
EDC 5699	Graduate Teaching Internship	6
EDC 5318	Elementary Language Arts	3
EDC x3xx	Elective	3
Total Hours		**36**

Middle Grades Education Certification - M.A.T. Degree Plan

(Grades 4 – 8 content-specific certification)

Code	Title	Hours
Required Courses for MAT		
Complete required courses for MAT		
Required Courses for Certification Program		
EDC 5392	Issues in Diversity	3
or TED 4349	Critical Issues in Mathematics Education	
EDC 5303	Models of Teaching and Learning	3
EDC 5370	Applications of Technology to Teaching and Learning	3
TED 4312	Methods of Teaching English as a Second Language	3
Select one course from the following		3
TED 43xx	Content Curriculum	
EDC x3xx	Elective	
EDC 5691	Teaching Associate Middle Grades	6
EDC 5699	Graduate Teaching Internship	6
EDC x3xx	Elective	3
EDC x3xx	Elective	3
EDC x3xx	Elective	3
Total Hours		**36**

Secondary Education Certification - M.A.T. Degree Plan

(Grades 7 – 12 content-specific certification / 6 – 12 for physical science certification)

Code	Title	Hours
Required Courses for MAT		
Complete required courses for MAT		
Required Courses for Certification Program		
EDC 5392	Issues in Diversity	3
EDC 5303	Models of Teaching and Learning	3
EDC 5317	Special Techniques in Secondary Schools	3
TED 4312	Methods of Teaching English as a Second Language	3
Select one of the following:		3
TED 43xx	Content Curriculum	
EDC 53xx	Content Curriculum	
EDC 5363	Observation and Participation in Middle and Secondary Schools	3
EDC 5390	Seminar: Education	3
EDC 5699	Graduate Teaching Internship	6
EDC x3xx	Elective	3
EDC x3xx	Elective	3
EDC x3xx	Elective	3
Total Hours		**36**

Curriculum and Instruction

Department of Curriculum and Instruction

Chairperson: Trena Wilkerson
Graduate Program Director: Lakia M. Scott
Graduate Program Director, Ed.D.: Laila Sanguras

Four graduate degree programs are offered through the Department of Curriculum and Instruction: Master of Arts (M.A.), Master of Science in Education (M.S.Ed.) Doctor of Education (Ed.D.), and Doctor of Philosophy (Ph.D.). Two joint degrees, the M.A/M.Div. and the M.S.Ed./M.Div., are offered through an agreement with the George W. Truett Theological Seminary.

Graduates from the Baylor University School of Education with master's or doctoral degrees in Curriculum and Instruction are found throughout the world, occupying a variety of unique positions. Their successes are due in large measure to the quality of the program they completed at Baylor. These graduates reflect the mission of the School of Education, which is to prepare educators for leadership, research, instructional and other professional roles to meet the demands of a dynamic and culturally diverse world.

Goals of the Master's Programs

Students completing the master's in Curriculum and Instruction will demonstrate an understanding of:

1. The philosophical and historical foundations of curriculum,
2. Research methodologies in education,
3. Contemporary instructional strategies,
4. Issues and trends in curriculum and instruction, including issues of social justice in education, and
5. The relationship between curriculum, culture and diversity.

Goals of the Doctoral of Philosophy Program

Students completing the Doctor of Philosophy in Curriculum and Instruction will:

1. Demonstrate an in-depth understanding of the philosophical, socio-cultural, and historical foundations of curriculum and teaching from a global perspective,
2. Acquire significant knowledge of seminal and contemporary pedagogical and curricular theories and practices in order to impact the initial preparation and continued professional development of educators at all levels,
3. Critically evaluate quantitative, qualitative, and mixed methods research literature in the disciplines and sub-disciplines of curriculum and pedagogy,

4. Develop a depth and breadth of research knowledge and skills in order to design, conduct, and disseminate original research that impacts the theories and practices in education in order to address complex issues with innovation and creativity, and
5. Apply the knowledge, skills, and values required to become the next generation of scholars guiding the preparation of individuals for transformative global leadership in curriculum, teaching and learning.

Goals of the Doctor of Education Program

The emerging leaders who are engaged in the Ed.D. in Learning and Organizational Change program require a dynamic curriculum to equip them fully with the knowledge, mindsets, networks, skills, and practices for the sort of equilibrium-shifting work they strive to do, cultivating organizational change in their own professional context. Graduates of this program are emerging leaders who will:

1. Utilize a professional knowledge base that integrates practical and research-based knowledge to cultivate systemic change,
2. Address problems of practice by exploring multiple perspectives that lead to the development of meaningful and creative solutions, and
3. Build professional partnerships and develop local, national, and /or global networks through collaboration and communication.

- Curriculum and Instruction, M.A. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/school-education/curriculum-instruction/curriculum-instruction-ma/)
- Curriculum and Instruction, M.S.Ed. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/school-education/curriculum-instruction/curriculum-instruction-msed/)
- Joint Master of Arts/Master of Divinity - Master of Science in Education/Master of Divinity (p. 41)
- Learning and Organizational Change, Ed.D. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/school-education/curriculum-instruction/curriculum-instruction-edd/)
- Curriculum and Teaching, Ph.D. (p. 41)

Joint Master of Arts/Master of Divinity - Master of Science in Education/Master of Divinity

The Master of Arts/Master of Divinity and the Master of Science in Education/Master of Divinity joint degrees link the faculties, resources, and education of two of Baylor's premier schools, School of Education and George W. Truett Theological Seminary. The program offers students an education that prepares them for careers in local congregations, in denominational leadership, in private school teaching and administration, or in some combination of these. The M.S.Ed. is a 36 hour program in Department of Curriculum and Instruction with a 15 hour cognate and the M.A. is a 33 hour program with a 12 hour cognate and a thesis.

M.A./ M.Div. Degree Plan

Code	Title	Hours
Required Courses		
EDC 5303	Models of Teaching and Learning	3
EDC 5321	Contemporary Curriculum-Designing and Implementing	3
EDC 5370	Applications of Technology to Teaching and Learning	3
EDC 5348	Issues in Curriculum Development	3
EDC 5391	Social Foundations of Education	3
EDP 5335	Research in Education (or other approved courses)	3
Master's Thesis		
EDC 5V99	Thesis	6
Cognate Area		
Seminary courses or approved EDC courses		12
Total Hours		**36**

M.S.Ed. / M.Div. Degree Plan

Code	Title	Hours
Required Courses		
EDC 5303	Models of Teaching and Learning	3
EDC 5321	Contemporary Curriculum-Designing and Implementing	3
EDC 5370	Applications of Technology to Teaching and Learning	3
EDC 5348	Issues in Curriculum Development	3
EDC 5391	Social Foundations of Education	3
EDC 5335	Research in Algebraic Thinking	3
Electives		
EDC Course or other approved graduate course at the 5000-level		3
Cognate Area		
Seminary courses or approved EDC courses		15
Total Hours		**36**

Curriculum and Teaching, Ph.D.

The Doctor of Philosophy in Curriculum & Teaching prepares graduate students for university-based leadership in the field of Curriculum and Teaching. The degree requires a minimum of seventy semester hours of graduate work arranged in five blocks of courses:

I. Foundations of Education,
II. Curriculum and Teaching,
III. Research and Statistics,
IV. Cognate, and
V. Pro Seminar.

All Ph.D. in C&T students complete a fifteen-hour cognate that typically consists of course work from both inside and outside of the School of Education. Common cognate choices include mathematics, history, English, social studies, science, moral education, philosophy, literacy, curriculum theory, urban education, media literacy, informal education, and foundations of education. The degree plan may exceed 70 hours if students choose to complete additional courses.

Admission (Ph.D.)

Admission to the Ph.D. program in Curriculum & Teaching is selective. Admission is based upon student vocational and professional goals as well as background, skill sets/aptitudes, and dispositional factors that indicate potential success in the program. The expectations are an expressed commitment for the university-based preparation of future

teachers and other educators, promising academic aptitude, successful experience teaching in a K-12 setting, dispositions relevant to being an ethically-principled teacher educator/researcher, strong interpersonal and foundational communication skills (especially writing ability), and reasonable fit with available Baylor faculty resources. All applicants must submit scores from the General Test of GRE taken within the last five years, official transcripts of baccalaureate and master's degrees from regionally accredited institutions, a curriculum vita/resume, a professional goals statement, and three letters of recommendation. A writing sample may also be required after review of GRE writing score.

Admission is competitive and based on a review of the application materials. Preference in admissions is given to applicants who have prior K-12 teaching experience. The Department of Curriculum and Instruction Graduate Programs Director and the Graduate Faculty Committee conduct the review. The review may include an on-campus interview and/or an on-site writing sample.

Students are not admitted on probation to the Ph.D. program.

Ph.D. Degree Plan

Block I: Foundations of Education

Total hours required: 15

Code	Title	Hours
Required Courses		
EDC 5392	Issues in Diversity	3
EDC 6330	The History of American Education [1]	3
EDC 6331	Sociopolitical Contexts of Schooling	3
Approved Research Electives		
In addition to the above required hours, students choose six (6) hours from approved research electives such as:		6
EDC 6345	Christian Faith and Education	
EDC 6310	Seminar in Curriculum and Instruction (Philosophy of Education)	
EDC 6310	Seminar in Curriculum and Instruction [2]	
EDC 6390	Seminar: Education [2]	
EDC 5000 or EDC 6000 other approved foundations of education courses (See faculty advisor and GPD for approval.)		
Total Hours		**15**

[1] Or equivalent completed graduate social foundations course. Approval by GPD for substitution.

[2] May be taken three times for a maximum of 9 semester hours. Approval required from faculty advisor and GPD.

Block II: Curriculum and Teaching

Total hours required: 15

Code	Title	Hours
Required Courses		
EDC 5350	Teaching for Understanding	3
EDC 6311	Fundamentals of Curriculum	3
EDC 6312	Curriculum Inquiry and Analysis	3
EDC 6355	Concepts of Teaching and Teacher Education [1]	3
Approved Research Electives		
In addition to the above required hours, students choose three (3) hours from approved research electives such as:		3
EDC 6346	Mentoring and Supervision	
EDC 6372	Teaching and Learning in Online Environments	
EDC 6310	Seminar in Curriculum and Instruction [2]	
EDC 6390	Seminar: Education [2]	
EDC 5000 or EDC 6000 other approved curriculum and teaching graduate course (See faculty advisor and GPD for approval.)		
Total Hours		**15**

[1] Or equivalent completed graduate curriculum and teaching course. Approval by GPD for substitution.

[2] May be taken three times for a maximum of 9 semester hours. Approval required from faculty advisor and GPD.

Block III: Research Methodologies and Methods

Total hours required: 24

Code	Title	Hours
Required Courses		
EDC/EDP 6336	Qualitative Research and Data Analysis	3
EDP 6360	Experimental Design I [1]	3
EDC 6V99	Dissertation (Minimum of 9 hours required)	9
Approved Research Electives		
In addition to the above required hours, students choose nine (9) hours from approved research electives such as:		9
EDC/EDP 6339	Ethnographic Research Methods in Education	
EDC/EDP 6359	Mixed Methods Research Design and Analysis	
EDC 6358	Design Research	
EDP 6361	Experimental Design II	
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	
EDC/EDP 6370	Case Study Research Methods and Analysis in Education	
EDC 6390	Seminar: Education (Advanced Qualitative Research)	
EDC 5000 or EDC 6000 approved research methodology and methods graduate course (See faculty advisor and GPD for approval.)		
Total Hours		**24**

[1] Or equivalent completed graduate statistics course.

Block IV: Cognate Area Options

Total hours required: 15

Specific required courses in cognate area will be selected by students and their faculty adviser. Courses may be taught by a variety of Baylor departments. Examples of cognates include:

- Bilingual Education
- Curriculum Theory

- English Education
- Foundations of Education
- Informal Education
- Instructional Technology
- Literacy and Reading Education
- Mathematics Education
- Media Literacy
- Qualitative Research
- Science Education
- Social and Cultural Studies Education
- Urban Education

Block V: Professional Development Seminar

Code	Title	Hours
Required Course		
EDC 6101	Professional Seminar	1
Total Hours		**1**

Total Hours Required: 70

Total number of hours in the program: 70

The Ph.D. Degree plan is often modified during advisement on an individual basis to meet each student's needs. The student's faculty advisor with approval from the GPD may submit official course petition requests for review.

Educational Leadership

Department of Educational Leadership

Acting Chairperson: Jeffrey Petersen

Mission

The primary mission of the department is to prepare quality leadership for elementary and secondary schools, school districts, colleges, universities, and sport settings.

- School Leadership and Principal Certification Preparation, M.A. (p. 43)
- Higher Education and Student Affairs (HESA), M.S.Ed. (p. 44)
- Higher Education Studies and Leadership 2-3 Masters/Ph.D. Student Pathway (p. 45)
- Sport Management (SPM), M.S.Ed. (p. 45)
- K-12 Educational Leadership, Ed.D. (p. 46)
- Higher Education Studies & Leadership, Ph.D. (p. 48)

School Leadership and Principal Certification Preparation, M.A.

The hybrid, dual-track M.A. in School Leadership is for emerging public and independent school leaders across Texas and the United States. This 30-hour program will annually equip and connect up to 30 teachers and administrators to lead for flourishing. Grounded in Baylor's unambiguously Christian mission, leaders will attend to their own spiritual, mental, emotional, relational, professional, and physical well-being so that they will lead humbly, do justice, and catalyze growth in colleagues and students. All students will complete six core classes. Three classes are track-specific and will meet the needs of those seeking Texas principal certification, and those who do not require that certification because they are serving in independent schools or other states. The program will consist of three on-campus intensive courses, six virtual job-embedded courses, and a leadership internship that will allow leaders to remain in their current professional roles while completing this degree in 18 months. Students seeking Texas principal certification will submit all materials for certification throughout the course of the program. The degree will culminate in a capstone research course that will require leaders to apply improvement science tools to address adaptive problems of practice in the leaders' current school contexts.

Program Distinctives

Grounded in Christ: The Baylor program is grounded in Christ, theory, and practice. As Christians, our work is animated by our faith, and we bring that mission to everything we do. We teach and lead for human flourishing because we believe our students and colleagues are made in the image of God. Our role as school leaders is to walk alongside others as we help them become all that God created them to be. Sound educational theory informs our inquiry and practice as we seek to serve others well and holistically.

Diverse Schools: M.A. students will learn about all school contexts as public and independent school leaders work alongside one another on common problems of practice. The diverse school contexts in which M.A. students serve will enrich the experience of the cohort model as we learn from the adaptive challenges and opportunities of particular contexts.

Hybrid Classes: The M.A. is structured to offer a hybrid form of learning that maximizes connection and convenience. Face-to-face on-campus intensives will build relationships that will flourish as we also work virtually from our own school contexts. The program will launch with a nine-day intensive residential experience. This will support the virtual collaboration that will occur through weekly synchronous online sessions and asynchronous work.

Capstone Research: The culminating experience for MA students will be a capstone research project. Students will conduct focused research on solving a problem of practice at their school. Using improvement science, leaders will identify problems of practice in their school context, identify possible solutions, and through an iterative process will execute, evaluate, and present the results of their solutions.

Requirements

To be considered for the program candidates must

1. submit official transcript(s) of all prior undergraduate and graduate coursework,
2. have at least two years of service in public or independent schools, and for Texas certification, you must hold a valid teaching certificate and have two years of teaching experience,
3. submit a letter of intent, no longer than three pages, describing why you want to pursue a degree in school leadership and believe you are a good fit for Baylor's MA in School Leadership,
4. submit two letters of recommendation from individuals who know you and can speak to your educational or professional experience, and
5. submit a current resume.

For Texas principal certification: Candidates will need to pass the TExES Principal (268) and complete the Performance Assessment for School Leaders (PASL) to obtain a standard principal certification.

Courses

Code	Title	Hours
EDL 5345	Fundamentals of School Leadership	3
EDL 5301	Christian Faith and P-12 Educational Leadership	3
EDL 5300	Research Applications in Educational Leadership	3
EDL 5302	Instructional Leadership	3
EDL 5363	Administrative Theory and Educational Leadership	3
EDL 5353	The Principalship	3
EDL 5V64	Internship in School Administration	3
EDL 5359	School Law and Governance	3
EDL 5344	School Business Management and Finance	3
EDL 5303	Capstone in Educational Leadership	3
Total Hours		**30**

Transfer Credits

A maximum of six credit hours may be transferred from an accredited institution toward the M.A. in School Leadership. Credit for graduate course work transferred from other universities is subject to the following provisions:

1. the work must be equivalent to Baylor graduate-level courses and must have been completed while a student was enrolled in good standing as a graduate student;
2. the work must have been done within five years prior to matriculation into the master's degree program;
3. the school from which the credits are transferred must be accredited by a regional accreditation agency;
4. the student must have earned a letter grade of "B" or above—audited courses or courses taken for "pass/fail" credit will not transfer;
5. none of the transfer course work consists of extension or workshop courses; and
6. petition for transfer of credit occurs after enrollment in the Graduate School.

Courses taken at Baylor as a "transfer of credit," post baccalaureate, or non-degree graduate student may be petitioned as transfer credit toward a graduate degree only after admission to a Baylor graduate program.

Higher Education and Student Affairs (HESA), M.S.Ed.

The Higher Education & Student Affairs program curriculum places emphasis on developing student affairs educators who are able to apply theories of college student development, organization, and administration to higher education environments. In addition, because of Baylor's unique position as a Christian research university, students explore the role of faith-based colleges and universities in U.S. higher education.

Each fall cohorts of approximately ten full-time (and a small number of part-time students) are typically enrolled. Students come from various large public universities, small liberal arts colleges, and private institutions within the United States and occasionally from abroad.

Graduates serve at institutions across the country and work in a variety of higher education positions such as student affairs, enrollment management, academic advising, and academic support programs.

The application deadline for fall admission each year is January 1. Applications by December 1 are encouraged when possible. A completed application consists of:

1. an application to the Baylor University Graduate School and application fee;
2. official transcripts from any institution of higher education attended;
3. official Graduate Record Exam (GRE) scores;
4. three letters of recommendation; and
5. a statement of interest and resume.

Each element of the application packet is considered. Although there are no minimum requirements for admission, the faculty recommends a minimum undergraduate grade point average of 3.0, a GRE combined score of at least 300, and a GRE analytical score of at least 4.0. Full-time students are required to have a graduate apprenticeship that extends the classroom experience to day-to-day practice.

Courses in the program include the following:

Code	Title	Hours
EDL 5100	Professional Seminar in Higher Education and Student Affairs	1
EDL 5379	Foundations & History of Higher Education Leadership	3
EDL 5370	Psychosocial Development in College Students	3
EDL 5371	Cognitive-Structural Development in College Students	3
EDL 5372	Culture and Organization of Higher Education	3
EDL 5394	Planning, Budgeting, & Human Resources in Higher Education	3
EDL 5273	Person-Environment Theories	2
EDL 5300	Research Applications in Educational Leadership	3
EDL 5336	Qualitative Research in Higher Education	3
EDP 5329	Counseling Theories and Techniques	3
EDL 5391	Cultural Issues in Higher Education	3
EDL 5374	Moral and Faith Development in College Students	3
EDL 5392	Higher Education & the Law	3
EDL 5399	Faith-Based Higher Education	3
EDL 5378	Capstone Course: Special Problems in Student Services Leadership	3
or EDL 5V99	Thesis	
Total Hours		**42**

Transfer

A maximum of six semester hours may be transferred from an accredited institution toward a master's degree. Credit for graduate course work transferred from other universities is subject to the following provisions:

1. the work must be equivalent to Baylor graduate-level courses and must have been completed while a student was enrolled in good standing as a graduate student;
2. the work must have been done within five years prior to matriculation into the master's degree program;
3. the school from which the credits are transferred must be accredited by a regional accreditation agency;
4. the student must have earned a letter grade of "B" or above---audited courses or courses taken for "pass/fail" credit will not transfer;
5. none of the transfer course work consists of extension or workshop courses; and
6. petition for transfer of credit occurs after enrollment in the Graduate School.

Courses taken at Baylor as a "transfer of credit," post baccalaureate, or non-degree graduate student may be petitioned as a transfer credit toward a graduate degree only after admission to a Baylor graduate program.

Capstone Case Study or Thesis

Every HESA master's student must partake in a culminating experience, whether in the form of taking the capstone course and assigned case study analysis or in the form of a thesis project. The case study analysis is incorporated into the capstone course, while the thesis project is conducted in lieu of taking the capstone course.

The thesis is designed to provide students with a deep and meaningful research experience. Students must apply and receive permission from the faculty program director of the HESA program before beginning thesis work. HESA theses involve completed research resulting in a journal article or its equivalent. This paper is regarded as a master's thesis. Students can select from one of two options for their thesis. Although both options result in a journal article, one option involves joining a faculty research project, while the other option involves proposing an independent research project.

Higher Education Studies and Leadership 2-3 Masters/Ph.D. Student Pathway

Baylor students who complete the Higher Education and Student Affairs masters program are eligible to apply for a special 2-3 program that allows them to obtain their Higher Education Studies and Leadership Ph.D. in three years by transferring one year of credit from their master's program. The first and second years, the student will then take the following courses. In the third and final year, the student will complete their dissertation.

Course	Title	Hours
Fall Semester 1 or 2		
EDL 6305	Ethics and Values in Educational Leadership	3
EDL 6385	Higher Education--Business and Finance	3
EDL 6302	Teaching and Learning in Higher Education	3
Research Elective (2 courses)		6
General Elective (1 course)		3
	Hours	**18**
Spring Semester 1 or 2		
EDC 6345	Christian Faith and Education	3
EDL 6335	Research Practicum in Education	3
EDL 5375	Sociology of Higher Education	3
Research Elective (1 course)		3
Select one of the following Independent Study[1] or Internship Courses[2]:		1-9
EDL 5V95 or EDL 6V95	Special Problems in Education or Special Problems in Educational Leadership	
EDL 6V64	Internship in Educational Leadership	
	Hours	**13-21**
Summer 1a and 2a		
EDP 5334	Statistical Methods	3
EDL 6363	Advanced Studies in Educational Leadership	3
	Hours	**6**
Summer 1b		
EDL 6306	Student Success in Higher Education	3
	Hours	**3**
Summer 2b		
EDL 6V95	Special Problems in Educational Leadership	2
	Hours	**2**
Year 3		
Fall-Spring-Summer Semester		
In the third and final year, the student will complete their dissertation:		7
EDL 6V99	Dissertation [3]	
	Hours	**7**
	Total Hours	**49-57**

[1] The student will work with a professor to produce a publishable journal article or professional presentation.

[2] The student works with an administrative unit to gain practical experience in a particular area.

Sport Management (SPM), M.S.Ed.

This graduate program trains professionals for service in all sectors of the sports enterprise by teaching specific management skills with unique sport applications in the areas of finance, personnel management, legal issues, marketing, public relations and facility or event management. The program curriculum and faculty seek to combine current research in this field with practical professional setting applications with an emphasis upon sport in the interscholastic and intercollegiate setting.

Tracing back a strong history and tradition to a founding in 1985, the Baylor Sport Management Graduate Program boasts a strong alumni base and network, and a curriculum that is focused upon ethical decision making. This 36 credit hour, master's degree program provides an on-campus delivery model with small classes taught by leading scholars and professional practitioners. All students are trained to engage in research and creative inquiry within the sport setting, with active participation in national and international level conferences by students highly encouraged. This program culminates with six credit hours of field work

through supervised work experience via internships or practica or through supervised research experience via completion of a thesis.

Program Application

Application to the program is made online through the Baylor Graduate School, and includes:

1. completion of the application forms and submission of any required application fees;
2. the submission of official transcripts from all undergraduate institutions with a benchmark GPA of 3.0 or above on a 4 point scale;
3. the submission of official GRE or GMAT results with a benchmark score of the 50th percentile or above on the verbal and quantitative areas;
4. three letters of recommendation from academic or professional sources;
5. a personal written statement indicating the rationale for pursuing the degree; and
6. a resume summarizing educational, professional and service experience.

Admission decisions are made on a rolling basis, with application materials reviewed in a holistic manner by the admissions committee. While the majority of students begin the program in the fall term, admission for the spring or summer terms is possible. Applications for the fall term should be submitted prior to March 1, spring term applications should be made by October 1, and summer applications by January 1.

A limited number of graduate assistantships is available that can provide tuition remission and stipend support within this program. The application for these graduate assistantships within the program and/or partnering agencies can be obtained online from the program website.

Comprehensive Examinations

A written comprehensive examination has been established as an evaluation measure for all degree seeking students in the program for both internal assessment and for reporting to external agencies. This examination is completed typically either during the final semester of fieldwork after the completion of the non-field work program of study, or during the final semester of academic coursework prior to the completion of field work portion of the curriculum. The examination includes content from the Research and Ethics Core courses and from the general core courses. Students not passing their initial attempt of the comprehensive examination will be eligible to participate a second time in during a subsequent semester, but may not move on to complete (defend) a thesis or culminating field work until after the comprehensive examination is passed. Before retaking the comprehensive examination, students should consult with their program advisor, who may require the completion of additional coursework or other additional study. Students who fail the comprehensive examination the second time will be dropped from candidacy for the degree.

Sport Management

Code	Title	Hours
Required Courses		
Research and Ethics Core		
EDP 5335	Research in Education	3
EDP 5334	Statistical Methods	3
or STA 5300	Statistical Methods	
SPM 5398	Contemporary Ethical Issues in Sport	3
Field Experience Core		
Select 6 semester hours from the following:		6
SPM 5V90	Internship in Sports Mgt.	
SPM 5V94	Practicum in Sports Mgt.	
EDL 5V99	Thesis	
General Core		
Select 21 semester hours from the following:		21
SPM 5327	Financial Management in Sport	
SPM 5328	Athletic Fundraising and Development	
SPM 5336	Sport Marketing	
SPM 5338	Public Relations in Sport	
SPM 5341	NCAA Policies & Procedures	
SPM 5372	Legal Issues in Sport	
SPM 5373	Sport Management	
SPM 5374	Sport in the Social Context	
SPM 5375	Governance in Sport	
SPM 5376	Facility and Event Management	
HP 5370	Sport Psychology	
HP 5377	Issues and Trends in Human Performance and Sport Management	
Total Hours		**36**

K-12 Educational Leadership, Ed.D.

The Doctor of Education (Ed.D.) Degree in K-12 Educational Leadership is a cohort-based practitioner-oriented doctoral program that builds upon Baylor's historic mission to educate men and women for worldwide leadership and service. Designed for the dedicated working education professional, the program prepares highly qualified practitioners in cohort settings to lead K-12 education institutions, while refining skills for executive positions in public, Christian, and private educational systems or agencies. The curriculum provides current and future educational leaders with authentic learning experiences, appropriate advanced knowledge and skills, opportunities for reflection and progressive mentoring to enable success in challenging leadership K-12 educational leadership positions. In particular, the program's design focuses on preparing educational leaders to

a. lead change through confronting complex organizational problems,
b. systemically identify and propose high-potential solutions, and
c. organize appropriate actions to achieve such solutions.

Academic rigor and practical clinical experiences are balanced with challenging courses to address contextual problems of practice. Support for students is based on competent mentorship, camaraderie and collegial relationships.

The program integrates coursework and clinical practice addressing organizational structure, best practices, and data informed decision-making in educational settings. Specific learning outcomes are integrated throughout the curriculum and clinical experiences. A total of 65 credit hours of graduate work above the Master's Degree are required for the degree. The degree plan may exceed 65 hours if students choose to complete additional courses, or undertake optional 12 credit hour

program specialties/cognates (e.g. curriculum and instruction or educational psychology).

Admission

Admission to the Ed.D. Degree program in K-12 Educational Leadership is selective, based upon student vocational aspirations and a variety of backgrounds, skill sets/aptitudes, and dispositional factors that project potential for successful completion of the program and subsequent success as a transformational K-12 leader. Applicants are sought who are already addressing educational/professional issues or who are motivated to gain the skills and knowledge required to address the complex issues and problems confronting leaders. Therefore, candidates with leadership experience and the demonstrated motivation to serve and lead will receive priority consideration for admission.

All applicants must submit a letter of application, certified university transcripts documenting all degrees conferred, three targeted professional reference letters, current professional resume, and other evidentiary documents. Finally, upon receipt of the above documentation, selected qualified applicants will be invited to participate in two activities at the University:

1. a structured interview with an admissions committee (composed of faculty and practitioners) and
2. the controlled-situation production of a professional writing sample of 1000-1500 words.

Degree Plan

Program component coursework and related experiences involve:

Block I: Educational Leadership-Management Core (33 Hours)

Students will engage in studies of advanced educational law; politics, policy and governance; school finance; trends in educational leadership; advanced studies for school executives; curriculum management and evaluation; conflict management and resolution; visioning, planning, and acquisitions of 21st century school facilities; ethics and values in educational leadership; and state, national, and international education systems.

Code	Title	Hours
EDL 6V95	Special Problems in Educational Leadership (Conflict Management and Resolution)	3
EDL 5305	International and Comparative Education	3
EDL 5344	School Business Management and Finance	3
EDL 5355	Transforming Learning Environments: School Facility Planning	3
EDL 6303	Seminar: Curriculum Management and Evaluation	3
EDL 6304	Seminar: Politics, Policy and Governance of Education	3
EDL 6305	Ethics and Values in Educational Leadership	3
EDL 6310	Organizational Behavior and Leadership	3
EDL 6350	Seminar: School Leadership	3
EDL 6352	Trends in Educational Thought	3
EDL 6359	Advanced Studies in Education Law	3
Total Hours		**33**

Block II: Disciplined Inquiry (18 Hours)

Learning to carefully frame complex problems facing school leadership, be savvy consumers of research in support of problem analyses and data informed decision-making, use data visualization strategies that help clarify and persuasively pose high-potential solutions is the essence of student experiences for disciplined inquiry, qualitative methods: case study analysis, and examination of writing methods and methodology.

Code	Title	Hours
EDP 5320	Survey of Quantitative Methods	3
EDL 6312	Systemic Inquiry through Data Analytics	3
EDL 6380	Technology in Educational Leadership	3
EDL 6309	Framing K-12 Problems for Inquiry	3
EDL 6V95	Special Problems in Educational Leadership (01 Examination of Methods and Methodology (39716))	3
EDL 6V95	Special Problems in Educational Leadership (02 Qualitative Methods – Case Study Analysis (38230))	3
Total Hours		**18**

Block III: Persuasive Communications (3 Hours)

Competences in effective oral and written persuasive communications are necessary skills for successful leaders.

- CSS 5320 Leadership and Persuasion

Block IV: Clinical Experience (5 Hours)

Students will have structured program-keyed clinical experiences learning to frame and address complex problems in educational settings that include working 1-1 with prominent educational leaders as mentors across much of the program. This clinical experience will generally serve as a basis for the dissertation.

- EDL 6V20 Clinical Experiences for Educational Leaders

Block V: Dissertation (6 Hours)

Candidates complete a capstone experience/dissertation-in-practice documenting their efforts to address real-life complex problems of practice, analyze values, persuasively present data-based solution options to a superintendent of schools and policy body/board or agency head, and develop a plan for appropriate implementation.

- EDL 6V99 Dissertation

Total Number of Hours in the Program: 65 hours (54 hours of coursework + 5 hours of clinical experience + 6 hours of dissertation). The degree plan may be modified during advisement on an individual basis to meet each student's needs.

Students are admitted as a candidate for the Doctor of Education degree only after they have passed the program Milestones 1, 2, 3 and have passed the Dissertation Proposal.

- Milestone 1: Qualifying Paper, Summer of Year 2
- Milestone 2: Chapter 1 of the Dissertation in Practice, Fall of Year 2
- Milestone 3: Proposal Chapters 1, 2, 3 of the Dissertation in Practice and approval of Proposal, Summer of Year 3

- Milestone 4: Completion of the Dissertation in Practice and successful defense, Spring of Year 3

No foreign language requirement

Higher Education Studies & Leadership, Ph.D.

The Doctor of Philosophy in Higher Education Studies & Leadership educates scholars and scholar-practitioners who desire to have meaningful, lasting influence on higher education. The program is uniquely balanced between research, academic rigor, and hands-on professional experience. Students entering the program can expect to be professionally challenged through their apprenticeships and academically challenged throughout the course sequence. The program is small and built on the idea that a great doctoral education stems from great mentorship. The program provides support, camaraderie, and debate as students come together from across the nation, representing a great diversity of regional and cultural world views.

Higher Education is a sophisticated enterprise, and the future scholars and leaders of higher education must be able to integrate research methodologies, complex critical thinking, and administrative responsibilities to foster meaningful change. Therefore, the Ph.D. in Higher Education Studies & Leadership has extensive learning outcomes woven throughout the curriculum. The degree requires 72 semester hours of graduate work arranged in eight blocks of courses. The degree plan may exceed 72 hours if students choose to complete additional courses.

Admission

Admission to the Ph.D. program in Higher Education Studies & Leadership is selective. Admission is based upon student vocational goals as well as a variety of background, skill sets/aptitudes, and dispositional factors that indicate potential success in the program. A hallmark of this program is the integration of Christian faith and learning, and students are expected to model this outcome.

All applicants must submit scores from the General Test of the GRE taken within the last five years, official transcripts of baccalaureate and master's degrees from regionally accredited institutions, a curriculum vita/resume, a professional goals statement, three letters of recommendation, and a writing sample.

Degree Plan

Block I: Higher Education Core (15 Hours)

Code	Title	Hours
EDL 5379	Foundations & History of Higher Education Leadership	3
EDL 6305	Ethics and Values in Educational Leadership	3
EDL 6302	Teaching and Learning in Higher Education	3
EDC 6345	Christian Faith and Education	3
EDL 5375	Sociology of Higher Education	3
Total Hours		**15**

Block II: Studies and Leadership in Higher Education (21 Hours)

Code	Title	Hours
EDL 5372	Culture and Organization of Higher Education	3
EDL 5392	Higher Education & the Law	3
EDL 5399	Faith-Based Higher Education	3
EDL 6385	Higher Education--Business and Finance	3
EDL 6363	Advanced Studies in Educational Leadership	3
EDL 6306	Student Success in Higher Education	3
EDL 6304	Seminar: Politics, Policy and Governance of Education	3
Total Hours		**21**

Block III: Research and Statistics (15 Hours)

Code	Title	Hours
EDL 5300	Research Applications in Educational Leadership (required only for students who have not already taken a similar course)	3
EDP 5334	Statistical Methods (If the student has already taken a master's level statistics course, they will be required to take either EDP 6360 Experimental Design I or EDP 6362 Applied Multiple Regression/ Correlation Analysis in Education.)	3
EDL 5336	Qualitative Research in Higher Education (required)	3
EDL 6335	Research Practicum in Education (required)	3
In addition to the above required R&S courses, students will choose 3 to 6 hours (depending on whether the student needs to take EDP 5334) from the following (in consultation with his or her advisor). The courses chosen should assist with the publication of the dissertation. In addition, students can use their cognate or elective hours to take additional research courses:		3-6
EDP 5340	Measurement and Evaluation	
EDP 6360	Experimental Design I	
EDP 6361	Experimental Design II	
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	
EDP 6337	Psychometric Theory and Test Construction	
EDL 6370	Seminar in American Educational Thought	
EDC 6339	Ethnographic Research Methods in Education	
Total Hours		15

Block IV: Electives/Cognate (9 Hours)

Students may take nine hours of their choice from within the department or across the university. We particularly encourage taking courses outside the School of Education that may expose students to other fields within the university. For instance, students may wish to take additional courses in management from the business school, particular methods courses from a particular discipline (e.g. history or sociology), or courses about education found in other disciplines (e.g., sociology of education, philosophy of education).

Block V: Professional Independent Study or Internship (3 Hours)

Code	Title	Hours
Select one of the following:		3
EDL 6V64	Internship in Educational Leadership	
EDL 5V95	Special Problems in Education	
EDL 6V95	Special Problems in Educational Leadership	
Total Hours		**3**

Block VI: Comprehensive Exam (2 Hours)

- EDL 6V95 Special Problems in Educational Leadership

Block VII: Dissertation (7 Hours)

- EDL 6V99 Dissertation

Total Number of Hours in the Program: 72 hours (65 hours of course work + 7 dissertation hours). The degree plan may be modified during advisement on an individual basis to meet each student's needs.

Educational Psychology

Department of Educational Psychology

Chairperson: Todd Kettler

The Department of Educational Psychology offers graduate courses leading to:

I. **Master of Science in Education (M.S.Ed.)**
A minimum of thirty-six semester hours of graduate work, twenty-one of which must be in Educational Psychology, and eighteen of which must be 5000 level or above. A specialization in gifted and talented, is available with this degree. More information regarding course requirements are included in the program description.

II. **Master of Science in Education (M.S.Ed.) with Concentration in Applied Behavior Analysis**
A minimum of thirty-six hours of graduate work, twenty-one of which include coursework in applied behavior analysis. All coursework must be 5000 level or above.

III. **Master of Arts (M.A.)**
Thirty semester hours of graduate courses including three hours of thesis and completion of a satisfactory defense. A quantitative specialization is available with this degree. Other requirements must be met as specified for all other master's degrees.

IV. **Master of Arts (M.A.) with Concentration in Applied Behavior Analysis**
A minimum of thirty-six hours of graduate work, including three hours of thesis and completion of a satisfactory defense. This program includes twenty-one hours of coursework in applied behavior analysis. All coursework must be 5000 level or above.

V. **Master of Arts (M.A.) with Concentration in Twice-Exceptionalities**
A minimum of thirty hours of graduate work, including three hours of thesis and completion of a satisfactory defense. This program includes eighteen hours of required coursework and twelve hours of elective courses.

VI. **Education Specialist (Ed.S.) in School Psychology**
The Education Specialist degree requires a minimum of sixty graduate hours and prepares students for practice as a school psychologist (or Licensed Specialist in School Psychology in Texas). More information regarding admission and other course requirements are included in the degree program description.

VII. **Doctor of Philosophy (Ph.D.) in Educational Psychology**
The Doctor of Philosophy in Educational Psychology requires a minimum of seventy-two graduate hours. Students take 39 hours in required core courses and 33 hours in one or more specialization areas: applied behavior analysis, gifted and talented, special education, or quantitative methods. More information regarding admission and other course requirements are included in the program description.

VIII. **Doctor of Philosophy (Ph.D.) in School Psychology**
The Doctor of Philosophy in School Psychology requires a minimum of 101 hours of academic course work, practica, and research. It typically consists of four full years of graduate study on campus followed by a culminating internship.

IX. **Graduate Minor in Educational Psychology**
The graduate minor in educational psychology focuses on Research Methods and Data Analysis. It is available for students enrolled in any master's or doctoral program. Students must complete twelve semester hours of graduate courses (including any prerequisite courses), which must include EDP 6360 Experimental Design I and EDP 6362 Applied Multiple Regression/Correlation Analysis in Education. Two additional courses are selected with the approval of the Graduate Program Director in the Department of Educational Psychology.

Please note the following important information regarding application for admission:

1. Contact the Graduate School to begin the application process.
2. All aspects of the application must be completed by the deadline. If everything is not submitted, the application file is not complete and will not be considered.
3. Applicants submitting their materials by the admission deadline may be contacted for an interview. Following the interview, applications will be considered and applicants will be notified of the results.
4. Prospective students who wish to begin in summer or fall are encouraged to apply by February 1 to increase their chances of obtaining scholarships or an assistantship; students who wish to begin a program in the spring are encouraged to complete an application by Oct. 1.

- Educational Psychology, M.A. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/school-education/educational-psychology/educational-psychology-ma/)
- Educational Psychology, M.S.Ed. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/school-education/educational-psychology/educational-psychology-msed/)
- School Psychology, M.S. (p. 49)
- Education Specialist in School Psychology, Ed.S. (p. 50)
- Educational Psychology, Ph.D. (p. 51)
- School Psychology, Ph.D. (p. 53)

School Psychology, M.S.

Non-terminal M.S. in School Psychology

Students pursuing the Doctor of Philosophy in School Psychology degree are encouraged to apply for the non-terminal M.S. The non-terminal M.S.

option is available only to students pursuing the Doctor of Philosophy in School Psychology degree.

The non-terminal M.S. degree requires completion of 45 graduate-level credit hours, including all the following courses:

Code	Title	Hours
Required Courses		
EDP 5327	Educational Evaluation	3
EDP 5328	Psychological Assessment of Children and Adolescents I: Cognitive	3
EDP 5337	Psychological Assessment of Children and Adolescents II: Psychoeducational	3
EDP 5340	Measurement and Evaluation	3
EDP 5341	Professional Practice, Law, and Ethics for School Psychologists	3
EDP 5356	Psychological Interventions with Children and Adolescents I: Behavior	3
EDP 5360	Psychological Interventions with Children and Adolescents II: Counseling	3
EDP 5362	Psychological Interventions with Children and Adolescents III: Academic	3
EDP 5367	Developmental Psychopathology	3
EDP 5370	Consultation, Collaboration, and Family-School Partnerships	3
EDP 5393	Cultural Issues with Children and Families	3
EDP 5394	Psychological Assessment of Children and Adolescents III: Social-Emotional	3
EDP 5V78	Practicum in School Psychology	3
Select 6 hours from the following research and statitics courses		*6*
EDP 6360	Experimental Design I	
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	
EDP 6365	Latent Variable Models in Education	
EDP 6366	Item Response Theory	
Total Hours		**45**

Education Specialist in School Psychology, Ed.S.

Director: Dr. Kelsey Ragan

The Educational Specialist (Ed.S.) degree program is designed for individuals who are interested in practicing psychology in school-based settings. The program consists of two full years of graduate study followed by a third year of internship. The program is fully accredited by the National Association of School Psychologists (NASP) and is designed to comply with the Licensed Specialist in School Psychology standards set by the Texas States Board of Examiners of Psychologists. The Ed.S. degree program policies and operating procedures are detailed in a handbook that is provided to each student upon enrollment. This program does not require a foreign language.

Recommended Sequence of Coursework

Elective course must be approved by advisor.

Course	Title	Hours
First Year		
Fall Semester		
EDP 5328	Psychological Assessment of Children and Adolescents I: Cognitive	3
EDP 5340	Measurement and Evaluation	3
EDP 5341	Professional Practice, Law, and Ethics for School Psychologists	3
EDP 5366	Psychology of Exceptional Children	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**15**
Spring Semester		
EDP 5333	Psychology of Learning, Cognition, and Affect	3
EDP 5337	Psychological Assessment of Children and Adolescents II: Psychoeducational	3
EDP 5360	Psychological Interventions with Children and Adolescents II: Counseling	3
EDP 5367	Developmental Psychopathology	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**15**
Summer Semester		
EDP 5393	Cultural Issues with Children and Families	3
EDP 5356	Psychological Interventions with Children and Adolescents I: Behavior	3
	Hours	**6**
Second Year		
Fall Semester		
EDP 5362	Psychological Interventions with Children and Adolescents III: Academic	3
EDP 5394	Psychological Assessment of Children and Adolescents III: Social-Emotional	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**9**
Spring Semester		
EDP 5327	Educational Evaluation	3
EDP 5346	Therapeutic Intervention	3
EDP 5370	Consultation, Collaboration, and Family-School Partnerships	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**12**
Third Year		
Fall Semester		
EDP 5382	Internship in School Psychology I	3
	Hours	**3**
Spring Semester		
EDP 5383	Internship in School Psychology II	3
	Hours	**3**
	Total Hours	**63**

*Elective course must be approved by advisor.

Comprehensive Examination

Candidates for the Ed.S. degree are required to take the Praxis Series® School Psychologist examination and earn a passing score, which is determined by the Texas State Board of Examiners of Psychologists. Additional information about the examination is provided in the school psychology student handbook.

The Ed.S. degree program accepts applicants for the fall semester only. Prospective students should have their completed application to the Baylor Graduate School by February 1. Admission decisions are made by consensus of the School Psychology faculty based on multiple factors including:

a. GRE scores (less than 5 years old);
b. letters of recommendation;
c. potential match between the applicant's goals and program objectives;
d. relevant work or clinical experience; and
e. undergraduate courses and grades.

The Test of English as a Foreign Language (TOEFL), International English Language Testing System (IELTS), or Duolingo exam is required for applicants whose native language is not English. Additional information about the Ed.S. degree program in school psychology is on the Internet at: www.baylor.edu/soe/edp/schoolpsychology (http://www.baylor.edu/soe/edp/schoolpsychology/).

Educational Psychology, Ph.D.

Director: Tonya Davis

The Doctor of Philosophy degree has specializations in applied behavior analysis, gifted and talented, special education, and quantitative methods. In some cases, students may complete courses from multiple specializations to total the required 33 hours of strand coursework. Specializations allow students to select courses based on their interests and future goals. The program focuses on developing reflective teachers of adult learners and competent researchers who will generate new information in their fields of study. The goals of this program are to

a. develop researchers with a balance between disciplinary and multidisciplinary perspectives;
b. improve the quality of instruction and research in higher education institutions;
c. develop teachers who are scholars and encourage inquiry-based learning and creative production; and
d. develop researchers in exceptionalities, learning and development, and/or quantitative methods.

Graduates from this program may expect to be hired as professors in departments of educational psychology and related disciplines; teachers in medical schools, church-related institutions, and community colleges; directors of development and research centers; coordinators of field-based and adult-based education programs; evaluators for public or private schools; and research and development in business, government, and other agencies. The majority of all course work toward the completion of the Ph.D. must be taken at Baylor. The number of credits to be transferred will be determined by the faculty in the department upon petition approval by the Graduate School.

Admission to Doctoral Program

Admission to the Graduate School of Baylor University and the Ph.D. program in Educational Psychology is conducted by formal application. Students must be admitted to the Ph.D. program.

This program admits a very select number of students with strong academic credentials who are interested in working with faculty in research and development projects. Admission to the doctoral program takes into consideration the following critical factors deemed important for success in graduate studies:

1. A bachelor's degree from an accredited institution.
2. A completed Graduate School application form.
3. Transcripts from all higher education institutions attended.
4. A written statement outlining the goals the applicant hopes to accomplish by completing the degree.
5. Scores on the Graduate Record Examination (GRE) that are predictive of success in this program.
6. A minimum overall GPA of 3.0 in the major field of undergraduate study or an overall GPA of 3.5 at the master's level.
7. Three letters of recommendation.
8. International students are expected to secure either a minimum of 550 (PBT) or 80 (iBT) on the Test of English as a Foreign Language (TOEFL), 6.5 on the International English Language Testing System (IELTS), or attain an overall score of 125 on the Duolingo exam.

Once these preliminary admission requirements are met, the applicant may be asked to submit a writing sample and a professional resume. Upon review of all of the information, the Graduate faculty teaching in the Ph.D. program may require a personal interview. This interview will be of sufficient length to allow the applicant as well as the faculty to make an informed decision.

In addition to the listed criteria, the committee may consider the applicant's related work and academic experience, publications, presentations to professional organizations, leadership roles, teaching excellence, awards, career focus, and other professional activities that might provide evidence of potential success in a doctoral program.

Applications must be submitted by December 1 for summer and fall semesters. Applicants for spring semesters should contact Dr. Tonya Davis regarding application deadlines. For more information, contact Dr. Davis. Telephone 254-710-6166; e-mail Tonya_Davis@baylor.edu.

Code	Title	Hours
Required Core Courses		
General/Applied		
EDP 6302	Doctoral Seminar Part 1	3
EDP 6303	(EDP 6303::Doctoral Seminar Part 2)	3
EDP 6304	(EDP 6304:: Doctoral Seminar Part 3)	3
EDP 6340	Teaching in Higher Education	3
EDP 6338	Grant Writing	3
Dissertation		
EDP 6V99	Dissertation	9
Research Methods		
EDP 6360	Experimental Design I	3
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	3
Select three courses from the following:		9

EDC 6359	Mixed Methods Research Design and Analysis
EDP 5340	Measurement and Evaluation
EDP 5357	Single-Subject Research Design
EDP 6336	Qualitative Research and Data Analysis
EDP 6337	Psychometric Theory and Test Construction
EDP 6354	Advanced Single Case Design
EDP 6365	Latent Variable Models in Education
EDP 6361	Experimental Design II
EDP 6366	Item Response Theory

Strand Courses

Students may choose a minimum of 24 hours within or across strands, which may include 12 hours of electives that match the student's interests. Students should consult with the catalog and individual departments with regard to any prerequisites.	33

Strand 1. Applied Behavior Analysis

EDP 5301	Philosophy in Applied Behavior Analysis
EDP 5302	Concepts and Principles of Applied Behavior Analysis
EDP 5332	Human Growth and Development
EDP 5333	Psychology of Learning, Cognition, and Affect
EDP 5354	Ethics in Applied Behavior Analysis
EDP 5358	Teaching Individuals with Autism and Developmental Disabilities
EDP 5361	Challenging Behavior and Developmental Disabilities
EDP 5393	Cultural Issues with Children and Families
EDP 5V98	Practicum in Applied Behavior Analysis
EDP 6320	Concepts and Foundations of Behavioral Assessment
EDP 6325	Positive Behavior Interventions and Supports
EDP 6332	Advanced Human Growth and Development
EDP 6335	Research Practicum in Education
EDP 6343	Consultation and Supervision in Applied Behavior Analysis
EDP 6354	Advanced Single Case Design
EDP 6355	Advanced Concepts in Applied Behavior Analysis
EDP 6363	Verbal Behavior
EDP 6380	Community Experience in Developmental Disability Services
EDP 6385	Internship in Applied Behavior Analysis

Strand 2. Gifted and Talented

EDC 5310	Principles and Strategies for Effective Discipline and Classroom Management
EDC 5311	Introduction to Qualitative and Quantitative Research
EDP 4350	Introduction to Gifted Education
EDP 5333	Psychology of Learning, Cognition, and Affect
EDP 5351	Social/Emotional Needs of the Gifted
EDP 5357	Single-Subject Research Design
EDP 5366	Psychology of Exceptional Children
EDP 5367	Developmental Psychopathology
EDP 5376	Practicum with Exceptional Children
EDP 5393	Cultural Issues with Children and Families
EDP 5V54	Practicum with Gifted Students
EDP 6332	Advanced Human Growth and Development
EDP 6333	Advanced Study of Human Learning
EDP 6335	Research Practicum in Education
EDP 6350	History and Systems of Psychology and Educational Applications
EDP 6353	Creativity and Problem Solving
EDP 6354	Advanced Single Case Design
EDP 6367	Individual Differences
EDP 6370	Case Study Research Methods and Analysis in Education
EDP 6390	Seminar: Education
PSY 5311	Seminar in Memory and Cognition

Strand 3. Special Education

EDP 5332	Human Growth and Development
EDP 5329	Counseling Theories and Techniques
EDP 5333	Psychology of Learning, Cognition, and Affect
EDP 5357	Single-Subject Research Design
EDP 5358	Teaching Individuals with Autism and Developmental Disabilities
EDP 5361	Challenging Behavior and Developmental Disabilities
EDP 5367	Developmental Psychopathology
EDP 6320	Concepts and Foundations of Behavioral Assessment
EDP 6325	Positive Behavior Interventions and Supports
EDP 6354	Advanced Single Case Design
EDP 6380	Community Experience in Developmental Disability Services
EDU 5354	Curriculum Differentiation
PSY 5311	Seminar in Memory and Cognition
PSY 5323	Biological Foundations of Behavior

Strand 4. Quantitative Methods

ECO 5347	Econometric Theory and Methods
ECO 5V98	Special Studies in Economics
EDP 5337	Psychological Assessment of Children and Adolescents II: Psychoeducational
EDP 6365	Latent Variable Models in Education
EDP 6366	Item Response Theory
EDP 6367	Individual Differences
MIS 6325	Quantitative Methods: Survey Research Using PLS Analysis
PUBH 5337	Public Health Concepts in Epidemiology
PSY 5305	Advanced Experimental Design
SOC 6307	Statistical Methods for Survey Research
SOC 6314	Advanced Quantitative Analysis for Sociology
SOC 6318	Sampling Techniques

STA 4385	Mathematical Statistics I	
STA 5384	Multivariate Statistical Methods	
STA 4386	Mathematical Statistics II	
STA 6360	Bayesian Methods for Data Analysis	
STA 6375	Computational Statistics I	
STA 6384	Analysis of Categorical Responses	
Total Hours		**72**

School Psychology, Ph.D.

Program Director: Nicholas F. Benson, Ph.D.

The School Psychology Ph.D. program is offered in the Department of Educational Psychology located in the School of Education. The program is accredited, on contingency, by the American Psychological Association. School Psychology is a general practice and health service provider specialty of professional psychology that is concerned with the science and practice of psychology with children, youth, families; learners of all ages; and the schooling process. The basic education and training of school psychologists prepares them to provide a range of psychological assessment, intervention, prevention, health promotion, and program development and evaluation services with a special focus on the developmental processes of children and youth within the context of schools, families, and other systems. School psychologists are prepared to intervene at the individual and system level, and develop, implement, and evaluate preventive programs. In these efforts, they conduct ecologically valid assessments and intervene to promote positive learning environments within which children and youth from diverse backgrounds have equal access to effective educational and psychological services to promote healthy development. The overall aim of the School Psychology Ph.D. program is to prepare highly skilled and competent scientist-practitioners. Earning a degree from this program requires mastery of a coherent body of knowledge and skills. Doctoral students must acquire substantial competence in the discipline of psychology as specified in the Standards of Accreditation and must be able to relate appropriately to clients/patients, fellow students, faculty and staff members, and other health care professionals.

Admissions

The admissions process for the SP Ph.D. program conforms to the general admissions requirements for the BU Graduate School, the SOE, and the EDP department. Prospective students are encouraged to access the admissions information available on the Graduate School's website. The application is available online at https://www.baylor.edu/graduate/gobaylor (https://www.baylor.edu/graduate/gobaylor/) or can a printed version can be obtained by telephoning the BU Graduate School at 254-710-3588 or by writing them at:

One Bear Place #97264
Waco, TX
76798-7264

Students are admitted for the fall semester only and the application deadline is January 15.The BU school psychology faculty desire to admit qualified applicants from a diversity of backgrounds. Students do not have to have an undergraduate degree in psychology, but should have taken courses in general psychology, introductory statistics, research design, and child/adolescent development. Admission decisions are made by consensus of the BU school psychology faculty based on multiple factors including:

- GRE scores
- Letters of recommendation
- Potential match between the applicant's goals and the program goals
- Relevant work, clinical experience, research experience
- Previous course work and grades

Required Courses and Typical Course Sequence

Course	Title	Hours
First Year		
Fall Semester		
EDP 5328	Psychological Assessment of Children and Adolescents I: Cognitive	3
EDP 5340	Measurement and Evaluation	3
EDP 5341	Professional Practice, Law, and Ethics for School Psychologists	3
EDP 6360	Experimental Design I	3
EDP 5366	Psychology of Exceptional Children	3
	Hours	**15**
Spring Semester		
EDP 5337	Psychological Assessment of Children and Adolescents II: Psychoeducational	3
EDP 5360	Psychological Interventions with Children and Adolescents II: Counseling	3
EDP 5367	Developmental Psychopathology	3
EDP 6362	Applied Multiple Regression/Correlation Analysis in Education	3
	Hours	**12**
Summer Semester		
EDP 5393	Cultural Issues with Children and Families	3
EDP 5356	Psychological Interventions with Children and Adolescents I: Behavior	3
Qualifying Exam		
	Hours	**6**
Second Year		
Fall Semester		
EDP 5362	Psychological Interventions with Children and Adolescents III: Academic	3
EDP 5394	Psychological Assessment of Children and Adolescents III: Social-Emotional	3
EDP 6350	History and Systems of Psychology and Educational Applications	3
EDP 6365	Latent Variable Models in Education	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**15**
Spring Semester		
EDP 5327	Educational Evaluation	3
EDP 5370	Consultation, Collaboration, and Family-School Partnerships	3
EDP 6340	Teaching in Higher Education	3
EDP 6332	Advanced Human Growth and Development	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**15**

Summer Semester		
PSY 5339	Social Psychology	3
EDP 5V78	Practicum in School Psychology	3
	Hours	**6**
Third Year		
Fall Semester		
EDP 6366	Item Response Theory	3
EDP 6V78	Advanced Practicum in School Psychology	3
PSY 5323	Biological Foundations of Behavior	3
	Hours	**9**
Spring Semester		
EDP 5333	Psychology of Learning, Cognition, and Affect	3
EDP 5364	Psychological Interventions with Children and Adolescents IV: Cognitive Behavioral Therapy	3
EDP 6V78	Advanced Practicum in School Psychology	3
	Hours	**9**
Summer Semester		
EDP 6356	Doctoral Seminar in School Psychology	3
	Hours	**3**
Fourth Year		
Fall Semester		
EDP 6V78	Advanced Practicum in School Psychology	3
EDP 6V99	Dissertation	2
	Hours	**5**
Spring Semester		
EDP 6V99	Dissertation	3
	Hours	**3**
Summer Semester		
EDP 6V82	Doctoral Internship in School Psychology	1
	Hours	**1**
Fifth Year		
Fall Semester		
EDP 6V82	Doctoral Internship in School Psychology	1
	Hours	**1**
Spring Semester		
EDP 6V82	Doctoral Internship in School Psychology	1
	Hours	**1**
	Total Hours	**101**

School of Engineering and Computer Science

The School comprises three departments, which offer five masters and three doctoral degrees. The Department of Computer Science offers a Master of Science in Computer Science, an Online Master of Science in Computer Science, and a Doctor of Philosophy. The Department of Electrical and Computer Engineering offers a Master of Science in Electrical and Computer Engineering and a Doctor of Philosophy. The Department of Mechanical Engineering offers a Master of Science in Mechanical Engineering and a Doctor of Philosophy. The School of Engineering and Computer Science also offers additional graduate engineering degrees, which are described below in the Interdisciplinary Degrees section and are administered jointly between the engineering departments. These degrees include a Master of Science in Biomedical Engineering, a Master of Engineering, joint undergraduate/graduate degrees, and a joint Master of Business Administration/Master of Engineering.

Computer Science

Department of Computer Science

Chairperson: Erich J. Baker
Graduate Program Director: Eunjee Song

Computer Science, M.S.

A bachelor's degree equivalent to the B.S. in computer science at Baylor or the B.A. in computer science at Baylor with calculus II and linear algebra is the standard requirement for admission. The submission of GRE score is required for admission. For those applying with less than the standard preparation, the quality and adequacy of the admissions record will be evaluated by the Graduate Committee of the Department of Computer Science after reviewing the application for admission. Requirements which must be met before admission will be determined by that committee. These requirements will be in addition to requirements for the M.S. degree.

At least fifteen semester hours are required at the 5000 level excluding CSI 5V92 Master's Research, CSI 5V96 Master's Project, and CSI 5V99 Thesis. All work presented to meet the requirements for this degree must be approved by the student's Advisory Committee or thesis Committee.

The Graduate Committee will appoint a graduate Advisory Committee for each student to monitor the progress of the student. The Master of Science program in computer science has two options, a thesis option and a project option.

Thesis Option

The thesis option is designed for students who are interested in eventually obtaining a Ph.D. in computer science or for well-qualified students who wish to complete a master's degree in the shortest time possible.

Code	Title	Hours
Required Courses		
CSI 5010	Graduate Seminar (2 semesters)	0
CSI 5310	Introduction to Computation Theory	3
CSI 5350	Advanced Algorithms	3
CSI 5324	Software Engineering	3
CSI 5321	Advanced Data Communications	3
CSI 5335	Advanced Database	3
CSI 5V92	Master's Research	3
CSI 5V99	Thesis	3
Electives		
A total of 12 semester hours of electives are required.		12
A student's undergraduate preparation wilnormally include courses in Data Communications and Operating Systems. For students without prior course work in these areas, one of the following two courses may be taken for graduate credit, but only one of these courses may count toward the master's degree requirements:		
CSI 4321	Data Communications	
or CSI 4337	Introduction to Operating Systems	
With the approval of the advisory committee, the student may take one 5000-level course from outside the department. No more than one course from outside the department may count toward the master's degree requirements.		
Except as mentioned above, any CSI course that is offered for graduate credit may be taken as an elective.		
Total Hours		**33**

Project Option

The project option is designed for students interested in a terminal master's degree. It is also appropriate for students who continue to work while obtaining the degree. This option is designed for a fall entry. The program is intended to be completed in two years by a full-time student, but it is structured so that additional time may be taken to complete the degree.

Code	Title	Hours
Required Courses		
CSI 5010	Graduate Seminar (2 semesters)	0
CSI 5310	Introduction to Computation Theory	3
CSI 5350	Advanced Algorithms	3
CSI 5324	Software Engineering	3
CSI 5321	Advanced Data Communications	3
CSI 5335	Advanced Database	3
CSI 5V92	Master's Research	3
CSI 5V96	Master's Project	3
Electives		
A total of 12 semester hours of electives are required.		12
A student's undergraduate preparation will normally include courses in Data Communications and Operating Systems. For students without prior course work in these areas, one of the following two courses may be taken for graduate credit, but only one of these courses may count toward the master's degree requirements:		
CSI 4321	Data Communications	
or CSI 4337	Introduction to Operating Systems	
With the approval of the advisory committee, the student may take one 5000-level course from outside the department. No more than one course from outside the department may count toward the master's degree requirements.		
Except as mentioned above, any CSI course that is offered for graduate credit may be taken as an elective.		
Total Hours		**33**

An oral examination will be required of every student in either option. There is no foreign language requirement for graduation.

Computer Science, M.S. (Online)

Successful applicants typically have a bachelor's degree in computer science or a closely related field from a regionally accredited institution. Successful completion of calculus II and linear algebra is a standard requirement for admission. Applicants with a bachelor's degree in a computational STEM discipline, defined as a degree in computer science, math, physics, engineering, chemistry, or statistics, must have maintained a minimum 3.0 major GPA. Applicants with a bachelor's degree in a non-computational STEM discipline must have maintained a minimum 3.0 GPA in computational STEM courses, defined as courses in computer science, math, physics, engineering, chemistry, and statistics. Applicants should have knowledge of algorithms, database, and operating systems. Students must be proficient in a high-level, object-oriented programming language such as Python, C, C++, C#, or Java. For applicants without a bachelor's degree in computer science, a passing grade on a programming exam administered by the program may be required. Applicants must submit three letters of recommendation and a resume. For those applying with less than the standard preparation, the quality and adequacy of the admissions record will be evaluated by the Graduate Committee of the Department of Computer Science or its designee after reviewing the application for admission. Leveling requirements which must be met before admission will be determined by that committee or its designee. These requirements will be in addition to requirements for the M.S. degree. Leveling requirements (i.e. foundation courses) award Credit or No Credit upon completion and do not affect grade point average. In order to receive Credit for a foundation course, students must receive an 80% or higher. Applications will be accepted on a year-round rolling basis. Admission is selective, and meeting the above criteria does not guarantee admittance.

Courses are fifteen weeks with fall, spring, and summer intakes. The program is a total of 30 hours if no prerequisites are needed, or 45 hours with all foundation courses. The core consists of 18 hours, 5 courses taken from CSI 5310, CSI 5350, CSI 5321, CSI 5324, CSI 5328, and CSI 5335, and the last course may be one additional core course or one course from CSI 5361, CSI 5355, CSI 5357, or CSI 5352. CSI 5361 is the standard core elective. For students without prior undergraduate coursework in Data Communications or Operating Systems, CSI 5304 or CSI 5305 may be taken. All students must take CSI 5310 and CSI 5350; they may not be waived. Students are advised to take core courses based on a variety of factors including, but not limited to, course availability,

a student's entry term, prior academic background, track, prerequisite requirements, and funding eligibility requirements. If a student wants to substitute an eligible core course, it is their responsibility to notify the program and get any alternative selection approved by the program. Not all courses listed will be available every term or to all students.

Students advised to take CSI 5305, Foundations of Operating Systems, by default, will (1) take the course to satisfy their 6th core class requirement (2) be graded on the standard grading mode, and **(3) acknowledge that they have consulted with their Student Success Advisor about the impact it may have on their degree plan, academic standing, and funding eligibility. Students need to receive an 80% or higher for the course to satisfy their 6th core class requirement. Implications and more language are available in the student orientation course.** Students will not be able to change the grade mode back to Credit/No Credit or select another course for this opportunity (if applicable), at any time for any course attempt, including any repeat attempt(s). It is the student's responsibility to notify the program of a decision to opt out of this opportunity. They must email their Student Success Advisor, in writing, no later than the add deadline (usually the 5th day of class). Failure to properly notify the program may result in the student taking CSI 5305 as part of their core requirements, regardless of their decision. Alternately, students who are advised to take CSI 5304 and want to use that course as part of their core requirements must opt in by notifying their Student Success Advisor before the 5th class day, and agree, in writing, to similar language.

Requirements for Master of Science (Online)

Code	Title	Hours
Foundation Courses (Prerequisite Track)		**0-15**
CSI 5301	Foundations of Algorithms	
CSI 5302	Foundations of Database	
CSI 5303	Foundations of Software Engineering (for COSE track)	
CSI 5304	Foundations of Data Communications	
CSI 5305	Foundations of Operating Systems	
CSI 5306	Foundations of Mathematics for Computer Science	
Core Courses		**18**
Two courses from the following:		
CSI 5310	Introduction to Computation Theory	
CSI 5350	Advanced Algorithms	
Three courses from the following:		
CSI 5321	Advanced Data Communications	
CSI 5324	Software Engineering (required for COSE track)	
CSI 5328	Applied Artificial Intelligence	
CSI 5335	Advanced Database	
One course from the following:		
CSI 5361	Cybersecurity Concepts (standard core elective)	
CSI 5355	Data Mining and Analysis	
CSI 5357	Cloud Computing	
CSI 5352	Advanced Object-Oriented Development	
Core course not used from the list above		
CSI 5304	Foundations of Data Communications (for students enrolled in Foundation courses)	
CSI 5305	Foundations of Operating Systems (for students enrolled in Foundation courses)	
Tracks		**12**
Students must pick a specialization from the two tracks: data science and software engineering. Each track consists of four courses totaling 12 hours.		
Data Science (DASC)		
CSI 5351	Data Visualization	
CSI 5355	Data Mining and Analysis	
CSI 5357	Cloud Computing	
CSI 5358	Applied Data Science	
Software Engineering (COSE)		
CSI 5342	Software Verification and Validation	
CSI 5347	Distributed Systems	
CSI 5352	Advanced Object-Oriented Development	
CSI 5354	Advanced Software Engineering	
Total Hours		**30-45**

Computer Science, Ph.D.

The Doctor of Philosophy in Computer Science (Ph.D.) is intended for students who want to have careers that require in-depth research experience in areas related to theoretical or applied computer science. Successful candidates are prepared to solve significant research problems in the academy, industry, government (e.g. national laboratories), or non-profits.

Admission

All students in the Computer Science (CSI) doctoral program must have a Bachelor of Science or Master of Science degree in computer science or a closely related field. The submission of GRE score is required for admission. While prior research experience is valued highly, each application package will be evaluated holistically by the Graduate Committee of the Department of Computer Science.

Course Requirements

The course requirements for the doctoral degree include:

Code	Title	Hours
Required Courses		
All course requirements for a Master of Science in Computer Science degree, excluding:		27
CSI 5V92	Master's Research	
CSI 5V96	Master's Project	
CSI 5V99	Thesis	
18 additional hours of 5000 or 6000-level course work		18
24 additional hours of 6000-level course work, of which at least 12 hours must be:		24
CSI 6V99	Dissertation	
Total Hours		**69**

A total of 69 hours post-Bachelor's degree are required, including dissertation hours.

A student entering the program with graduate-level work or a master's degree in computer science or a closely related field may apply up to twenty-seven (27) semester hours of approved courses toward the Ph.D.

Qualifying Breadth Examinations

The qualifying exams will consist of two distinct portions: a Breadth Exam and a Depth Exam. It is intended to test the mastery of a number of related fields as well as the student's capacity for synthesis and critical analysis.

Timing: At the end of the third full semester (summer semesters not counted), the student should prepare to take their qualifying exams. The student must be enrolled and in good standing during the semester. To start the qualifying exam process either before or after the fourth semester due to transfer credits, requiring of leveling courses, etc., the student must obtain approval from their advisor and the Graduate Program Director (GPD) by the 2nd Friday of their fourth full semester.

Breadth Exam

A student must demonstrate breadth of knowledge in computer science in one of two ways: (1) Superior Course Performance (defined below) or (2) Area Examinations. As long as a student is able to complete one of these paths, they are eligible to proceed with the Depth Exam. If a student is not able to complete one of these paths, there is no alternative to move forward in the process.

Superior Course Performance: The first option for demonstrating breadth of knowledge is by obtaining superior grades in four graduate courses, two of which must include Analysis of Algorithms and Theory of Computing. The other two courses can be selected from any of the following areas (only one course may be selected per area): Systems and Networks, Security, Machine Learning and Artificial Intelligence, Software Engineering, Databases, and Visual Computing. The grades obtained in the four selected courses must meet the following requirements: 1) Students must obtain a grade of A- or better in at least three of the four courses, and 2) In the fourth course, students must obtain a grade of B or better.

Area Examinations: Alternatively, the prospective candidate can opt to take four written area examinations, one of which must be a combined Algorithms and Theory of Computation exam. To begin the process, the student must inform the GPD of their preferred areas of examination. It is the responsibility of the GPD to select the faculty who will be administering each exam and determining pass/fail for that particular area's examination. All examinations will be administered during a single morning where the student is given four hours to complete all of the required material. The faculty who prepare the examinations will have one week to grade and inform the student and department of the results of the exam (Pass/Fail).

Depth Exam

The Depth Exam will be broken into two subsequent parts: a Written Examination followed by an Oral Examination. A student must pass both to be considered "Passed" for the qualifying examination. In preparing for this portion of the exam, the student will first select a committee of three members. Two of the members must be in the student's research area and the third must be outside the research area. To begin the process, the student, the advisor, and the rest of the committee must complete and submit the Qualifying Exam Application Form, found on the Degree Requirements page on the Baylor ECS website, to the GPD at least two weeks before the exam. Once the application has been approved by the GPD and the department chair, the written portion of the depth exam can begin.

Written Examination: The committee members and any other graduate faculty will select 5-7 papers related to the student's research interests and outline 2-3 basic research questions which need to be explored in the written document. The student will be given two weeks to create a written report on the assigned readings which must involve an in-depth study and critical analysis. While the report should summarize the articles, it is expected that the report will demonstrate the student's ability for critical analysis and synthesis of fundamental knowledge. The student's written submission will be evaluated by the committee and each member will determine whether the student has passed or failed the written portion of the exam. If two or more members give a grade of "fail", then the student does not pass the written exam. The results of the exam will be returned to the students within two weeks of final submission.

Oral Examination: The oral exam will be offered twice a year, once during the fall semester and once during the spring semester. Students become eligible to register for the oral exam once they have received a passing grade for the written portion of the depth exam and have successfully completed one of the two paths to the breadth exam. The oral exam must take place in the presence of the committee but is open to any graduate faculty who wish to attend. During the exam itself, committee members or any attendees may ask questions from a wide range of topics (not constrained to the specific contents of the student's written report). However, the questions should have some relevance to the topic.

In preparing for the oral part of the exam, the student should be prepared to give oral explanations and/or presentations of various aspects, and possible extensions, of the written part of the exam. However, the degree to which aspects of the written part of the examination are re-iterated and/or expanded upon during the oral part of the examination is per the discretion of the committee and can cover any aspect of a computer science education that the committee deems appropriate to the examination. The oral portion of the exam should be no less than one hour and no more than four hours in duration. As with the written exam, if two or more members give a grade of "Fail", then the student does not pass. Once complete, the committee will convene and determine the results of the oral portion within 24 hours of the end of the exam. If the committee, in either the written or the oral examinations, gives a grade of "Fail," the student will be required to start the process over with a new depth examination. Students are allowed only one failure. If a second failure is given, the student will no longer be eligible to continue as a Ph.D. student in the Computer Science program.

Appeals Process

If the student is unable to pass either of the options for the breadth exam or if they have failed the written and oral examination twice, then they may appeal the decision to the chair of the department within 6 months of receiving the final decision. If the student believes that the issue has still not been resolved, they may have a final appeal to the Dean of the Graduate School.

Student's Dissertation Committee

The Dissertation Committee for a Ph.D. candidate shall follow the guidelines given in the Dissertation Examining Committee Composition section of the Baylor Graduate Catalog.

Dissertation Proposal

A student must pass a dissertation proposal and preliminary exams before being admitted to candidacy and allowed to enroll in CSI 6V99 Dissertation. The student is expected to write a proposal formatted as a federal funding application (e.g. to NSF or NIH) and make a presentation to the committee about the proposed research. The student will not be allowed to register for CSI 6V99 Dissertation until the Graduate School has approved the Result of the Preliminary Examination form and Admission to Doctoral Candidacy form.

Dissertation

Candidates for the Ph.D. in computer science degree must complete an acceptable dissertation on a research topic in the computer science discipline or a closely related field. The dissertation must show evidence that the candidate has made a significant scholarly contribution to the field. At the completion of the dissertation research, the candidate defends the dissertation before the dissertation committee.

Foreign Language Requirement

The CSI doctoral program does not have a foreign language requirement.

Electrical and Computer Engineering

Chairperson: Kwang Y. Lee

Graduate Program Director: Keith Schubert

- Electrical and Computer Engineering, M.S.E.C.E. (p. 58)
- Electrical and Computer Engineering, Ph.D. (p. 58)

Electrical and Computer Engineering, M.S.E.C.E.

The Department of Electrical and Computer Engineering offers a Master of Science in Electrical and Computer Engineering (M.S.E.C.E.). This program is designed for students who are interested in engineering careers that require education beyond the baccalaureate degree. Examples of those include engineers performing industrial research and development or students who plan to pursue a doctoral degree.

Admission and Financial Aid

Admission is based on undergraduate academic record, the Graduate Record Examination (GRE), and letters of recommendation for the candidate. Tuition waivers and stipends are available on a competitive basis.

Requirements

Thesis Option Requirements

A discovery-oriented thesis is required in accordance with the criteria listed in the graduate catalog general requirements.

Code	Title	Hours
Course Work		24
ELC 5V99	Master's Thesis	6
Total Hours		**30**

Non-Thesis Option Requirements

A 3 credit MS-level project to be completed under the supervision of a ECE graduate faculty member that results in a project report submitted to the Department of Electrical and Computer Engineering.

Code	Title	Hours
Course Work		27
ELC 5397	Special Projects in Engineering (MS Project)	3
Total Hours		**30**

Courses will be selected in consultation with the student's advisor. Courses in the departments of Mechanical Engineering, Mathematics, Statistics, Physics, Chemistry, Biology, or Environmental Science may be included in this total with consent of the advisor.

Electrical and Computer Engineering, Ph.D.

All applicants accepted into the Electrical and Computer Engineering (ECE) doctoral program must have received a Bachelor of Science or Master of Science degree in electrical or computer engineering, or closely related fields. The GRE exam is required of all applicants.

The program requirements include a minimum of sixty (60) semester hours of approved course work and research hours beyond the bachelor's degree. The sixty (60) semester hours must meet the following minimums or maximums:

1. Thirty-six (36) semester hours of coursework including:
   - Minimum of fifteen (15) semester hours of ECE course work,
   - Maximum of six (6) semester hours of 4000 level ECE,
   - Minimum of six (6) semester hours outside ECE (see note 1 below), and
   - Minimum of twelve (12) semester hours of course work taken at Baylor.
1. Twenty-four (24) semester hours of dissertation (ELC 6V99 Dissertation).

Note 1: Engineering is inherently cross-disciplinary; students may select courses from non-ECE disciplines to broaden their understanding of particular application or knowledge domains. Supportive graduate course hours outside of ECE can be selected from mechanical or biomedical engineering, computer science, mathematics, statistics, the physical sciences, the social sciences, education or business. Engineering is also a value-based discipline that benefits from Christian world view and faith perspectives; students can also select supportive courses from religion, theology or philosophy. Course selection is broadly specified to provide flexibility and to accommodate a wide-range of student interest. The selection of specific courses must be approved by the student's graduate committee.

The minimal requirements may be expanded based on the student's background, research area and recommendations from the student's graduate committee. Students entering the program with graduate-level work or a master's degree in electrical or computer engineering, or a closely related field may apply up to twenty-nine (29) semester hours of approved courses toward the Ph.D. A break-down of the course requirements for non-ECE MS degree students is detailed as follows:

- a maximum of 30 semester credit hours of approved Master's level course work with at most 6 hours of 4000 level courses,
- a minimum of 12 semester hours of approved advanced level ECE course work, and
- a minimum of 6 approved non-ECE courses (See Note 1 above).

Doctoral Candidates with Master's Degree Backgrounds

Students with a master's degree in a field other than electrical or computer engineering (or an equivalent) will be able to enter the ECE doctoral program. Each such student will be required to pass preliminary exams in appropriate areas or sub-disciplines of electrical or computer engineering and one sub-discipline or area of their background field.

Student's Graduate Committee

The Graduate Committee for a Ph.D. candidate shall consist of at least four graduate faculty members, at least three from ECE and at least one from outside of ECE. The chairperson of the Committee must be a tenured/tenure-track ECE graduate faculty. If deemed appropriate, a graduate faculty member outside of ECE can supervise and mentor the student, in the capacity of a co-chair of the Committee. The Committee's activities and structure will otherwise be governed by the appropriate sections of the Graduate Catalog.

Foreign Language Requirement

The ECE doctoral program does not have a foreign language requirement; however, competency in the use of technical tools and techniques such as computer programming, Matlab, Mathematica, VHDL, Verilog and CST is strongly encouraged.

Preliminary Examination and Research Proposal

Students must pass a preliminary examination to be admitted to candidacy. The written and oral preliminary exam will cover three of the principle sub-disciplines of ECE such as signals and systems, digital systems, linear systems and controls, electronics and circuits, electromagnetics, and communications systems. An exam in a sub-discipline of the student's background may be substituted for one of the required ECE sub-disciplines for students with non-ECE backgrounds. The preliminary exams are normally not administered until after a student has completed at least 36 hours of graduate course work beyond the bachelor's degree, with at least one year of work at Baylor. The student is further expected to present a research proposal to the ECE faculty, as approved by their graduate (dissertation) committee, within one year of passing the preliminary exam.

Dissertation

Candidates for the Ph.D. in electrical and computer engineering degree must complete an acceptable dissertation on a research topic in the ECE discipline or closely related field. The dissertation must give evidence that the candidate has pursued a program of research, the results of which reveal scholarly competence and a significant contribution to knowledge.

Mechanical Engineering

Department of Mechanical Engineering

Chairperson: Paul I. Ro
Graduate Program Director: Stephen T. McClain

Mechanical Engineering, M.S.M.E.

The Master of Science in Mechanical Engineering (M.S.M.E.) is designed for students who are interested in engineering careers that require education beyond the baccalaureate degree. Examples of those include engineers performing industrial research and development or students who plan to pursue a doctoral degree.

Admission and Financial Aid

Admission is based on undergraduate academic record, the Graduate Record Examination (GRE), and letters of recommendation for the candidate. Tuition waivers and stipends are available on a competitive basis.

Course Requirements for Master of Science

Thesis Option Requirements

A discovery-oriented thesis is required in accordance with the criteria listed in the graduate catalog general requirements.

Code	Title	Hours
Course Work		24
ME 5V99	Master's Thesis	6
Total Hours		**30**

Non-Thesis Option Requirements

A 3 credit MS-level project to be completed under the supervision of a ME graduate faculty member that results in a project report submitted to the Department of Mechanical Engineering.

Code	Title	Hours
Course Work		27
EGR 5V98	Master's Project [1]	3
Total Hours		**30**

[1] Candidates in the Ph.D. program who have passed the preliminary examination and who have not received an M.S. degree in engineering from Baylor or another institution may satisfy the EGR 5V98 Master's Project requirement using three (3) hours of ME 6V97. Graduate Program Director approval and Research Advisor approval are required.

Course work will be selected in consultation with the student's advisor. Courses in the departments of Electrical and Computer Engineering, Mathematics, Statistics, Physics, Chemistry, Biology, or Environmental Science may be included in this total with consent of the advisor.

Mechanical Engineering, Ph.D.

The Doctor of Philosophy in mechanical engineering (Ph.D.) is designed for students who are interested in engineering careers that require education beyond the Master of Science degree. Examples of those include engineers performing industrial research, research at national laboratories, or careers in engineering academics.

Admission and Financial Aid

All applicants accepted into the Mechanical Engineering (ME) doctoral program must have received a Bachelor of Science degree in mechanical engineering or closely related fields. The GRE exam is required of all applicants.

Credit Hours

The program requirements include a minimum of seventy-two (72) semester hours of approved course work and research hours. A maximum of thirty (30) semester hours of approved graduate coursework from a master's in Mechanical Engineering or closely related field may be transferred to the Ph.D. program. Broad latitude is granted in the selection of courses, but all courses must be approved by the student's graduate committee. The semester hours for the Ph.D. must meet the following criteria:

1. **At least forty-two (42) semester hours of coursework, subject to the following criteria:**

Requirement	Hours
A minimum of twenty-four (24) semester hours of 5000 or 6000 graduate level course work within ME	24
A minimum of six (6) semester hours of 5000 or 6000 graduate level course work outside of ME [1]	6
A maximum of six (6) semester hours of 4000 level course work	6
A minimum of three (3) semester hours of course work in Ethics, Religion, Philosophy, or related area[2]	3

2. **At least twenty-four (24) hours of Doctoral Research:**

Requirement	Hours
A minimum of twelve (12) semester hours of ME Doctoral Research ME 6V99 taken after the preliminary exam	12
A maximum of twelve (12) semester hours of Engineering Research ME 6V97 taken prior to the preliminary exam	12

[1] Engineering is inherently cross-disciplinary, and oftentimes students may benefit from courses in non-ME disciplines to broaden their understanding of particular applications or knowledge domains. Supportive graduate course hours outside of ME can be selected from areas that include, but are not limited to: electrical and computer engineering, biomedical engineering, computer science, mathematics, statistics, the physical sciences, the social sciences, education or business.

[2] Engineering is a values-based discipline that benefits from Christian worldview and faith perspectives. Therefore, students are required to take select supportive course in areas that touch on these perspectives. Among the courses accepted for this requirement are one-credit-hour seminars taught by ME faculty on Research Ethics, or on Technology and Society.

Foreign Language Requirement

The ME doctoral program does not have a foreign language requirement. However, competency in a collateral field will be cultivated in students through the requirement of course work outside of ME.

Student's Graduate Committee

The Graduate Committee for a Ph.D. candidate shall consist of at least five members of the Baylor graduate faculty, at least three members from within ME, and at least one member from outside of ME. A researcher from outside of Baylor may serve as a committee member if approved by the ME graduate director and the Baylor members of the committee. The committee chair must be a tenured or tenure-track member of the ME faculty and a member of the Graduate Faculty.

If deemed appropriate, a graduate faculty member outside of ME may supervise and mentor the student, in the capacity of a co-chair of the committee. The committee's activities and structure will otherwise be governed by the appropriate sections of the Graduate Catalog.

Qualifying Examination

Students must pass a qualifying exam that covers course work in three subject areas selected by the student's graduate committee from among those offered by the ME department. The qualifying exam format will be at the discretion of the ME graduate faculty. A student may petition the graduate faculty to retake one or more failed subject areas of the qualifying exam, but must pass all three subject areas within six months of the date when the first exam was taken.

Preliminary Examination

Students must pass a preliminary exam (Ph.D. proposal) to be admitted to candidacy, and to enroll in Dissertation Research 6V99. The preliminary exam must be submitted in a semester following the semester during which the qualifying exam was passed. The preliminary exam format will be at the discretion of the student's graduate committee, but may typically include a formal written proposal along with a formal presentation providing the committee an opportunity to ask questions about the scope and nature of the proposed research.

Dissertation

Candidates for the Ph.D. in mechanical engineering degree must complete an acceptable dissertation on a research topic in the ME discipline or closely related field. The dissertation must provide evidence that the candidate has pursued a program of research, the results of which reveal scholarly competence and a significant contribution to knowledge.

Teaching Opportunities

Doctoral students considering an academic career may benefit from serving as undergraduate course instructors with a title of Teaching Fellow. To be eligible to serve as a Teaching Fellow a student must have passed the qualifying exam, be approved by the ME department chair, and have completed training through the Graduate School. A Baylor ME

faculty member will be assigned to supervise and guide each Teaching Fellow.

Interdisciplinary Degrees

Graduate Directors in Engineering: Ian Gravagne and Stephen T. McClain

The Department of Electrical and Computer Engineering and the Department of Mechanical Engineering jointly administer degrees that are interdisciplinary in nature.

- Biomedical Engineering, M.S.B.M.E. (p. 61)
- Master of Engineering, M.E. (p. 61)

Biomedical Engineering, M.S.B.M.E.

The Master of Science in Biomedical Engineering (M.S.B.M.E.) is designed for students who are interested in engineering careers at the intersection of engineering, biology, and medicine.

Admission and Financial Aid

Admission is based on undergraduate academic record, the Graduate Record Examination (GRE), and letters of recommendation for the candidate. Tuition waivers and stipends are available on a competitive basis.

Course Requirements for Master of Science

Thesis Option Requirements

A discovery-oriented thesis is required in accordance with the criteria listed in the graduate catalog general requirements.

Code	Title	Hours
Course Work		24
BME 5V99	Master's Thesis	6
Total Hours		**30**

Non-Thesis Option Requirements

A 3 credit MS-level project to be completed under the supervision of a ME graduate faculty member that results in a project report submitted to the Department of Mechanical Engineering.

Code	Title	Hours
Course Work		27
EGR 5V98	Master's Project	3
Total Hours		**30**

Course work will be selected in consultation with the student's advisor. Courses in the departments of Electrical and Computer Engineering, Mechanical Engineering, Mathematics, Statistics, Physics, Chemistry, Biology, or Environmental Science may be included in this total with consent of the advisor.

Master of Engineering, M.E.

The Master of Engineering (M.E.) is offered for students who are more practice oriented. This program is ideal for students who have an interest in engineering consulting, product development, or appropriate technology for developing countries.

Admission and Financial Aid

Admission is based on undergraduate academic record, the Graduate Record Examination (GRE), and letters of recommendation for the candidate.

Requirements

Requirement	Hours
Course Work[1]	30

[1] 3 hours may be EGR 5V98 Master's Project course with engineering applications

Courses will be selected in consultation with the student's advisor. Oral examination is not required. Master of Engineering students may take up to 12 hours outside the Department of Engineering in the Master of Business Administration (MBA) program or the departments of Mathematics, Statistics, Biology, Chemistry, or Physics with consent of the advisor.

Engineering Joint Degree Programs

Students who are near completion of their undergraduate engineering degree at Baylor University may enter one of the joint programs in which, by proper planning, up to six semester hours of graduate credit may be applied toward the degree requirements of both the bachelor's and master's degrees. Students will select whether to pursue a Master of Science in one of the engineering disciplines or a Master of Engineering. Both diplomas are awarded at the completion of both degree programs. The eight joint degree programs are:

- Electrical and Computer Engineering Joint Program, B.S.E.C.E./M.S.E.C.E.
- Electrical and Computer Engineering/Biomedical Engineering, B.S.E.C.E/M.S.B.M.E.
- Electrical and Computer Engineering/Master of Engineering, B.S.E.C.E./M.E.
- Mechanical Engineering Joint Program, B.S.M.E./M.S.M.E.
- Mechanical Engineering/Biomedical Engineering, B.S.M.E./M.S.B.M.E.
- Mechanical Engineering/Master of Engineering, B.S.M.E./M.E.
- Engineering/Biomedical Engineering, B.S.E./M.S.B.M.E.
- Engineering/Master of Engineering, B.S.E./M.E.

Admission and Financial Aid

Admission is based on undergraduate academic record, the Graduate Record Examination (GRE), and letters of recommendation for the candidate. For Master of Science programs, tuition waivers and stipends are available on a competitive basis.

Course Requirements for Master of Science

Thesis Option Requirements

A discovery-oriented thesis is required in accordance with the criteria listed in the graduate catalog general requirements.

Code	Title	Hours
Course Work		24
ME 5V99	Master's Thesis	6
or ELC 5V99	Master's Thesis	
Total Hours		**30**

Non-Thesis Option Requirements

A 3 credit MS-level project to be completed under the supervision of a ME graduate faculty member that results in a project report submitted to the Department of Mechanical Engineering.

Code	Title	Hours
Course Work		27
MS Project - Select one of the following:		3
EGR 5V98	Master's Project	3
Total Hours		**33**

Course work will be selected in consultation with the student's advisor. Courses in the departments of Electrical and Computer Engineering, Mathematics, Statistics, Physics, Chemistry, Biology, or Environmental Science may be included in this total with consent of the advisor.

Course Requirements for Master of Engineering

Requirement	Hours
Course Work[1]	30

[1] 3 hours may be EGR 5V98 Master's Project project course with engineering applications

Courses will be selected in consultation with the student's advisor. Master of Engineering students may take up to 15 hours outside the Department of Engineering in the Master of Business Administration (MBA) program or the departments of Mathematics, Statistics, Biology, Chemistry, or Physics with consent of the advisor.

Program
School of Music

Associate Dean for Graduate Studies: Timothy R. McKinney

Accreditation

The School of Music graduate programs are accredited by the National Association of Schools of Music.

Graduate Degrees in Music

Graduate programs in music at Baylor University are designed to bring students to the highest levels of performance and scholarship of which they are capable. The graduate faculty of the School of Music is comprised of individuals who have distinguished themselves in their chosen disciplines and who maintain active performance, research, and other professional interests. Graduates from Baylor's School of Music hold positions in orchestras, opera companies, churches, universities and colleges, and conservatories, and other venues throughout the world. Assistantships are available in many performance and academic areas to enable students of superior ability to pursue a quality education in music at Baylor.

Master of Music

The Master of Music degree is offered in the School of Music with majors in church music, composition, conducting, musicology, music theory, performance, collaborative piano, and piano pedagogy and performance.

Admission

Graduates of recognized four-year courses leading to a bachelor's degree in music with a minimum GPA of 3.0 may become candidates for the Master of Music degree. Students desiring to become candidates for the degree must have the equivalent of the undergraduate major in music at Baylor University in the field of concentration in which they wish to continue. Those who lack courses prerequisite to graduate study may make up the undergraduate work, for which graduate credit may be granted, provided the course work is at the 4000 level and appropriate to the degree program. All students will take music theory and music history diagnostic examinations. Certain majors, including Vocal Performance, Choral Conducting, Collaborative Piano, and the Vocal Performance Concentration of Church Music, require additional diagnostic exams in Diction. Appropriate remedial course work may be required.

Applicants for degrees with emphasis in performance, collaborative piano, piano pedagogy, or the performance option of church music must audition (in person or submit a video recording of a recent performance) with repertoire of at least senior recital level. A repertoire list must be submitted for evaluation at the time of the audition. Applicants for the major in composition or the composition option in church music must submit a portfolio of recently completed compositions. An example of a recent paper is required of applicants who intend to pursue an emphasis in musicology, church music, or music theory. Applicants seeking admission to the conducting program must submit a video of their work in both rehearsal and performance. Papers, composition portfolios, videos, and audio recordings should be submitted to the School of Music. To request an audition and/or submit materials, please go to the School of Music's website: https://www.baylor.edu/music/.

The Graduate Record Examination General Test (GRE) is required of applicants in musicology and music theory; the GRE General Test is not required of church music, composition, conducting, performance, piano pedagogy and performance, or collaborative piano majors.

Applicants in musicology must possess intermediate proficiency in German or French (see Graduate School Language Requirement).

Special Requirements for Master's Degrees

The normal time for completion of the requirements for the degree ranges from two semesters and two summers to four semesters. A minimum of thirty semester hours is required. No correspondence work may be counted for graduate credit.

Enrollment in an ensemble, as assigned by the conducting faculty, is required throughout the term of residence. Ensemble participation is not required of Piano Performance majors or Collaborative Piano majors. Students in piano pedagogy may fulfill the ensemble requirement through enrollment in two semesters of Studio Collaborative Piano, Piano Ensemble, or Chamber Music. Organ performance majors will fulfill the ensemble requirement through enrollment in two semesters of a choral ensemble.

All candidates for a master's degree must pass a comprehensive oral examination.

Students who desire to pursue a double major (e.g., Music Theory and Piano Performance) must fulfill all application requirements for and be accepted by both areas. An additional 15-18 credit hours will be required to complete the major in the second area (the number of hours depends upon the majors chosen). Except for the core course requirements of 9 credit hours, no courses can be credited toward degree requirements in both areas (e.g., a recital in Piano Pedagogy and Performance cannot be used to fulfill degree requirements in Piano Performance).

Summer Applied Lessons

Applied music courses are only open in summer sessions to MM, MDiv/MM, DMA, and PhD students in their primary applied concentration and only with the approval of the Associate Dean for Academic Affairs.

- Church Music, Master of Music (p. 63)
- Composition, Master of Music (p. 64)
- Conducting, Master of Music (p. 64)
- Musicology, Master of Music (p. 64)
- Music Theory, Master of Music (p. 65)
- Performance, Master of Music (p. 65)
- Collaborative Piano, Master of Music (p. 65)
- Piano Pedagogy and Performance, Master of Music (p. 65)

Curriculum for Master of Music

The core of study for all Master of Music degrees is as follows:

Code	Title	Hours
Core Courses		
MUS 5302	Analytical Techniques	3
MUS 5320	Research Methods and Bibliography	3
Select one course from the following:		3
MUS 5321	Seminar in The Middle Ages	
MUS 5322	Seminar in The Renaissance Era	
MUS 5323	Seminar in The Baroque Era	
MUS 5325	Seminar in The Classic Era	
MUS 5326	Seminar in The Romantic Era	
MUS 5328	Seminar in Music of World War I to the Present	
Total Hours		**9**

- Church Music, Master of Music (p. 63)
- Composition, Master of Music (p. 64)
- Conducting, Master of Music (p. 64)
- Musicology, Master of Music (p. 64)
- Music Theory, Master of Music (p. 65)
- Performance, Master of Music (p. 65)
- Collaborative Piano, Master of Music (p. 65)
- Piano Pedagogy and Performance, Master of Music (p. 65)

Church Music, Master of Music

Required Courses for all Church Music Majors

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Church Music Core		
Select one course in each category:		14
Congregational Song		
MUS 4374	The Song of the Church (required) [1]	
MUS 5353	Congregational Song in Global Perspective	
MUS 5357	Congregational Song in Historical Perspective	
MUS 5346	Leading the Church's Song	
Worship		
MUS 4373	Worship in the Church (required) [1]	
MUS 5349	Perspectives on Worship	
MUS 5352	Worship in Global Perspective	
MUS 5347	Liturgical Traditions	
MUS 5350	Resources for Worship	
Leadership/Administration		
MUS 4375	Leadership in Music Ministry	
MUS 5345	Leadership for Ministry	
MUS 5354	The Business of Ministry	
Vocal/Choral		
MUS 5342	Choral/Vocal Music Ministry	
MUS 5351	Sacred Choral Literature	
Conducting		
MUS 5251	Advanced Choral Conducting	
MUS 4259	Fundamentals of Conducting	
Elective		
3-hour elective in Church Music		3
Concentration Requirements		
Select one option from the following:		10
Option A: Church Ministry		
Additional courses drawn from the Church Music core		
Applied		
General electives in music		

Option B: Composition	
Composition [2]	
MUS 5170	Graduate Recital [3]
General electives in music	
Option C: Conducting	
Conducting and Choral literature [4]	
MUS 5141	Performance Document
MUS 5170	Graduate Recital
General electives in music	
To be admitted to the program, the candidate must submit a video of conducting that will be evaluated by the conducting and church music faculties.	
For the conducting project, the student will assemble a choir. In consultation with the church music faculty and the appropriate conducting faculty, the student will select repertoire that reflects the music from a variety of styles and periods. Approximately six anthems will be prepared and presented. The repertoire will be prepared under the supervision of the church music and choral conducting faculties. The document, which will be related to the repertoire of the concert or service, will be written under the supervision of the church music faculty.	
Option D: Performance	
Applied Major	
MUS 5141	Performance Document
MUS 5170	Graduate Recital
Piano proficiency of level IVs required for vocal, instrumental, or organ emphasis, and level VIIs for piano emphasis.	
In the vocal and organ emphases the recital will consist primarily of sacred music; a collaborative and/or solo recital will be acceptable for a piano emphasis.	
The document that accompanies the recital will be supervised by the church music faculty.	
Option E: Thesis	
MUS 5V99	Thesis
Applied	
Additional courses drawn from teh Church Music core	
General electives in music	
After the completion of applied study, students are required to present a performance project (representative program of works appropriate for church in the student's performance medium) to the church music faculty.	
Total Hours	**36**

1. Students who had an equivalent course in their undergradute degree may choose one of the other options upon the approval of the Church Music faculty and Graduate Program Director.
2. Choose from MUS 4203 Electroacoustic Music Composition, MUS 5207 Graduate Composition I, MUS 5208 Graduate Composition II, MUS 5209 Graduation Composition III, and MUS 5V89 Special Research Problems.
3. The recital may consist of a concert format or a presentation of original compositions within a service.
4. Choose from MUS 5260 Orchestral Conducting, MUS 5251 Advanced Choral Conducting, MUS 5282 Band Conducting, MUS 5270 Applied Conducting, and MUS 4337 Choral Literature.

Composition, Master of Music

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
MUS 4203	Electroacoustic Music Composition	2
MUS 5207	Graduate Composition I	2
MUS 5208	Graduate Composition II	2
MUS 5209	Graduation Composition III	2
MUS 5328	Seminar in Music of World War I to the Present	3
MUS 5355	Analysis Seminar	3
MUS 5V99	Thesis	3
Electives		
Select four semester hours of electives		4
Total Hours		**30**

Conducting, Master of Music

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
MUS 5260	Orchestral Conducting	2
MUS 5251	Advanced Choral Conducting	2
MUS 5282	Band Conducting	2
Select one course from the following:		2
MUS 5265	Orchestral Conducting Performance Practicum	
MUS 5266	Choral Conducting Performance Practicum	
MUS 5267	Band Conducting Performance Practicum	
MUS 5270	Applied Conducting	4
Select one course from the following:		3
MUS 4321	Symphonic Literature	
MUS 5337	Choral Literature	
MUS 4331	Band Literature	
Electives		
Select six semester hours of electives		6
Total Hours		**30**

Musicology, Master of Music

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
Two additional Musicology Seminars from those listed in the core requirements		6
MUS 5329	Foundations and Trends in Musicology	3
MUS 5319	Foundations and Trends in Ethnomusicology	3
MUS 5V99	Thesis	3
Applied Music		3

Electives		
Select three semester hours of electives [1]		3
Enrollment is required for every term in residence. [2]		
MUS 5010	Academic Division Colloquium (Enrollment is required for every term in residence.)	0
Total Hours		**30**

[1] Chosen in consultation with the student's advisor in support of thesis research. Piano proficiency of level VIs or two semesters of piano with a minimum grade of "B" is required.

Music Theory, Master of Music

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
MUS 5201	Pedagogy of Theory	2
MUS 5301	History of Music Theory	3
MUS 5328	Seminar in Music of World War I to the Present	3
MUS 5355	Analysis Seminar (two semesters)	6
MUS 5V99	Thesis	3
Electives		
Select four semester hours of electives		4
MUS 5010	Academic Division Colloquium (Enrollment is required for every term in residence.)	0
Total Hours		**30**

Supportive courses in music literature, music theory, composition, or applied music to total a minimum of thirty hours. Piano proficiency of level VIIIs or two semesters of piano with a minimum grade of "B" is required.

Performance, Master of Music

(Offered in strings, woodwinds, brass, percussion, voice, piano, organ, harp)

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
Applied Major		12
MUS 5170	Graduate Recital (two required, one sem. hr. each)	2
Supportive courses chosen from music literature, music theory, pedagogy of major area[1] or applied music[2]		7
Total Hours		**30**

[1] Instrumental students must take one of the following courses appropriate to their major performance area: MUS 4333 Percussion Literature and Pedagogy, MUS 4334 String Chamber Literature, MUS 4335 Woodwind Literature and Pedagogy, or MUS 4336 Brass Literature and Pedagogy.

[2] A maximum of four semester hours of applied music is permitted among the supportive courses.

One of the recitals may be a lecture-recital, a performance with chamber ensemble, an accompaniment of a major performance, or a major opera role at the discretion of the student's graduate committee. The recitals will consist of repertoire learned while the student is in residence for the degree. The student must be enrolled for applied music during the term in which a recital is given. If the recitals are not given before the twelve hours of applied music concentration are completed, the student must continue with applied study.

Collaborative Piano, Master of Music

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
MUS 5252 & MUS 5253	Seminar in Vocal Collaboration I and Seminar in Vocal Accompanying II	4
MUS 5254 & MUS 5255	Seminar in Instrumental Collaboration I and Seminar in Instrumental Collaboration II	4
MUS 5170	Graduate Recital (two recitals equally representing vocal and instrumental repertoire)	2
MUS 51K5	Applied Piano: Collaborative (one sem. hr. each semester) [1]	4
MUS 51K1	Graduate Piano (applied lessons one sem. hr. each semester) [1]	4
Electives		
Select three semester hours from the following:		3
MUS 4325	Opera Literature	
MUS 4327	Song Literature I	
MUS 4329	Song Literature II	
MUS 4334	String Chamber Literature	
MUS 4335	Woodwind Literature and Pedagogy	
MUS 4336	Brass Literature and Pedagogy	
MUS 5V89	Special Research Problems	
Total Hours		**30**

[1] Collaborative Piano (collaborative repertoire/private coaching) will alternate, one hour per week with Graduate Piano (applied lessons).

Piano Pedagogy and Performance, Master of Music

Code	Title	Hours
Core Requirements		
Complete all the courses listed under the Core Requirements		9
Core Courses		
MUS 4315 & MUS 4316	and	6
MUS 5170	Graduate Recital	1
MUS 52K1	Graduate Piano	8

MUS 5V16	Research Project in Piano Pedagogy	2
Electives		
Select four semester hours from the following:		4
MUS 4322	Piano Literature I	
MUS 4324	Piano Literature II	
MUS 4V13	Workshop in Keyboard Music	
MUS 5114	Internship in Piano Teaching I	
MUS 5115	Internship in Piano Teaching II	
MUS 5201	Pedagogy of Theory	
MUS 5252	Seminar in Vocal Collaboration I	
MUS 5253	Seminar in Vocal Accompanying II	
MUS 5254	Seminar in Instrumental Collaboration I	
MUS 5255	Seminar in Instrumental Collaboration II	
Organ		
Harpsichord		
Total Hours		**30**

Joint Master of Divinity/Master of Music

The Master of Divinity degree is designed primarily for students preparing for pastoral ministry, though it also provides preparation for other specialized ministries. The Master of Music degree in church music is a professional graduate degree for those who plan to serve in the music ministry. The degree is designed to develop proficiency in performance, a knowledge of church music (including music history, music theory and conducting), and an understanding of the theological context of church music and the administration of a church music program.

Admission

Students seeking admission to the joint degree program will be required to fulfill admission requirements to the George W. Truett Theological Seminary, the Graduate School, and the School of Music. Students must apply and be admitted to each of the programs. Upon commencing seminary studies, the student may enroll in courses in both programs.

Requirements

Students will complete sixty semester hours of the theological education core, three hours of elective, twelve hours of music concentration courses, and twelve hours of Master of Music courses to satisfy requirements for the Master of Divinity. To complete requirements for the Master of Music degree, an additional eighteen semester hours will be taken from the Church Music degree program in one of the following five options: Thesis, Performance, Conducting, Church Ministry, or Composition. Since both degrees are awarded simultaneously, all requirements in both schools must be completed in order to receive either degree.

Code	Title	Hours
Theological Education Core Courses		
Introductory Courses [1]		
THEO 7340	Introduction to Christian Scriptures	3
THEO 7341	Introduction to Christian History and Theology	3
Spiritual Formation		
PRTH 7101	Spiritual Formation I	1
PRTH 7102	Spiritual Formation II	1
PRTH 7103	Spiritual Formation III	1
PRTH 7004	Spiritual Formation Retreat	0
Christian Scriptures		
THEO 7370	Christian Scriptures I	3
THEO 7372	Christian Scriptures II	3
THEO 7371	Christian Scriptures III	3
THEO 7373	Christian Scriptures IV	3
Christian Theology		
THEO 7360	Christian Texts and Traditions I	3
THEO 7361	Christian Texts and Traditions II	3
THEO 7362	Christian Texts and Traditions III	3
THEO 7382	Constructive Theology	3
THEO 7396	The Baptist Identity	3
Christian Ministry		
LEAD 7301	Leadership for Ministry	3
or PAST 7330	Introduction to Pastoral Care	
WOCW 7385	Introduction to Christian Witness and Mission	3
PRCH 7316	Preaching I	3
THEO 7316	Christian Worship	3
PRTH 7391	Integrative Seminar: Faith and Practice	3
MENT 7V00	Mentoring in Ministry	9
Elective		
Select three semester hours		3
Music Concentration Courses		
Required Courses		
MUS 4374	The Song of the Church	3
MUS 4375	Leadership in Music Ministry	3
MUS 5342	Choral/Vocal Music Ministry	3
or MUS 5351	Sacred Choral Literature	
Select one course from the following:		3
THEO 7317	Studies in Worship	
MUS 5353	Congregational Song in Global Perspective	
MUS 5357	Congregational Song in Historical Perspective	
MUS 5346	Leading the Church's Song	
MUS 5349	Perspectives on Worship	
MUS 5352	Worship in Global Perspective	
MUS 5347	Liturgical Traditions	
MUS 5350	Resources for Worship	
Master of Music Courses		
These courses are credited toward the Master of Divinity degree upon the successful completion of the Master of Music degree.		
MUS 5302	Analytical Techniques	3
MUS 5320	Research Methods and Bibliography	3
Musicology Seminar		
Select one course from the following:		3
MUS 5321	Seminar in The Middle Ages	
MUS 5322	Seminar in The Renaissance Era	
MUS 5323	Seminar in The Baroque Era	
MUS 5325	Seminar in The Classic Era	
MUS 5326	Seminar in The Romantic Era	

MUS 5328	Seminar in Music of World War I to the Present	
MUS 4259	Fundamentals of Conducting	2
or MUS 5251	Advanced Choral Conducting	
Select one of the following:		1
MUS 5V89	Special Research Problems	
One hour of graduate applied music		
MUS 5037	Church Music Forum (4 semesters)	0
Ensemble (4 semesters)		
Covenant Group		
Complete 4 semesters		
Lifelong Learning Units		
Satisfactory completion of 200 Lifelong Learning Units.		
Master of Divinity		
Six hours of Master of Divinity credits are accepted toward the Master of Music degree upon the successful completion of the Master of Divinity degree.		
Master of Music		
The Master of Music degree requires an additional eighteen hours of Music School courses selected from one of the five options below:		18
Option A: Thesis		
MUS 5V99	Thesis	
Applied		
Additional course from Church Music core (under III above)		
Church Music Electives		
General music Electives		
After the completion of applied study, students are required to present a performance project (representative program of works appropriate for church in the student's performance medium) to the church music faculty.		
Option B. Performance		
Applied		
MUS 5170	Graduate Recital	
MUS 5141	Performance Document [2]	
Church Music Electives		
General music Electives		
Piano proficiency of level IVs is required for vocal, instrumental, and organ emphasis areas, level VIIs for piano emphasis. In the vocal and organ emphasis areas the recital will consist primarily of sacred music; a collaborative and/or solo recital will be acceptable for a piano emphasis.		
Option C: Conducting		
Conducting and Choral Literature [3]		
MUS 5170	Graduate Recital [4]	
MUS 5141	Performance Document [5]	
Church Music Electives		
General music Electives		
To be admitted to the conducting option the candidate must submit a video of conducting which will be evaluated by the conducting and church music faculties. In consultation with the church music faculty and appropriate conducting faculty, the student will select repertoire that reflects music from a variety of styles and periods. Approximately six anthems will be prepared under the supervision of the church music and choral conducting faculties.		
Option D: Church Ministry		
Additional course from Church Music core (under III above)		
Applied		
Church Music Electives		
General music Electives		
Option E: Composition		
Composition [6]		
MUS 5170	Graduate Recital	
Church Music Electives		
General music Electives		
Total Hours		**105**

1. **These are required courses; however, based upon previous academic experience, students may petition to waive or substitute these courses. Introductory courses are waived from the degree plan by passing an advanced standing exam.**
2. The document that accompanies the recital MUS 5141 Performance Document will be supervised by the church music faculty in cooperation with the appropriate applied faculty member(s).
3. Courses to be selected from MUS 5260 Orchestral Conducting, MUS 5251 Advanced Choral Conducting, MUS 5282 Band Conducting, MUS 4337 Choral Literature, and MUS 5270 Applied Conducting.
4. For the conducting project (MUS 5170 Graduate Recital) the student will assemble a choir.
5. The document (MUS 5141 Performance Document), which will be related to the repertoire of the concert or service, will be written under the supervision of the church music faculty.
6. Courses to be selected from MUS 4203 Electroacoustic Music Composition, MUS 5207 Graduate Composition I, MUS 5208 Graduate Composition II, MUS 5209 Graduation Composition III, or MUS 5V89 Special Research Problems.

Doctoral Degrees in Church Music

The School of Music offers courses of study leading to the Doctor of Philosophy in church music and the Doctor of Musical Arts in church music.

Admission Requirements

Applicants must have earned a master's degree in music from an accredited college or university. Applicants are encouraged to have significant prior professional experience in the field of music. At least two years of full-time employment or the equivalent in part-time and/or volunteer work is recommended.

Prospective students must submit official GRE scores. The GRE must have been taken within five years of the application for admission. Normal expectations for PhD students are a combined Verbal/Quantitative score of at least 300, with a minimum Verbal score of 153;

expectations for DMA students are a combined score of at least 297, with a minimum Verbal score of 152.

Students from non-English speaking countries must take the Test Of English as a Foreign Language and submit a minimum score of 600 (250 computer-based, 100 internet-based). (Comparable scores on the IELTS, PTE, or Duolingo exams may also be submitted.) Applicants also must submit a master's thesis or significant research paper as a writing sample. The research paper may take the form of a published book or article, a major paper for a master's-level course, or a paper written specifically to fulfill this requirement. The writing sample must demonstrate familiarity with appropriate research techniques, originality of thought, and ability to write with clarity.

Applicants will have a face-to-face interview with the Church Music faculty. The applicant should prepare a curriculum vita for the interview that includes all relevant academic and professional experience as well as goals and plans for the future. Prospective DMA students must audition for and be accepted by the Church Music and applied faculties in their area of performance. No audition is required for PhD applicants.

Three letters of recommendation are required. At least one should be from a person qualified to comment on the applicant's master's degree work, and at least one should be from a person who can speak to the applicant's music activity in a local congregation.

Diagnostic examinations in music history, music theory, conducting, voice, and piano will be administered to each student.

Church Music, Ph.D.

Curriculum for the Doctor of Philosophy in Church Music

Code	Title	Hours
Required Courses		
MUS 6341	Introduction to Research in Church Music	3
MUS 6348	Professional Development and Teaching Practicum	3
Church Music Seminars		
Select five seminars from the following:		15
MUS 6342	Research in Congregational Song	
MUS 6343	Research in Church Music History	
MUS 6344	Research in Church Music Philosophy	
MUS 6345	Research in Christian Worship	
MUS 6346	Research in Music Ministry	
MUS 6347	Research in Sacred Choral Music	
Musicology and/or Music Theory		
Select six semester hours from the following:		6
MUS 5321	Seminar in The Middle Ages	
MUS 5322	Seminar in The Renaissance Era	
MUS 5323	Seminar in The Baroque Era	
MUS 5325	Seminar in The Classic Era	
MUS 5326	Seminar in The Romantic Era	
MUS 5328	Seminar in Music of World War I to the Present	
MUS 5329	Foundations and Trends in Musicology	
MUS 5319	Foundations and Trends in Ethnomusicology	
MUS 5355	Analysis Seminar	
MUS 5201	Pedagogy of Theory	
MUS 5301	History of Music Theory	
MUS 5V89	Special Research Problems	
Minor Area		
Select nine hours of 5000-level or above course work taken in a single field of study other than Church Music. The remaining three hours of electives may be taken in any field.		12
Dissertation		
MUS 6V99	Dissertation	9
Total Hours		**48**

Church Music, D.M.A.

Curriculum for the Doctor of Musical Arts in Church Music

Code	Title	Hours
Required Courses		
MUS 6341	Introduction to Research in Church Music	3
MUS 6348	Professional Development and Teaching Practicum	3
Church Music Seminars		
Select five seminars from the following:		15
MUS 6342	Research in Congregational Song	
MUS 6343	Research in Church Music History	
MUS 6344	Research in Church Music Philosophy	
MUS 6345	Research in Christian Worship	
MUS 6346	Research in Music Ministry	
MUS 6347	Research in Sacred Choral Music	
Musicology and/or Music Theory		
Select six semester hours from the following:		6
MUS 5321	Seminar in The Middle Ages	
MUS 5322	Seminar in The Renaissance Era	
MUS 5323	Seminar in The Baroque Era	
MUS 5325	Seminar in The Classic Era	
MUS 5326	Seminar in The Romantic Era	
MUS 5328	Seminar in Music of World War I to the Present	
MUS 5329	Foundations and Trends in Musicology	
MUS 5319	Foundations and Trends in Ethnomusicology	
MUS 5355	Analysis Seminar	
MUS 5201	Pedagogy of Theory	
MUS 5301	History of Music Theory	
MUS 5V89	Special Research Problems	
Applied Music		
Select 16 semester hours of applied music		16
MUS 6V10	Doctoral Performance Document (accompanying 2nd recital)	3

MUS 5170	Graduate Recital (2)	2
Total Hours		**48**

Advanced Performers Certificate Program

(Piano or Organ)

The Advanced Performers Certificate is intended for students who demonstrate the potential to establish a career as a performing artist. Accordingly, the goals of this non-degree program are more narrowly focused than traditional graduate performance degrees. The requirements for the Advanced Performers Certificate Program are designed for students who have demonstrated the ability to perform advanced repertoire and whose artistic communication and technical mastery of major repertoire for the instrument are unusually strong.

It is expected that the student applying for admission to the program will have completed a Bachelor of Music degree or its equivalent from a recognized institution. Those applying for admission to the Advanced Performers Certificate Program must follow the procedures and regulations of other students applying for acceptance to the Graduate Division of the School of Music. (GRE not required)

Admission

Upon recommendation of the faculty of the Keyboard Division, a student may be accepted to the Advanced Performers Certificate Program. Admission will require a live audition before a committee that will include at least four members of the Keyboard Division faculty appointed by the Director of Keyboard Studies and the Graduate Program Director in Music. The option of a video performance may be approved when distance to the audition would be a hardship. When the audition is by video, the student must present a live audition before a designated faculty committee during the first semester of residence in order to be fully accepted into the program.

The audition will require sixty minutes of solo repertoire representing the 18th, 19th, and 20th centuries and will include at least two major works and two virtuoso etudes from the literature. The audition committee may choose from the repertoire prepared.

Students who have been admitted to the Advanced Performers Certificate Program will be advised on course content by the Graduate Program Director in Music in consultation with the major teacher and the Director of Keyboard Studies.

Assessment of Progress in the Program

Students will be required to maintain a 3.0 GPA to remain in the program. Recitals must receive a grade of A- to be passed. A committee consisting of four Keyboard Division faculty, one faculty member from another applied division, and the Graduate Program Director in Music will grade the required recitals.

A probationary semester will be granted when a student's GPA falls below the required GPA. Students placed on probationary status will be evaluated yearly by the Dean of the School of Music, the major teacher involved, and any members of the Keyboard Division faculty assigned by the Dean.

Residency Requirements

All course requirements for the Advanced Performers Certificate Program must be completed in residence at Baylor University. The student may complete the credit requirements in four regular Fall-Spring semesters or may distribute the semester hours over four regular Fall-Spring semesters and two summer terms. The minimum time allowed to complete the requirements is two years and the maximum is three years.

Language Requirement

All international students whose first language is not English must achieve a TOEFL score of 550 (213 computer based or 80 Internet based) to be admitted to the Advanced Performers Certificate Program.

Curriculum

Code	Title	Hours
Course Requirements		
Applied Major		
Select 20 semester hours		20
MUEN 5136	Advanced Performers Certificate Collaborative Keyboard (includes two full-length collaborative recitals)	4
Music Courses		
Select literature, pedagogy, music history or music theory courses appropriate to the area and for which the student is qualified.		6
MUS 5170	Graduate Recital	2
Total Hours		**32**

Additional courses not included in the program curriculum may be added upon consultation with the Graduate Program Director in Music, the major teacher, and the Director of Keyboard Studies. Added courses will not be counted toward the requirement.

Louise Herrington School of Nursing

Associate Dean of Online Graduate Programs: Dr. Deborah Shirey and Dr. Stacia Hays

The Louise Herrington School of Nursing offers a Doctor of Nursing Practice with tracks in Adult Gerontology Acute Care Nurse Practitioner (AGACNP), Family Nurse Practitioner (FNP), Neonatal Nurse Practitioner (NNP), Primary Care Pediatric Nurse Practitioner (PNP-PC), Acute Care Pediatric Nurse Practitioner (PNP-AC/PC), Executive Nurse Leader (ENL), Nurse-Midwifery (NM), Psychiatric Mental Health Nurse Practitioner (PMHN-PC) and Certified Registered Nurse Anesthesia (CRNA), a US Army affiliated program.

- Doctor of Nursing Practice, DNP (p. 70)
  - Adult Gerontology Acute Care Nurse Practitioner (AGACNP Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/agacnp-track-bsn-dnp-degree/)
  - Family Nurse Practitioner (FNP Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/fnp-track-bsn-dnp-degree/)
  - Neonatal Nurse Practitioner (NNP Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-

departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/nnp-track-bsn-dnp-degree/)

- Pediatric Nurse Practitioner (AC/PC-PNP Dual Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/acpc-pnp-dual-track-bsn-dnp-degree/)
- Nurse-Midwifery (NM Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/nm-track-bsn-dnp-degree/)
- Executive Nurse Leadership, DNP-ENL (p. 71)
- APRN Post Master's DNP (p. 72)
- Psychiatric Mental Health Nurse Practitioner (PMHN Track), BSN to DPT Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/pmhn-track-bsn-dnp-degree/)

Doctor of Nursing Practice, DNP

The Doctor of Nursing Practice (DNP) degree is a 75-89 credit hour curriculum offering the following tracks:

- Adult Gerontology Acute Care Nurse Practitioner (AGACNP)
- Family Nurse Practitioner (FNP)
- Neonatal Nurse Practitioner (NNP)
- Pediatric Nurse Practitioner (acute care and primary care)
- Nurse-Midwifery (NM)
- Executive Nurse Leader (ENL)
- Psychiatric Mental Health Nurse Practitioner (PMHN)

Applicants who possess a baccalaureate degree with a major in Nursing, or a Master's degree with a major in Nursing and who are seeking a role change are eligible to apply for the BSN to DNP program. Applicants who completed an advanced practice master's degree in nursing and are not seeking a new role are eligible to apply for the Post-Master's Doctor of Nursing Practice (DNP) degree. Full-time and part-time degree plans are available. The DNP Program offers students opportunities to participate in global missions.

Admissions Requirements

Admission requirements for the Post Baccalaureate to Doctor of Nursing Practice Degree:

For admission to the BSN to NP/NM DNP program, applicants must meet the general requirements set forth by the Graduate School and the Louise Herrington School of Nursing.

Admissions criteria for BSN to DNP at the time of application:

1. Completed BSN with a nursing GPA of 3.0 or higher.
2. Experience:
   a. AGACNP - 1-year full-time nursing experience
   b. FNP- 1-year full-time nursing experience
   c. NNP- 1-year experience in a level III NICU
   d. PNP- 1-year full-time nursing experience
   e. NM- 1-year experience in labor & delivery, mother-baby unit or in an Outpatient OB/GYN
3. Unencumbered and current RN license
4. Three acceptable letters of recommendation (one from an immediate supervisor, one from a peer nurse, one from an MSN, DNP or PhD prepared nurse)
5. An acceptable writing sample.
6. There is no foreign language requirement.

Admission requirements for post master's to NP/MW DNP without a role change:

1. Master's degree as an Advanced Practice Nurse in the specialty role of FNP, NNP, PNP or NM
2. Unencumbered license to practice as an Advanced Practice Nurse in the specialty role of AGACNP, FNP, NNP, PNP or NM
3. Cumulative Master's GPA of 3.0 or higher
4. Experience:
   a. AGACNP - 1-year nursing experience as an APRN-AGACNP
   b. FNP- 1-year nursing experience as an APRN-FNP
   c. NNP- 1-year nursing experience as an APRN-NNP
   d. PNP- 1-year nursing experience as an APRN-PNP
   e. NM- 1-year nursing experience as an APRN-NM
5. Documentation of successful completion (grade of B or better) of a health-related graduate level statistics course prior to matriculation in the program.
6. Acceptable writing sample
7. Three letters of recommendation as follows: one from an immediate supervisor, one from a peer nurse, and one from an MSN, DNP, or PhD prepared nurse.
8. There is no foreign language requirement.

DNP Program Outcomes

1. Synthesize scientific evidence and methods to design, direct, and evaluate strategies to promote effective patient-centered care.
2. Incorporate leadership skills and interprofessional team building strategies to improve quality metrics within health care systems, organizations, and diverse practice settings.
3. Employ information systems and technology in the delivery of transformative health care.
4. Advocate for evidence-based health policy to improve local, national, and/or global patient and health population outcomes.
5. Utilize effective interprofessional communication and collaborative skills to facilitate improvement in population health.
6. Demonstrate advanced levels of clinical judgment and systems thinking in designing, delivering, and evaluating evidence-based care for clinical prevention and population health.
7. Integrate scientific knowledge with faith-in-action, incorporating culturally sensitive and diverse approaches to advanced nursing care.

DNP Advanced Practice Nursing Core

Code	Title	Hours
NUR 5201	Introduction to Statistical Methods	2
NUR 5209	Theoretical Concepts for the Advanced Practice Registered Nurse	2
NUR 5211	Servant Leadership and Advanced Practice Nursing	2
NUR 5280	Health Informatics and Innovations in Technology	2

NUR 5312	The Roles and Business of the Advanced Practice Registered Nurse (APRN)	3
NUR 5314	Scientific Inquiry	3
NUR 5332	Advanced Human Pathophysiology	3
NUR 5349	Global Healthcare and Missions	3
NUR 5351	Advanced Pharmacology	3
NUR 5354	Advanced Health Assessment/Promotion/ Disease Prevention	3
NUR 6110	Data Management for the Advanced Practice Nurse	1
NUR 63C1	DNP Project I	3
NUR 61C2	DNP Project II	1
NUR 62C3	DNP Project III	2
NUR 6272	Applied Ethics for Advanced Practice Nursing	2
NUR 6316	Transforming Health Care Organizations and Changing Outcomes	3
NUR 6373	Clinical Epidemiology	3
NUR 6375	Translational Science	3
NUR 6377	Policy and Implications for Health	3
NUR 6V76	Advanced Practice Nursing Residency	3-6

- Adult Gerontology Acute Care Nurse Practitioner (AGACNP Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/agacnp-track-bsn-dnp-degree/)
- Family Nurse Practitioner (FNP Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/fnp-track-bsn-dnp-degree/)
- Neonatal Nurse Practitioner (NNP Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/nnp-track-bsn-dnp-degree/)
- Pediatric Nurse Practitioner (AC/PC-PNP Dual Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/acpc-pnp-dual-track-bsn-dnp-degree/)
- Nurse-Midwifery (NM Track), BSN to DNP Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/nm-track-bsn-dnp-degree/)
- Executive Nurse Leadership, DNP-ENL (p. 71)
- APRN Post Master's DNP (p. 72)
- Psychiatric Mental Health Nurse Practitioner (PMHN Track), BSN to DPT Degree (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/louise-herrington-school-nursing/doctor-nursing-practice-dnp/pmhn-track-bsn-dnp-degree/)

Executive Nurse Leadership, DNP-ENL

The Baylor University Louise Herrington School of Nursing DNP-ENL online program prepares graduates with advanced executive knowledge and competencies to strategically lead change, transform care models to improve patient-centric outcomes and influence current and emerging healthcare organizations and systems.

The curriculum is 36 credit hours in length.

Admission Requirements for DNP-ENL Degree

1. MSN or BSN with masters in non-nursing health-related field (MHA, MPH, MBA, etc) and certified in Executive Nursing Practice (AONL, ANCC)
2. Unencumbered RN license
3. Those with a total GPA of 3.0 and above will be considered.
4. Two years of healthcare administration (director or above) experience within the last five years.
5. Acceptable writing sample
6. There is no foreign language requirement.

ENL Curriculum

Code	Title	Hours
NUR 6175	Scientific Inquiry for Executive Nurse Leaders	1
NUR 6275	Translational Science for Executive Nurse Leaders	2
NUR 6301	Developing Executive Nursing Presence, Authority, and Influence	3
NUR 6302	Resource Attainment and Allocation	3
NUR 6303	Influential Communication & Relationship Building	3
NUR 6304	Optimizing Quality and Safety Outcomes	3
NUR 6305	Business Intelligence and Advanced Decision-making in Complex Healthcare Organizations	3
NUR 6306	Creating Excellence in Professional Practice Environments	3
NUR 6307	Strategic Economic and Financial Concepts	3
NUR 6308	Transforming Systems and Care Delivery Models for Diverse Populations and Emerging Needs	3
NUR 6V09	Doctor in Nursing Practice Executive Nursing Leadership Residency	3-6
NUR 6310	Evidence Informed Health Policy for the Executive Nurse Leader	3
NUR 6203	Doctor of Nursing Practice-Executive Nursing Leadership-Project 1	2
NUR 6102	Doctor of Nursing Practice-Executive Nursing Leadership-Project 2	1
NUR 6103	Doctor of Nursing Practice-Executive Nursing Leadership-Project 3	1

Sample Curriculum Plan for ENL

Course	Title	Hours
Year 1		
Fall Trimester		
NUR 6301	Developing Executive Nursing Presence, Authority, and Influence	3

NUR 6302	Resource Attainment and Allocation	3
	Hours	**6**
Spring Trimester		
NUR 6175	Scientific Inquiry for Executive Nurse Leaders	1
NUR 6275	Translational Science for Executive Nurse Leaders	2
NUR 6303	Influential Communication & Relationship Building	3
NUR 6203	Doctor of Nursing Practice-Executive Nursing Leadership-Project 1	2
	Hours	**8**
Summer Trimester		
NUR 6310	Evidence Informed Health Policy for the Executive Nurse Leader	3
NUR 6304	Optimizing Quality and Safety Outcomes	3
	Hours	**6**
Year 2		
Fall Trimester		
NUR 6305	Business Intelligence and Advanced Decision-making in Complex Healthcare Organizations	3
NUR 6306	Creating Excellence in Professional Practice Environments	3
NUR 6102	Doctor of Nursing Practice-Executive Nursing Leadership-Project 2	1
	Hours	**7**
Spring Trimester		
NUR 6307	Strategic Economic and Financial Concepts	3
NUR 6308	Transforming Systems and Care Delivery Models for Diverse Populations and Emerging Needs	3
	Hours	**6**
Summer Trimester		
NUR 6V09	Doctor in Nursing Practice Executive Nursing Leadership Residency	3-6
NUR 6103	Doctor of Nursing Practice-Executive Nursing Leadership-Project 3	1
	Hours	**4-7**
	Total Hours	**37-40**

APRN Post Master's DNP

Sample Curriculum Plan for APRN Post Master's DNP

(no change in advanced practice role):

Course	Title	Hours
Year 1		
Fall Trimester		
NUR 5209	Theoretical Concepts for the Advanced Practice Registered Nurse	2
NUR 5211	Servant Leadership and Advanced Practice Nursing	2
NUR 6373	Clinical Epidemiology	3
	Hours	**7**
Spring Trimester		
NUR 6316	Transforming Health Care Organizations and Changing Outcomes	3
NUR 6377	Policy and Implications for Health	3
NUR 5349	Global Healthcare and Missions	3
	Hours	**9**
Summer Trimester		
NUR 6375	Translational Science	3
NUR 6272	Applied Ethics for Advanced Practice Nursing	2
NUR 6110	Data Management for the Advanced Practice Nurse	1
	Hours	**6**
Year 2		
Fall Trimester		
NUR 63C1	DNP Project I	3
NUR 6V76	Advanced Practice Nursing Residency	1
	Hours	**4**
Spring Trimester		
NUR 61C2	DNP Project II	1
NUR 6V76	Advanced Practice Nursing Residency	1-6
NUR 5280	Health Informatics and Innovations in Technology	2
	Hours	**4-9**
Summer Trimester		
NUR 6V76	Advanced Practice Nursing Residency	1-6
NUR 62C3	DNP Project III	2
	Hours	**3-8**
	Total Hours	**33-43**

George W. Truett Theological Seminary

Dean: Todd D. Still
Associate Dean for Academic Affairs: Angela Reed
Director of Ph.D. in Preaching: Scott M. Gibson

- Preaching, Ph.D. (p. 72)

Preaching, Ph.D.

Program Description

The Ph.D. in Preaching program provides an opportunity for qualified students to engage in graduate work in the discipline of homiletics at the highest level. It provides preparation for research and teaching in undergraduate and graduate theological education and for the development of pastor-scholars. The Baylor program offers a rich study of preaching in relation to exegesis, history, theology, ecclesiology, homiletical structure and practice, and teaching.

Admission Requirements

Applicants will be required to have a Master of Divinity degree (or 72 hours of graduate credit from an accredited program) with a 3.5 or higher cumulative grade point average.

Students must submit the following items as part of the application process:

1. Provide a **statement of purpose** of 7-10 pages (single-space) indicating rationale for pursuing graduate work in preaching.
2. Applicants will also be required to submit two **sermon manuscripts and recordings of two preaching events.**
3. Applicants will demonstrate their facility with the biblical languages by submitting exegetical papers for both sermons and by taking a **language competency exam** during the admissions process. One foreign language must be completed before the end of the first year of the program. Until then, the student will be admitted on probation.
4. Applicants will provide a **sample of scholarly writing**. One example (not exceeding 25 pages double-spaced) of a recent work of scholarly writing that provides evidence of one's capacity to think analytically and critically about homiletics.
5. Applicants will provide a **resume or Curriculum Vitae.** *Include a list of publications and professional presentations*.
6. Applicants must have three to five years of **full-time pastoral/ preaching ministry.**
7. Applicants will submit **official transcripts** of all degree work: undergraduate, master's degrees, and specifically the master of divinity degree (with a 3.5 or higher cumulative grade point average on a 4.0 scale) from a regionally accredited seminary or university.
8. Applicants will provide three **letters of recommendation.**

Degree Requirements

The Ph.D. in Preaching program has both residential and distance students. A Ph.D. in Preaching orientation will take place before the first seminar for each entering class. Total hours required for the Ph.D. in Preaching is 57 hours beyond the master's degree.

Given the hybrid structure of the program, students will enroll in two **one-week intensive** courses in the fall and two in the spring. Students will take two courses in one summer and one course in the two other summers. All Ph.D. seminars involve pre-seminar and post-seminar work, in addition to the hours in the classroom during the seminar. After three full years of course work, students will take comprehensive exams in the fall of the fourth year and begin work on a prospectus. The remainder of the program will be devoted to the dissertation. Students will satisfactorily complete a dissertation in accordance with guidelines provided by the Ph.D. in Preaching and by the Graduate School.

Students may take up to 9 hours in graduate programs external to Baylor University with the approval of the Director of the Ph.D. in Preaching program.

Other Requirements

1. Prior to completion of their degree, all students will have a minimum of one article and one book review submitted for publication in a peer-reviewed scholarly journal.
2. Upon admission, if not already, students will become members of the Evangelical Homiletics Society and must attend the yearly Annual Meeting.

PhD Preaching Courses

Code	Title	Hours
PHDP 6350	History of Preaching from the First Testament to Wycliffe	3
PHDP 6351	History of Preaching from the Reformation to Post-Modern Preaching	3
PHDP 6354	Homiletical Theory and Methods	3
PHDP 6360	Studies in OT and Proclamation	3
PHDP 6361	Studies in the New Testament and Proclamation	3
PHDP 6362	Studies in Theology and Proclamation	3
PHDP 6363	Hermeneutics for Preaching	3
PHDP 6364	Teaching Preaching	3
PHDP 6365	Research Methodology	3
PHDP 6366	Victorian and Edwardian Preaching: Preaching in the Grand Style	3
PHDP 6367	Studies in Minoritized Preaching Traditions	3
PHDP 6370	Preaching and Culture: Engaging Societal Shifts in North America	3

Robbins College of Health and Human Sciences

- Communication Sciences and Disorders (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/communication-sciences-disorders/)
  - Communication Sciences and Disorders, M.S. (Residential) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/communication-sciences-disorders/communication-sciences-disorders-ms-residential/)
  - Communication Sciences and Disorders, M.S. (Online) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/communication-sciences-disorders/communication-sciences-disorders-ms-online/)
  - Communication Sciences and Disorders, Ph.D. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/communication-sciences-disorders/communication-sciences-disorders-phd/)
- Health, Human Performance and Recreation (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/)
  - Exercise Physiology, M.S. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/exercise-physiology-ms/)
  - Sport Pedagogy, M.S. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/sport-pedagogy-ms/)
  - Medical Science, M.S. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-

college-health-human-sciences/health-human-performance-recreation/medical-science-ms/)
    - Master of Athletic Training, MATR (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/master-athletic-training-mat/)
    - Joint Bachelor of Science/Master of Athletic Training (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/joint-bachelor-science-master-athletic-training/)
    - Joint Bachelor of Science in Education/Master of Science in Sport Pedagogy (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/joint-bachelor-science-education-master-science-sport-pedagogy/)
    - Exercise and Nutrition Sciences, Ph.D. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/health-human-performance-recreation/exercise-nutrition-sciences-phd/)
- Human Sciences and Design (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/human-sciences-design/)
    - Nutrition Sciences, M.S. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/human-sciences-design/nutrition-sciences-ms/)
- Doctor of Physical Therapy, DPT (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/doctor-physical-therapy/)
- Public Health (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/)
    - Master of Public Health, MPH (On-Campus) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-on-campus/)
        - Community Health Science Major, MPH (On-Campus) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-on-campus/community-health-science-major-mph/)
        - BSPH/MPH in Community Health Science Joint Degree (On-Campus) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-on-campus/bsphmph-community-health-joint-degree/)
        - Epidemiology Major, MPH (On-Campus) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-on-campus/epidemiology-concentration-mph/)
        - Environmental Health Science Major, MPH (On-Campus) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-on-campus/environmental-health-science-concentration-mph/)
        - BSPH/MPH in Environmental Health Science Joint Degree (On-Campus) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-on-campus/bsphmph-environmental-health-science-joint-degree/)
    - Master of Public Health, MPH (Online) (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/master-public-health-mph-online/)
    - Public Health, Ph.D. (https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/robbins-college-health-human-sciences/public-health/public-health-phd/)
- Doctor of Occupational Therapy, OTD (p. 74)
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Doctor of Occupational Therapy, OTD

Department Chair: Marian Gillard, Ph.D., OTR, FAOTA

Academic Fieldwork Coordinator: Kirsten Davin, OTD, OTR, ATP, SMS

Director of Doctoral Capstone: Barbara Doucet, Ph.D., OTR

Mission

To prepare practice scholars, educational innovators, and professional leaders to utilize clinically meaningful research in the implementation of best practice to meet the changing demands of the Occupational Therapy profession. The Department of Occupational Therapy offers two distinct program tracks, entry-level and post-professional.

General Information For the Entry-Level OTD Program

Program Description

The Entry-Level Occupational Therapy Doctorate (EL OTD) program provides an accelerated, learner-centered, occupation-based, hybrid educational program that emphasizes academic excellence, life-long-scholarship, and servant leadership. This 2-year, hybrid-education program prepares doctoral-level, reflective Occupational Therapy practitioners with the requisite clinical reasoning skills and professional values to be responsive to the occupational needs of persons, organizations and populations within the communities they serve. Graduates are eligible to sit for the National Certification Examination administered by the National Board for Certification in Occupational Therapy (NBCOT). Graduates are employed as Occupational Therapists in such settings as hospitals, school systems, long-term care facilities, mental health facilities, rehabilitation hospitals, out-patient settings and the community.

The entry-level occupational therapy doctoral degree program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its web address is www.acoteonline.org. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, all states require licensure in order to

practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Students must complete 24 weeks of Level II fieldwork as well as an individual 14-week capstone experience within 12 months following the completion of the didactic portion of the program. The doctoral capstone experience must be started after completion of all coursework and Level II fieldwork as well as completion of preparatory activities defined in 2018 ACOTE OTD Standard D.1.3.

To be eligible to take the National Board for the Certification of Occupational Therapy (NBCOT) certification exam, OTR candidates must graduate with an entry-level occupational therapy degree from an ACOTE accredited occupational therapy (OT) program. Per USDE regulations, all credits and degrees earned and issued by a program holding Candidate for Accreditation status are considered to be from an accredited program. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure. The Baylor University OTD Program meets the educational requirements for certification in all states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. NBCOT maintains for the public a database of graduation rates for every accredited program.

Robbins College of Health and Human Sciences

The Department of Occupational Therapy is housed within the Robbins College of Health and Human Sciences (RCHHS). The following policies and guidelines apply to the OTD program.

Entry-Level OTD Program Admission Requirements

The following requirements apply to the EL OTD program and must be met by every applicant to be considered for admission.

Program Admission Requirements

Admission to the OTD program closely follows the admission criteria for all health science programs in the Robbins College of Health and Human Sciences with differences reflecting the need for prerequisite courses unique to, and in support of the OTD curriculum. Students applying to the EL OTD program should have the requisite skills and demonstrated potential to navigate the academic rigors of an accelerated and hybrid model of OTD education.

Prerequisites for Admission

The following prerequisites (or their approved transfer equivalents) are required for admission:

Completion of all prerequisite coursework with a GPA of 3.00 or greater on a 4.00 scale:

- Human Movement, Biomechanics, or Physics (3 semester hours)
- Abnormal Psychology (3 semester hours)
- Human Development (lifespan) (3 semester hours)
- Social Sciences (200-level) (6 semester hours)
- Statistics (3 semester hours)
- Medical Terminology (1 semester hour)
- Human Anatomy and Physiology I with laboratory (4 semester hours)
- Human Anatomy and Physiology II with laboratory (4 semester hours)
  - Applicants must complete Anatomy and Physiology courses within the last 5 years prior to application or demonstrate ongoing work experiences that have kept this knowledge current (e.g. occupational therapy assistant, athletic trainer, etc.).

    For other courses, letter-graded prerequisite coursework is acceptable, no matter when the course work was completed.

Application

Completion of an Occupational Therapy Centralized Application Service (OTCAS) application and a Baylor University Graduate School supplemental application.

- The Occupational Therapy Program uses the Occupational Therapy Centralized Application Service (OTCAS) for those wishing to apply to the program. All students use the **Occupational Therapy Centralized Application Service (OTCAS)** to apply to the occupational therapy program. Visit the website at: https://otcas.liaisoncas.com/applicant-ux/#/login.
- It is strongly encouraged that all applicants thoroughly review the instructions for submitting an application through OTCAS as available for download through the OTCAS website before attempting to apply to the Baylor University Doctor of Occupational Therapy Program.
- Supporting Materials submitted through OTCAS:
  - **Official Transcripts:** Applicants must arrange for OTCAS to receive an official transcript from each college and university from which a degree was earned (bachelor's or higher) in the United States and/or Canada.
  - **References:** Applicants must arrange for references to be submitted electronically through OTCAS. Each evaluator providing a reference will be contacted using an email address provided in OTCAS by the applicant. It is required that one recommendation be from a licensed occupational therapy practitioner.
  - Current CV/Resume
  - **Writing Sample:** Applicant must provide a carefully written 5-paragraph essay describing one treatment activity observed during an occupational therapy observation. Describe the purpose of the activity and the client's response. Sample is scored for writing mechanics and content.
  - OTD Essay
  - **Test of English as a Foreign Language (TOEFL), International English Language Testing System (IELTS), or Duolingo:** If English is not an applicant's first (primary) language, official TOEFL, IELTS, or Duolingo scores must be submitted to OTD@baylor.edu.
- For assistance with applications students may contact: Admissions Program Manager at OTD@baylor.edu.

Application Review

The OTD Admissions Committee and faculty will review all completed applications (i.e., application and all supporting materials received) in the order of receipt. Applicants are evaluated based on the following items:

- Cumulative GPA
- Pre-requisite GPA
- Observation hours
- References
- Personal Essay

Other factors considered, but not required:

- Relevant work experience
- Prior military experience

The OTD admissions committee uses this evaluative process to ensure nondiscrimination and equal opportunity for all applicants. The OTD admissions committee will grant admission interviews by invitation only.

The OTD program does not offer credit for previous work experience, coursework or experiential learning, nor is advanced placement credit available for this program.

Interview Process

The OTD Program Director or designee will contact selected applicants and provide further instructions for completing the interview process. Interviews are conducted using a video-based platform called Kira Talent®. Students record and upload their responses to a series of standardized interview questions for review by program faculty and the Admissions Committee. Students must have a computer with a webcam and internet service to complete this interview.

Selection Process

The OTD admissions committee and faculty will accept students into the program based on a holistic evaluation of the submitted application, supporting documents, and interview. All applicants will be notified by email and/or mail regarding final selection decisions.

Application Deadlines

The program has two applications windows. Please refer to the Baylor OTD Program website for the current information: https://otd.robbins.baylor.edu/.

For questions related to admission to the program, please contact OTD Admissions at OTD@baylor.edu.

General Admission Requirements

- Bachelor's degree from a regionally accredited institution prior to OTD classes beginning. Provisional admission may be granted pending completion of the undergraduate degree. Students are required to successfully complete and document a minimum of four (4) FTE academic years of preprofessional preparation.
- Minimum prerequisite course GPA of 3.00.
- If cumulative GPA is less than 2.75 on a 4.00 scale, an applicant may still be eligible for admission if a cumulative GPA of 3.00 or greater has been achieved over the last 60 semester or 90 quarter hour credits of coursework.
- Three (3) letters of recommendation: it is required that one of your recommendations be from a licensed occupational therapy practitioner.
- Thirty (30) hours of volunteer or work experience with an occupational therapy practitioner is required (50 recommended).
- Personal interview.
- Ability to fulfill Technical Standards with or without accommodation.
- Background Check prior to matriculation.
- Test of English as a Foreign Language (TOEFL), International English Testing Service (IELTS), or Duolingo exam is required for all applicants for whom English is not the first language or those who have completed a degree and prerequisite courses in a foreign country.
  - Acceptable TOEFL scores: Internet based score = 80
  - Acceptable IELTS scores: are an overall band score of 6.5
  - Acceptable Duolingo scores: are an overall score of 125
  - Official TOEFL scores must be submitted to OTD@baylor.edu.

Note: Meeting minimal entrance requirements does not necessarily guarantee admission.

Additional Requirements Once Accepted into the Program

Once accepted into the Occupational Therapy Program, and prior to beginning classes, students must submit the following documentation to the Department of Occupational Therapy:

- Attend the mandatory OTD Program Orientation.
- Purchase student liability insurance annually.
- Provide documentation of health insurance
- Purchase all required OTD textbooks, manuals and laboratory supplies.
- Assume all responsibility for transportation to and from all facilities used for educational experiences, including clinical agencies assigned.
- Complete HIPAA Training
- Adhere to the OTD Program Dress Code
  - No ear gauges, piercing other than a single post in the ear lobes.
  - No visible tattoos are permitted while in labs, or in uniform.
  - If a clinical site has a dress code more restrictive than that of the OTD Program, students will adhere to the more restrictive code.
- Submit application for:
  - Child Abuse History Clearance.
  - FBI Clearance/ federal criminal background study.
  - Texas Criminal Record Check, regardless of state of residence.
    - Note: Students will be notified on how to submit the appropriate forms.

Note: Documented history of Child Abuse, a Criminal Record, and/or FBI Record may exclude the student from participating in the program.

Students accepted to the program may need to complete clinical placements in geographic areas requiring travel and/or housing costs. Student handbooks are provided to all accepted applicants for specific policies and procedures related to academics and fieldwork.

Blended Education Format

In designing the OTD curriculum, the faculty embraces a student-centered approach to develop cohorts of learners with a focus toward critical thinking, values and social responsibility, learning goals, and experiential learning. The curriculum provides the best education in a condensed time frame through a blend of online and on-campus education. Students learn through pre-recorded didactic instruction, daily engagement with faculty, hands-on lab immersions, fieldwork experiences, and the doctoral capstone project. Classes are not bound by geography, thus, allowing students and faculty to live all over the country to coordinate optimal learning experiences.

The OTD curriculum is delivered in a blended learning format that optimizes technology and web-based teaching strategies. Distance-based education courses and the online component of blended courses are scheduled in instructional blocks that are typically seven (7) weeks in duration. Students in the Baylor University EL OTD program can anticipate devoting between 50-60 hours per week, on average, to academic study. Intensive lab immersive sessions are scheduled during each minimester within the academic term. Online active learning accounts for 43% of the total academic program; immersive laboratory with modeled clinical experiences account for 15%, and 42% of the program is based in fieldwork and doctoral capstone experiences. The program's didactic courses are completed using a combination of asynchronous and synchronous didactic instruction and activities to

provide a quality, rigorous, and flexible learning experience for a diverse student body of traditional and nontraditional students.

Onsite laboratory immersion sessions conducted in Waco, Texas, emphasize intentional practice, self-reflection and peer-feedback of performance, with high- stakes practical examinations in a physically and mentally demanding environment that simulates full-time clinical practice. These sessions range from five (5) to ten (10) days depending on the number of blended courses in the minimester. These lab sessions focus on the development of professional behavior, problem solving, clinical reasoning, and psychomotor skills that are required for effective occupational therapy practice in traditional and emerging practice settings.

The overall curriculum is comprised of courses that prepare the graduate to practice as an occupational therapy generalist in current and emerging practice settings, with individuals of all age groups, and in areas of physical and mental health. This requires completion of Level I and Level II Fieldwork experiences. Level I Fieldwork occurs in year one of the program, over three (3) terms. Level II Fieldwork occurs in in year two of the program over two (2) terms. In accordance with the program's Scholarship Agenda, student learning outcomes also support the program's expectations that the OTD student performs beyond generalist-level preparation with application of in-depth knowledge in practice skills, research skills, administration, leadership, program and policy development, advocacy, education, or theory through a combination of a capstone experience and a capstone project. The Doctoral Capstone Experience and the Doctoral Capstone Project occur in year two of the program.

Entry-Level OTD Academic Calendar

Academic calendars are published for each program cohort based on the year of graduation. Key dates and activities contained in these academic calendars are subject to change. Please see the following link for additional information: https://otd.robbins.baylor.edu/entry-level-otd/curriculum/academic-calendar (https://otd.robbins.baylor.edu/entry-level-otd/curriculum/academic-calendar/).

Graduation Requirements

For a student to graduate from the Entry level OTD program, the student must be in good academic standing, have had satisfactory progress in all semesters of the academic program, and satisfactorily complete the following:

1. Successfully complete the required 108 semester credit hours.
2. Achieve a cumulative GPA of 3.0 or better across all academic courses.
3. Exhibit professional behaviors as described in the Professional Behaviors, AOTA Core Values, and the Code of Ethics for the Occupational Therapist.
4. Successfully complete a total of 24 weeks of supervised Level II Fieldwork and a 14-week Doctoral Capstone Experience.
5. Complete all Level II Fieldwork and the Doctoral Capstone within 12 months of completing the didactic portion of the program.
6. Complete all required Baylor University and OTD Program documents in preparation for graduation.
7. Honor all professional and financial obligations to Baylor University, as published in the Baylor University and OTD Program Handbooks, and as specified in any written communications from the University's administrators.

Entry-Level OTD Curriculum

The professional curriculum leading to the Doctor of Occupational Therapy degree requires students to complete 108 semester credit hours of coursework in 6 continuous academic semesters over a 24-month period. Students are enrolled into the EL OTD program as a cohort and complete required courses in a prescribed, sequential manner. Course sequencing within the curriculum is designed to optimize the student's ability to learn and integrate course material into future didactic and clinical education experiences, culminating in the doctoral capstone. The curriculum is dynamic to keep abreast with best evidence in both clinical and educational practice.

The OTD faculty believe that student-centered teaching promotes discovery and clinical reasoning based on scholarly inquiry and instills a sense of awareness of self and others resulting in scientifically based client-centered service delivery characterized by ethical treatment decisions. This approach challenges students to expand their understandings of the relevance of occupational therapy to include considerations about the dynamic interaction of occupational performance, social participation and Christian values. The OTD curriculum design is comprised of the OTD Practice Sequence developed to prepare students for Fieldwork II and the OTD Scholarship Sequence developed for doctoral-level preparation for research and for application of in-depth knowledge required for the Doctoral Capstone. Stemming from the program's five curricular threads the faculty have established the following curricular learning outcomes.

At the time of graduation from the program, the student will be able to:

1. Utilize clinical reasoning in the occupational therapy process based on critical analysis, reflection and a dedication to excellence;
2. Articulate the positive relationship between occupation and health and appreciate the occupational nature of humans as a core philosophical assumption of the profession;
3. Provide client-centered care based on the principles, beliefs, and values of occupational therapy and a steadfast commitment to Christian values and identity;
4. Demonstrate servant-leadership roles leading to an in-depth understanding of a specialized competency in the profession that contributes to solving problems facing people and communities worldwide;
5. Demonstrate a commitment to scholarly practice and research through lifelong learning and critical inquiry.

Entry-Level OTD Degree Plan

Required:

Course	Title	Hours
Semester 1.1		
OTD 6311	Foundations of Occupational Therapy	3
OTD 6212	Scholarly Practice I	2
OTD 6215	Neuroscience in Occupational Therapy	2
OTD 6217	Analysis of Human Occupation Across the Lifespan	2
	Hours	**9**
Semester 1.2		
OTD 6420	Mental Health Populations and Practice in Occupational Therapy	4
OTD 6225	Fieldwork Seminar IA: Mental Health	2

OTD 6122	Conditions Impacting Occupational Performance	1
OTD 6227	Occupational Therapy Process Across the Lifespan	2
OTD 6124	Professional Competencies I	1
	Hours	**10**
Semester 2.1		
OTD 6430	Adult & Older Adult POP & PRAC in OT	4
OTD 6238	Fieldwork Seminar IB: Adult and Older Adult	2
OTD 6333	Human Movement	3
OTD 6237	Communication and Engagement in the Therapeutic Process	2
	Hours	**11**
Semester 2.2		
OTD 6242	Occupational Therapy Service Delivery and Organization	2
OTD 6144	Professional Development	1
OTD 6147	Conditions Impacting Occupational Performance II	1
OTD 6246	Scholarly Practice II	2
OTD 6248	Occupational Performance and Theories of Practice	2
	Hours	**8**
Semester 3.1		
OTD 6450	Children & Youth Populations & Practice in OT	4
OTD 6256	Fieldwork Seminar IC: Children and Youth	2
OTD 6255	Management of Occupational Therapy Services	2
OTD 6257	Educational Strategies and Learning in Healthcare and Academic Settings	2
	Hours	**10**
Semester 3.2		
OTD 6360	Wellness and Health Promotion	3
OTD 6262	Professional Competencies II	2
OTD 6265	Program Development	2
OTD 6161	Leadership and Advocacy	1
	Hours	**8**
Semester 4.1		
OTD 6V75	Level II Fieldwork I	12
	Hours	**12**
Semester 4.2		
OTD 6572	Doctoral Mentorship I	5
	Hours	**5**
Semester 5.1		
OTD 6V80	Level II Fieldwork II	12
	Hours	**12**
Semester 5.2		
OTD 6383	Doctoral Mentorship II	3
OTD 6285	Scholarly Practice III	2
	Hours	**5**
Semester 6.1		
OTD 6V09	Doctoral Capstone Experience	15
	Hours	**15**
Semester 6.2		
OTD 6309	Doctoral Capstone Project	3
	Hours	**3**
	Total Hours	**108**

Post-Professional Doctor of Occupational Therapy, PP-OTD

Department Chair: Marian Gillard, Ph.D. OTR/L, FAOTA

Graduate Program Director: Kayla Collins, Ed.D., OTR/L

Director of Administrative Affairs: Lori McNamara

Overview

The Post-Professional Doctor of Occupational Therapy program of study provides meaningful, obtainable, and affordable post professional education to licensed occupational therapists. The Program is offered through an online format and can be completed in sixteen months.

The program is structured to facilitate the student's personal and professional development, to encourage change and adaptation, and to ensure the mastery of the discipline through advanced coursework including development as leaders and advanced scholarly practitioners in occupational therapy. Coursework is organized to prepare students to identify client's potential or actual occupational needs and to intervene with a client-centered, evidence-based approach. Student completion of the doctoral capstone project is designed to strengthen the integration of evidence and practice. Students graduate as doctoral-level practice-scholars with the capacity to transform occupational therapy practice and to teach in the discipline.

The curriculum promotes synthesis of professional trends, occupational science, and technologies that support health and participation. Students are required to complete 30 credits of Occupational Therapy courses including the doctoral capstone series and 6 advanced practice courses focused on developing hybrid teaching and learning skills for the healthcare clinic and classroom.

Mission

To prepare practice scholars, educational innovators, and professional leaders who utilize clinically meaningful research in the implementation of best practice to meet the changing demands of the Occupational Therapy profession.

Admission Requirements

The PP-OTD program is designed for qualified individuals who wish to further their academic studies in occupational therapy. Students accepted into the PP-OTD Program must meet the following criteria. All applicants will:

1. Provide a current and valid license to practice occupational therapy in one of the 50 United States, the District of Columbia, Puerto Rico, or US Virgin Islands. This license must be in good standing.
2. Submit an online application.

3. Submit official transcripts from an entry-level, accredited occupational therapy program at the master's level.
4. Submit a CV/resume.
5. Submit 2-3 letters of recommendation.
6. Submit an application essay or personal statement expressing the student's professional goals and reasons for pursuing a PP-OTD degree with Baylor University.

Applicants for whom English is not a primary language must take either the TOEFL, IELTS, or Duolingo exam.

Student Learning Outcomes

Graduates will:

1. Demonstrate knowledge of relevant evidence, diagnostic considerations, and regulations that inform and guide best practice in the identified practice area.
2. Implement instructional design and teaching and learning principles to provide occupational therapy education in the healthcare clinic or classroom while demonstrating cultural relevance; knowledge of current occupational therapy practice; integrating available evidence; and leveraging occupation-based theoretical perspectives.
3. Identify ethical implications associated with the delivery of client-centered and student-centered services and articulate a process for navigating through fiscal, regulatory, scope of practice, or organizational issues.
4. Promote services for individuals, populations, or institutions in the identified practice area through education or advocacy activities.
5. Demonstrate a commitment to scholarly practice and research through lifelong learning and critical inquiry.

Post-Professional OTD Courses

Courses are structured to guide the student's personal and professional growth, to encourage change and adaptation, and to ensure the mastery of the discipline through synthesis of theory and research.

Occupational Therapy Core Courses

Seven core courses (17 credit hours) promote synthesis of evidence-based practice, professional trends, occupational science, and technologies that support health and participation in life.

Code	Title	Hours
OTD 6310	Advances in Occupational Therapy Practice	3
OTD 6210	Evidence-Based Practice	2
OTD 6320	Occupational Therapy Conceptual Foundations	3
OTD 6220	Professional Development and Leadership	2
OTD 6230	Teaching and Educational Theory in Occupational Therapy	2
OTD 6330	Clinical Reasoning: Forms of Inquiry in Advanced Practice	3
OTD 6240	Program Evaluation & Development	2

Doctoral Capstone Projects

Three doctoral capstone courses (7 credit hours) guide the student through completion of a scholarly capstone project that reflects synthesis of knowledge, reflective practice, and skills developed during post professional studies to demonstrate in-depth knowledge in a practice area that relates to the student's professional goals. Capstone projects are a faculty-mentored experience that may be completed either individually or in project teams.

Code	Title	Hours
OTD 6340	Doctoral Capstone 1	3
OTD 6272	Doctoral Capstone II	2
OTD 6280	Doctoral Capstone III	2

Advanced Practice Courses

Three advanced practice courses (6 credits) develop the student's teaching skills for the healthcare clinic or classroom with a focus on incorporating digital technologies in hybrid learning environments.

Code	Title	Hours
OTD 6196	Hybrid Learning in the Healthcare Clinic and Classroom	1
OTD 6298	Hybrid Teaching Strategies for the Healthcare Clinic and Classroom	2
OTD 6396	Developing Hybrid Teaching Skills for the Healthcare Clinic and Classroom	3

Affiliated Programs

- Anesthesia Nursing, D.N.P. (p. 83)
  - Doctor of Nursing Practice in Anesthesia Nursing, BSN to DNP Program (p. 83)
- Health Care Administration, M.H.A. (p. 79)
  - Master of Health Administration, M.H.A. (p. 80)
  - Joint Master of Health Administration/Master of Business Administration, M.H.A./M.B.A. (p. 81)
  - Executive Clinical Leadership (ECL), M.H.A. (p. 82)
  - Executive Clinical Leadership (ECL) - Joint Master of Health Administration/ Master of Business Administration, M.H.A./ M.B.A. (p. 82)
- Nutrition, M.S. (https://catalog.baylor.edu/graduate-school/affiliated-programs/nutrition-ms/)
- Occupational Therapy, DSc.O.T. (p. 89)
- Occupational Therapy, O.T.D. (p. 92)
- Physical Therapy, DSc.P.T. (p. 90)
  - Orthopaedic Manual Physical Therapy, DSc.P.T. (p. 90)
  - Sports Medicine and Primary Care, DSc.P.T. (p. 91)
- Physical Therapy, D.P.T. (p. 88)
- Physician Assistant, DSc.P.A. (p. 85)
  - Emergency Medicine, DSc.P.A. (p. 85)
  - Orthopedics, DSc.P.A. (p. 86)
  - General Surgery, DSc.P.A. (p. 87)

Health Care Administration, M.H.A.

Program Director: COL Dan Wood

- Master of Health Administration, M.H.A. (p. 80)
- Joint Master of Health Administration/Master of Business Administration, M.H.A./M.B.A. (p. 81)
- Executive Clinical Leadership (ECL), M.H.A. (p. 82)

- Executive Clinical Leadership (ECL) - Joint Master of Health Administration/ Master of Business Administration, M.H.A./M.B.A. (p. 82)

Master of Health Administration, M.H.A.

Program Directors: Patsy Norman, Associate Dean for Graduate Business Programs; COL Dan M. Wood, Director for the Army-Baylor Graduate Program in Health and Business Administration, JBSA Fort Sam Houston, TX.

The Master of Health Administration degree is awarded after sixty-six semester hours of study which includes five semesters of graduate courses, a comprehensive oral examination, a twelve-month administrative residency, and a graduate management portfolio (GMP). The objective of this program is to prepare students for a professional career in health services administration, with particular emphasis on middle and senior level management in federal health care systems. Through the course of study, students gain a broad knowledge of the theories, concepts, managerial tenets and techniques fundamental to effective administration of health care delivery.

Prerequisites and Admission Screening

Candidates for admission must hold either a baccalaureate degree or the first professional degree from an accredited college or university acceptable to Baylor University. Candidates must also demonstrate a capacity for rigorous graduate study. Applicants must present both a grade point average and current (i.e., within the past 5 years) score on the GRE (minimum score of 300) or GMAT (minimum score of 530) that are predictive of success in this program. For further information regarding admission requirements and waivers, contact the Program Administrator at (210) 221-6443.

The Master of Health Administration degree will be granted upon completion of graduate course work (one year), the comprehensive oral examination, the administrative residency (one year), and the GMP.

Class Composition and Curriculum

Each class is tri-service in composition, and most classes include Coast Guard, Department of Veterans Affairs, and Bureau of Medicine and Surgery Navy civil servants. Class members typically include physicians, dentists, nurses, allied health professionals, and administrators, making the year an invaluable, multidisciplinary learning experience. The M.H.A. program of study consists of 18 core courses and one required elective.

Curriculum

The sequence for the program is:

Course	Title	Hours
First Semester		
HCA 5105	Ethics in Health Care	1
HCA 5106	Fundamentals in Graduate Studies	1
HCA 5213	Health Insurance and Managed Care in the U.S.	2
HCA 5301	U. S. Health Care Systems	3
HCA 5310	Quantitative Analysis I: Statistics & Research Methods	3
MECO 5331	Managerial Economics	3
	Hours	**13**
Second Semester		
HCA 5358	Quantitative Methods II: Modern Data Science	3
HCA 5359	Seminar in Human Resources Management	3
HCA 5389	Population Health & Homeland Security	3
HCA 5450	Finance I: Financial and Managerial Accounting in Healthcare Organizations	4
HCA 5336	Health Care Law and Policy	3
	Hours	**16**
Third Semester		
HCA 5306	Current Issues in Healthcare Quality	3
HCA 5329	Leadership in Complex Organizations	3
HCA 5322	Organizational Behavior and Theory	3
MMGT 5460	Operations Management and Research	4
	Hours	**13**
Fourth Semester		
HCA 5309	Health Economics	3
MMKT 5371	Marketing Management	3
HCA 5317	Health Management Information Systems	3
	Hours	**9**
Fifth Semester		
HCA 5218	Finance II: Financial Apps	2
MMGT 5325	Strategy	3
	Hours	**5**
	Total Hours	**56**

Code	Title	Hours
Required Elective Hours for Didactic Year		*1*

Code	Title	Hours
Residency		
HCA 5961	Administrative Residency	9

Electives

Electives are subject to change based on instructor availability. Students enrolled in the Army-Baylor M.H.A. program may take electives from both the H.C.A. and the M.B.A. courses.

Code	Title	Hours
HCA 5211	Quantitative Analysis III: Decision Making with Statistics and Research	2
HCA 5308	Lean Six Sigma	3
HCA 5356	Organizational Ethics	3
HCA 5357	MEDCOM Analytics	3
MENT 5137		1
MINB 5450	International Business	4
MBL 5310	Selected Topics in Business Law	3
MECO 5132	Macroeconomic Analysis in the Global Economy	1
MECO 5133	Seminar in World Economic Systems	1
MMGT 5162	Seminar in International Management	1
MMKT 5171	Seminar in International Marketing	1

HCA 5V92	Special Studies in Health Care Administration [1]	1-3

[1] May be repeated with a different topic for up to 12 credit hours

Residency

Degree candidates are required to serve an administrative residency in a selected health care institution. During this residency, performed under the guidance of a qualified preceptor, students study and analyze all the functional elements of the organization. They develop managerial skills through experience in the performance of administrative tasks and through direct participation in the problem-solving process. Additionally, students perform special studies as directed and conduct a portfolio of graduate management projects. Approval of proposed projects must be secured from the preceptor and the student's faculty advisor at the Medical Center of Excellence.

Joint Master of Health Administration/Master of Business Administration, M.H.A./M.B.A.

Program Directors: Patsy Norman, Associate Dean for Graduate Business Programs; COL Dan M. Wood, Director for the Army-Baylor Graduate Program in Health and Business Administration, JBSA Fort Sam Houston, TX.

Note: This M.B.A. program is only open to eligible students enrolled in the Army-Baylor MHA graduate program.

Admissions

Students can take either the GRE or GMAT. The minimum required score is 310 for the GRE or 580 for the GMAT. Candidates for admission must hold either a baccalaureate degree or the first professional degree from an accredited college or university acceptable to Baylor University. Candidates must also demonstrate a capacity for rigorous graduate study. Applicant's grade point average and GRE/GMAT scores must be predictive of success in this program. Applications must be submitted directly to the Army-Baylor Graduate Program. For further information regarding admission requirements and waivers, contact the Program Administrator at (210) 221-6443.

Requirements

Candidates must complete all degree requirements for the M.B.A. and the M.H.A. The M.H.A. requires the successful (passing) completion of 66 semester hours; the M.B.A. program requires the successful completion of an additional 21 semester hours (for a total of 87 semester hours). The joint program requires a one-year residency and the successful completion of a portfolio of graduate management projects. Since M.H.A./M.B.A. degrees are awarded simultaneously, all requirements in both programs must be completed in order to receive both degrees.

Curriculum

Course	Title	Hours
First Semester		
HCA 5105	Ethics in Health Care	1
HCA 5106	Fundamentals in Graduate Studies	1
HCA 5213	Health Insurance and Managed Care in the U.S.	2
HCA 5301	U. S. Health Care Systems	3
HCA 5310	Quantitative Analysis I: Statistics & Research Methods	3
MBL 5310	Selected Topics in Business Law	3
MECO 5331	Managerial Economics	3
	Hours	**16**
Second Semester		
HCA 5336	Health Care Law and Policy	3
HCA 5356	Organizational Ethics	3
HCA 5358	Quantitative Methods II: Modern Data Science	3
HCA 5359	Seminar in Human Resources Management	3
HCA 5389	Population Health & Homeland Security	3
HCA 5450	Finance I: Financial and Managerial Accounting in Healthcare Organizations	4
	Hours	**19**
Third Semester		
HCA 5306	Current Issues in Healthcare Quality	3
HCA 5322	Organizational Behavior and Theory	3
HCA 5329	Leadership in Complex Organizations	3
MMGT 5460	Operations Management and Research	4
MECO 5330	Principles of Macroeconomics	3
	Hours	**16**
Fourth Semester		
HCA 5211	Quantitative Analysis III: Decision Making with Statistics and Research	2
HCA 5317	Health Management Information Systems	3
HCA 5450	Finance I: Financial and Managerial Accounting in Healthcare Organizations	4
MINB 5450	International Business	4
MMKT 5371	Marketing Management	3
	Hours	**16**
Fifth Semester		
HCA 5218	Finance II: Financial Apps	2
MMGT 5325	Strategy	3
MECO 5132	Macroeconomic Analysis in the Global Economy [1]	1
MECO 5133	Seminar in World Economic Systems [1]	1
MMGT 5162	Seminar in International Management [1]	1
MMKT 5171	Seminar in International Marketing [1]	1
MENT 5137	[1]	1
	Hours	**10**
	Total Hours	**77**

[1] *Students are required to take 4 out of the five seminar courses listed.*

Code	Title	Hours
Required Elective Hours for Didactic year		*3*

Code	Title	Hours
Residency		
HCA 5961	Administrative Residency	9

Executive Clinical Leadership (ECL), M.H.A.

Master of Health Administration

Program Directors: Patsy Norman, Associate Dean for Graduate Business Programs; COL Dan M. Wood, Director for the Army-Baylor Graduate Program in Health and Business Administration, JBSA Fort Sam Houston, TX.

Admissions

The Executive Clinical Leadership (ECL) M.H.A. track in a program that entails a 54-week didactic phase in which the student completes 66 credit hours, including a Graduate Management Project (GMP). Since the administrative residency year required for the traditional M.H.A. is waived, substantial clinical experience is a prerequisite (generally 10 years). Students are either a senior Major or junior Lieutenant Colonel. Additional requirements include the following: advanced clinical degree; minimum 3.2 undergraduate GPA (on a 4.0 scale); minimum of four years from Mandatory Retirement Date; research topic proposal (GMP). Candidates must have a current GRE (300 for M.H.A.; 310 for joint ECL) or GMAT (530 for M.H.A.; 580 for joint ECL) score. Applications must be submitted directly to the Army-Baylor Graduate Program. For further information regarding admission requirements and waivers, contact the Program Administrator at (210) 221-6443.

Requirements

Candidates must complete all degree requirements of the M.H.A. The M.H.A. requires the successful (passing) completion of 66 semester hours including successful completion of residency rotations and GMP.

Curriculum

Course	Title	Hours
First Semester		
HCA 5105	Ethics in Health Care	1
HCA 5106	Fundamentals in Graduate Studies	1
HCA 5213	Health Insurance and Managed Care in the U.S.	2
HCA 5301	U. S. Health Care Systems	3
HCA 5310	Quantitative Analysis I: Statistics & Research Methods	3
MECO 5331	Managerial Economics	3
	Hours	**13**
Second Semester		
HCA 5101	Graduate Management Study Development 1	1
HCA 5336	Health Care Law and Policy	3
HCA 5358	Quantitative Methods II: Modern Data Science	3
HCA 5359	Seminar in Human Resources Management	3
HCA 5389	Population Health & Homeland Security	3
HCA 5450	Finance I: Financial and Managerial Accounting in Healthcare Organizations	4
	Hours	**17**
Third Semester		
HCA 5201	Residency Rotation	2
HCA 5306	Current Issues in Healthcare Quality	3
HCA 5322	Organizational Behavior and Theory	3
HCA 5329	Leadership in Complex Organizations	3
MMGT 5460	Operations Management and Research	4
	Hours	**15**
Fourth Semester		
HCA 5102	Graduate Management Study Development 2	1
HCA 5307	Residency Rotation 2	3
HCA 5309	Health Economics	3
HCA 5317	Health Management Information Systems	3
MMKT 5371	Marketing Management	3
	Hours	**13**
Fifth Semester		
HCA 5103	Graduate Management Study Development 3	1
HCA 5218	Finance II: Financial Apps	2
MMGT 5325	Strategy	3
	Hours	**6**
	Total Hours	**64**

Code	Title	Hours
Required Elective Hours for Didactic Year		*2*

Executive Clinical Leadership (ECL) - Joint Master of Health Administration/ Master of Business Administration, M.H.A./M.B.A.

Curriculum

Course	Title	Hours
First Semester		
HCA 5105	Ethics in Health Care	1
HCA 5106	Fundamentals in Graduate Studies	1
HCA 5213	Health Insurance and Managed Care in the U.S.	2
HCA 5301	U. S. Health Care Systems	3
HCA 5310	Quantitative Analysis I: Statistics & Research Methods	3
MBL 5310	Selected Topics in Business Law	3
MECO 5331	Managerial Economics	3
	Hours	**16**
Second Semester		
HCA 5101	Graduate Management Study Development 1	1
HCA 5336	Health Care Law and Policy	3
HCA 5356	Organizational Ethics	3

HCA 5358	Quantitative Methods II: Modern Data Science	3
HCA 5359	Seminar in Human Resources Management	3
HCA 5389	Population Health & Homeland Security	3
HCA 5450	Finance I: Financial and Managerial Accounting in Healthcare Organizations	4
	Hours	**20**
Third Semester		
HCA 5201	Residency Rotation	2
HCA 5306	Current Issues in Healthcare Quality	3
HCA 5322	Organizational Behavior and Theory	3
HCA 5329	Leadership in Complex Organizations	3
MMGT 5460	Operations Management and Research	4
MECO 5330	Principles of Macroeconomics	3
	Hours	**18**
Fourth Semester		
HCA 5102	Graduate Management Study Development 2	1
HCA 5211	Quantitative Analysis III: Decision Making with Statistics and Research	2
HCA 5307	Residency Rotation 2	3
HCA 5309	Health Economics	3
HCA 5317	Health Management Information Systems	3
MINB 5450	International Business	4
MMKT 5371	Marketing Management	3
	Hours	**19**
Fifth Semester		
HCA 5103	Graduate Management Study Development 3	1
HCA 5218	Finance II: Financial Apps	2
MMGT 5325	Strategy	3
Select four courses from the following:		4
MECO 5132	Macroeconomic Analysis in the Global Economy [1]	
MECO 5133	Seminar in World Economic Systems [1]	
MMGT 5162	Seminar in International Management [1]	
MMKT 5171	Seminar in International Marketing [1]	
MENT 5137	[1]	
	Hours	**10**
	Total Hours	**83**

Code	Title	Hours
Required Elective Hours for Didactic Year		*4*

Anesthesia Nursing, D.N.P.

- Doctor of Nursing Practice in Anesthesia Nursing, BSN to DNP Program (p. 83)

Doctor of Nursing Practice in Anesthesia Nursing, BSN to DNP Program

Program Director: COL Steven Kertes, DNP, CRNA

The D.N.P. in Nurse Anesthesia is a U.S. Army affiliated program. The U.S. Army has prepared Certified Registered Nurse Anesthetists (CRNAs) for nearly 50 years and their students have earned graduate degrees through university-based affiliations since 1981. The U.S. Army Graduate Program in Anesthesia Nursing (USAGPAN) produces virtually all active duty CRNAs and has averaged 28 graduates per year for the past ten years. The USAGPAN program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA) and will be included in the LHSON D.N.P. program accreditation currently held by the Commission on Collegiate Nursing Education (CCNE). The USAGPAN historically ranks among the nation's top nursing anesthesia programs and is currently ranked 8th out of 113 accredited programs by U.S. News & World Report.

The USAGPAN is a rigorous 2-phase 36-month program, with phase 1 consisting of 52 weeks of didactic instruction at the U.S. Medical Center of Excellence (MEDCoE), Joint Base San Antonio, Fort Sam Houston, Texas. Phase 2 consists of 97 weeks of didactic and clinical instruction conducted at select Medical Treatment Facilities affiliated with the Army, Department of Defense, Veterans Administration, and private sector. Among the current sites utilized for clinical instruction are Brooke Army Medical Center, Carl R. Darnall Army Medical Center, William Beaumont Army Medical Center, Dwight D. Eisenhower Army Medical Center, Womack Army Medical Center, Madigan Army Medical Center, Tripler Army Medical Center, and Memphis VA Medical Center. The overall program credit hours total 122 taught by a combined cadre of 37 highly qualified faculty.

The U.S. Army Graduate Program in Anesthesia Nursing matriculates Army and VA registered nurses. Graduates of the Baylor-USAGPAN will serve as Certified Registered Nurse Anesthetists, CRNAs, in their respective agency. The U.S. Army Graduate Program in Anesthesia Nursing students are educated in a manner that encourages independent thought and critical decision-making skills during times of great stress, both physical and emotional. As the sole providers of anesthesia under many circumstances in the Army, CRNAs need to rely on their skills and training to save the lives of soldiers and beneficiaries.

Admission Requirements

Candidates seeking admission to the USAGPAN must meet the following minimum qualifications:

1. BSN or MSN degree from a CCNE, ACEN or NLN CNEA accredited program (U.S. programs only); Official transcripts must be submitted for all degrees and course work
2. GRE within five years: competitive combined score, writing 3.5 required, submit official score reports to Baylor Graduate School, Waco, TX, CEEB code: 6032 or select Baylor University in Waco, Texas in the "Graduate" category
3. BSN or MSN GPA of 3.0 and an overall science GPA of 3.0
4. Undergraduate or graduate statistics course
5. Current Within 5 Years - Undergraduate or graduate course in Biochemistry or Organic Chemistry; online or in-residence programs are accepted (no lab required)

6. At least one year of experience as a Registered Nurse in a critical care setting[1]
7. An essay or formal letter on your Goals and Objectives
8. Curriculum Vitae or Resume
9. Letters of recommendation: three required[2]
10. Interview: Qualified applicants must attend a 2-3-day shadow/interview before August 1st. Coordinated through your Army Medical Recruiter or VA liaison
11. Direct Accessions: Direct Accession Applicants must work with an Active Duty U.S. Army Medical (AMEDD) Recruiter to be considered for an appointment onto active duty. To request an "Active Duty Medical (AMEDD) Recruiter" near you, call (888) 550-2769 or go to: https://www.goarmy.com/locate-a-recruiter.html.

[1] Critical Care experience – As defined by the Council on Accreditation (COA), Critical care experience must be obtained in a critical care area within the United States, the territories, or a U.S. Military hospital outside of the United States. During this experience, the registered nurse is to have developed critical decision making and psychomotor skills, competency in patient assessment, and the ability, to use and interpret advanced monitoring techniques. A critical care area is defined as one where, on a routine basis, the registered professional nurse manages one or more of the following: invasive hemodynamic monitors (such as pulmonary artery catheter, CVP, arterial); cardiac assist devices; mechanical ventilation; and vasoactive drips. The critical care areas are typically intensive care units. Examples of critical care units may include but are not limited to: surgical intensive care, cardiothoracic intensive care, coronary intensive care, medical intensive care, pediatric intensive care, and neonatal intensive care. (COA Standards pg. 35) Those who have experience in other areas may be considered provided they can demonstrate competence with invasive monitoring, ventilators, and critical care pharmacology.

[2] Letters of Recommendation, three required – processed through the application portal

1. Supervisor
2. Peer / professional colleague
3. Post Shadow/Interview Letter from CRNA Faculty (sent internally by the writer)

CCRN is preferred, but not required.

Additional Application Details

Transcripts - Official copies required from all schools attended as noted below:

- All degree-earned transcripts
- Transferred coursework applied to Nursing Degree(s) (submit transcript from original school)
  - Electronically sent to Baylor Graduate School at: Grad_Transcripts@baylor.edu, or
  - official copies by U.S. Mail to:
    Baylor University
    Graduate Admissions
    One Bear Place #97264
    Waco, Texas 76798-7264

Direct Accession applicants: Baylor University Louise Herrington School of Nursing (LHSON) admission is a separate and distinct admission process. You must be selected for both an Army active duty appointment (Direct Accession) and selected for admission to the USAGPAN program by Baylor University LHSON.

Curriculum

The sequence for the program is:

Course	Title	Hours
Phase 1/Year 1		
Summer		
MNUR 6411	Biochemistry for Nurse Anesthesia	4
MNUR 6612	Advanced Anatomy and Physiology I for Nurse Anesthesia	6
MNUR 6513	Advanced Pharmacology for Nurse Anesthesia I	5
MNUR 6321	Health Care Informatics	3
	Hours	**18**
Fall		
MNUR 6514	Advanced Anatomy and Physiology II for Nurse Anesthesia	5
MNUR 6631	Introductory Concepts and Principles of Anesthesia Practice	6
MNUR 6422	Research and Statistical Methods	4
MNUR 6132	Clinical Concepts of Nurse Anesthesia Practice I	1
MNUR 6233	Regional Anesthesia and Point of Care Ultrasound I	2
	Hours	**18**
Spring		
MNUR 6415	Advanced Pharmacology for Nurse Anesthesia 2	4
MNUR 6735	Anesthesia for Surgical Procedures and Special Populations	7
MNUR 6434	Advanced Health Assessment and Diagnosis	4
MNUR 6323	Research Evidence into Practice	3
MNUR 6136	Clinical Concepts for Nurse Anesthesia II	1
MNUR 6237	Regional Anesthesia and Ultrasound Science 2	2
	Hours	**21**
Phase 2/Year 2		
Summer		
MNUR 6344	Leadership in Advanced Practice Nursing	3
MNUR 6371	DNP Scholarly Project 1 (Design and Ethical Consideration of Practice Application)	3
	Hours	**6**
Fall		
MNUR 6342	Healthcare Management	3
MNUR 6V01	Clinical Practicum and Role Development 1	11
	Hours	**14**
Spring		
MNUR 6341	Professional Aspects of Nursing Anesthesia	3
MNUR 6343	Health Policy and Law	3

MNUR 6V02	Clinical Practicum and Role Development 2	11
	Hours	**17**
Phase 2/Year 3		
Summer		
MNUR 6372	DNP Scholarly Project 2 (Applying Practice Knowledge Implementation/Outcomes)	3
	Hours	**3**
Fall		
MNUR 6V03	Clinical Practicum and Role Development 3	11
MNUR 6373	DNP Scholarly Project 3 (Dissemination of Practice Inquiry)	3
	Hours	**14**
Spring		
MNUR 6V04	Clinical Practicum and Role Development 4	11
	Hours	**11**
	Total Hours	**122**

Physician Assistant, DSc.P.A.

- Emergency Medicine, DSc.P.A. (p. 85)
- Orthopedics, DSc.P.A. (p. 86)
- General Surgery, DSc.P.A. (p. 87)

Emergency Medicine, DSc.P.A.

Doctor of Science in Physician Assistant Studies - Emergency Medicine

Program Director Chair: COL Aaron J. Cronin, DSc, PA-C

In fall 2007, Baylor University, in affiliation with the U.S. Army, established a new degree program, the Doctor of Science in Physician Assistant Studies (DSc.P.A.) with the concentration in Emergency Medicine. This professional, terminal doctoral degree was then new to the discipline of physician assistant studies. The program consists of 18 months of didactic study, clinical experience, and clinically oriented research conducted in a professional residency setting. Today, the U.S. Army / Baylor University Emergency Medicine Physician Assistant Residency Program trains joint-services, active-duty PAs at five training sites: Brooke Army Medical Center (BAMC) at Joint Base San Antonio in San Antonio, Texas, Madigan Army Medical Center (MAMC) at Joint Base Lewis-McChord in Tacoma, Washington, Carl R. Darnall Army Medical Center (CRDAMC) at Fort Hood in Killeen, Texas, William Beaumont Army Medical Center (WBAMC) at Fort Bliss in El Paso, Texas, and Mike O'Callaghan Military Medical Center (MOMMC) at Nellis Air Force Base in Las Vegas, Nevada.

Objectives

The vision of the U.S. Army / Baylor University Emergency Medicine Physician Assistant Residency Program is to create the benchmark for postgraduate emergency medicine physician assistant education through the pursuit of academic and clinical excellence. The program achieves this vision by developing clinical scientists who are prepared to conduct advanced scientific research and provide quality emergency care for patients with a wide variety of illnesses and injuries in the emergency department or in the deployed setting. The clinical scientists graduating from this program become future leaders and mentors by establishing scholarly excellence for the physician assistant profession.

The U.S. Army / Baylor University Emergency Medicine Physician Assistant Residency Program provides advanced education and training, further enhancing the abilities of clinicians to save U.S. Military servicemembers' lives on the battlefield, to serve Military Health System beneficiaries, to augment and extend physician care, and to improve recruiting and retention through unique professional development opportunities. The program produces graduates with expertise in evidence-based emergency care for examining, diagnosing, and managing a variety of life-threatening injuries and illnesses. The curriculum is structured to develop competency in research design, production, analysis, and critical review. Graduates will use competencies in triage and management of emergency medical conditions and injuries to stabilize critically ill or injured soldiers on the battlefield and prepare them for transportation to higher echelons of care.

Admission

For admission, candidates must be active-duty U.S. military physician assistants with a master's degree in physician assistant studies (or equivalent) with a minimum of two years of active-duty military service practicing as a physician assistant prior to beginning the program. Applicants must have a cumulative grade point average of 3.0 or above, a minimum GRE score of 300, and letter of endorsement from an emergency medicine PA after 40 hours of shadowing in an emergency department setting. Candidates must have a minimum of two years of time on station prior to the start date of the residency or if outside the continental United States (OCONUS), the applicants must have served to within 60 days of their prescribed tour. Applicants must also agree to incur a 2-year active-duty service obligation (ADSO). Candidates must also meet the entrance requirements of the Graduate School of Baylor University. Candidates are selected by a competitive board process by their respective uniformed service.

Curriculum

The 18-month curriculum totals 88 semester credit hours and consists of 16 didactic and 20 clinical sections (representing approximately 740 hours of classroom instruction and 3,460 clinical training hours, respectively), and a research project. Midterm and final board examinations, including written and oral evaluations, are based on the standards set by the American Board of Emergency Medicine for physician training.

The didactic portion accounts for 32 credit hours and consists of 16 courses on an array of emergency-medicine topics. Each course carries two semester hours of credit:

Code	Title	Hours
MEM 6210	Introduction to Emergency Medicine Resuscitation, Shock, and Anesthesia	2
MEM 6211	Emergency Treatment of Orthopedic Injuries, Emergency Ultrasounds, and Emergency Radiology	2
MEM 6212	Toxicology and Oral Maxillary Facial Disorders	2
MEM 6213	Cardiovascular, Pulmonary, Hematologic, Oncologic, and Psychosocial Diseases and Disorders	2

MEM 6214	Gastrointestinal, Genitourinary, Obstetrics, and Gynecology Diseases	2
MEM 6215	Pediatric Non-Traumatic Musculoskeletal Disorders, Abuse, and Assault	2
MEM 6216	Emergency Wound Management, Environmental Injuries, and Trauma	2
MEM 6217	Infectious Disease, Endocrinology, and Neurology	2
MEM 6220	Advanced Emergency Medicine, Resuscitation, Shock, and Anesthesia	2
MEM 6221	Advanced Emergency Treatment of Orthopedic Injuries, Emergency Ultrasounds, and Emergency Radiology	2
MEM 6222	Advanced Toxicology and Oral Maxillary Facial Disorders	2
MEM 6223	Advanced Cardiovascular, Pulmonary, Hematologic, Oncologic, and Psychosocial Disorders	2
MEM 6224	Advanced Gastrointestinal, Genitourinary Obstetrics, and Gynecology Diseases	2
MEM 6225	Advanced Pediatrics Non-Traumatic Musculoskeletal Disorders, Abuse, and Assault	2
MEM 6226	Advanced Emergency Wound Management, Environmental Injuries, and Trauma	2
MEM 6227	Advanced Infectious Disease, Endocrinology, and Neurology	2

The remaining 56 credit hours are earned through clinical rotations. These include an emergency department orientation, eight emergency department rotations, four intensive-care rotations, one trauma surgery rotation, two pediatric rotations, one toxicology rotation, one radiology rotation, one emergency ultrasound rotation, one oral maxillofacial rotation, two elective rotations, and a dedicated research block:

Code	Title	Hours
MEM 6330	Orientation to Emergency Medicine	3
MEM 6231	Emergency Department 1	2
MEM 6232	Emergency Department 2	2
MEM 6233	Emergency Department 3	2
MEM 6234	Emergency Department 4	2
MEM 6235	Emergency Department 5	2
MEM 6336	Emergency Department 6	3
MEM 6337	Emergency Department 7	3
MEM 6338	Emergency Department 8	3
MEM 6439	Pediatrics Emergency Department	4
MEM 6440	Pediatrics Emergency Department and Pediatric Intensive Care Unit	4
MEM 6142	Radiology	1
MEM 6143	Oral-Maxillary Facial Surgery	1
MEM 6144	Toxicology	1
MEM 6445	Emergency Ultrasound	4
MEM 6346	Clinical Research	3
MEM 6447	Surgical Intensive Care Unit (SICU)	4
MEM 6448	Medical Intensive Care Unit (MICU)	4
MEM 6449	Cardiac Care Unit (CCU)	4
MEM 6450	Trauma Surgery	4

Each physician assistant resident is required to initiate and complete an Internal Review Board (IRB) approved research project during the 18-month residency. During the final month of the residency, each resident will present the results of the research project in written and oral form and defend the project before a doctoral examining committee. The examining committee is chaired by the training site program director and includes three additional program faculty and a faculty member from the Baylor-Waco campus. A manuscript from the completed project will be submitted to a peer-reviewed journal for publication.

Orthopedics, DSc.P.A.

Doctor of Science in Physician Assistant Studies-Orthopedics

Program Director Chair: MAJ Preston Lopez, U.S. Army

In the Fall 2008, Baylor University, in affiliation with the U.S. Army, established a new degree program, the Doctor of Science in Physician Assistant Studies, with the major in Orthopaedics (DSc.P.A.S.). The program of study consists of 18 months of didactic study, clinical experience, and clinically oriented research conducted in a professional residency setting. The Baylor-Army DScPAS residency in Orthopaedics is offered at William Beaumont Army Medical Center, Ft. Bliss in El Paso, Texas; Brooke Army Medical Center, Ft. Sam Houston in San Antonio, Texas; Madigan Army Medical Center, Ft. Lewis in Tacoma, Washington; and David Grant USAF Medical Center, Travis AFB, in Fairfield, CA.

This residency provides physician assistants the opportunity to develop advanced competencies in both operative assistance and non-operative management of musculoskeletal conditions. Graduates of the program will possess expertise in evidence-based orthopaedic care and advanced skills in history taking and physical examination, diagnostics, special testing, and management of a variety of non-operative musculoskeletal injuries and conditions in an outpatient setting and on the battlefield. Residents will demonstrate competency in research design, methods, analysis and critical review. Graduates will be prepared to function as clinical scientists and become future leaders and mentors by setting the standard of scholarly excellence for physician assistants worldwide.

Admission

Candidates for admission must hold a Master's Degree in Physician Assistant Studies and be active-duty members of the U.S. Armed Services. Applicants must present a competitive undergraduate grade point average and scores on the GRE General Exam predictive of success in this program. Candidates must also meet all Baylor University Graduate School entrance requirements. Fully qualified candidates are competitively board-selected for a limited number of program spots.

Curriculum

The 18-month curriculum totals 85 semester credit hours. The 19 clinical rotations (71 credit hours representing more than 4,900 training hours in academic hospitals), and 4 research courses (14 credit hours) used to develop and execute a research project. Both written and oral exams, preceptor evaluations, article reviews and presentations are used for assessment and parallel the standards set by the Accreditation Council for Graduate Medical Education (ACGME).

Each physician assistant resident is required to initiate and complete a research project, approved by the Institutional Review Board (IRB), during their 18-month curriculum. The initial two weeks of program instruction focus on preparing new residents for this project; introduction to statistical analysis, developing a research question, and submitting a research protocol are just a few topics discussed in detail. During the final month of the course of study, each resident will present the results of research project in written and oral form and defend the project before a doctoral examining committee. The examining committee is chaired by the Program Director and includes three additional program faculty and a faculty member from the Baylor-Waco campus. A manuscript from the completed project will be submitted to an indexed, peer-reviewed journal for publication.

The curriculum includes the following courses:

Code	Title	Hours
MCO 6350	Introduction to Orthopaedic Clinical Evaluation and Procedures	3
MCO 6410	Introduction to Upper Extremity Sports Injury Management	4
MCO 6411	Introduction to Lower Extremity Sports Injury Management	4
MCO 6412	Evaluation and Management of Hand and Elbow Disorders	4
MCO 6413	Evaluation and Management of Foot and Ankle Disorders	4
MCO 6352	Orthopaedic Evaluation and Management of Spine Disorders	3
MCO 6353	Evaluation and Management of Neurologic Disorders	3
MCO 6354	Evaluation and Management of Pediatric Orthopaedic Disorders	3
MCO 6414	Evaluation and Management of Complex Wounds	4
MCO 6415	Evaluation of Joint Arthritis and Trauma Managed with Joint Reconstruction	4
MCO 6416	Musculoskeletal Oncology Evaluation and Management	4
MCO 6417	Introduction to Evaluation and Management of Orthopaedic Trauma	4
MCO 6418	Introduction to Evaluation and Management of General Trauma	4
MCO 6419	Introduction to Critical Care Management	4
MCO 6420	Advanced Sports Injury Management	4
MCO 6421	Advanced evaluation and management of orthopaedic trauma	4
MCO 6422	Advanced Critical Care Management	4
MCO 6355	Advanced Orthopaedic Clinical Evaluation and Procedures	3
MCO 6425	Urgent Orthopaedic Evaluation	4
MCO 6351	Evidence Based Orthopaedic Care	3
MCO 6423	Medical Research Design	4
MCO 6424	Approaches to Medical Data Collection and Analysis	4
MCO 6356	Techniques for Medical Research Presentation	3

General Surgery, DSc.P.A.

Doctor of Science in Physician Assistant Studies-General Surgery

Baylor Program Director Chair: MAJ Ryan McMahon, U.S. Army

In the Fall 2012, Baylor University, in affiliation with the U.S. Army Medical Center of Excellence (MEDCoE) established the Doctor of Science in Physician Assistant in General Surgery degree (DSc.P.A.S.). The Army/ Baylor Doctorate of Science Physician Assistant-General Surgery (DSc.P.A.S.-GS) Program serves as the benchmark for post-graduate PA education and research through the pursuit of clinical excellence, academic rigor, and scholarly activity. The program will challenge the graduate student through a strenuous clinical and academic schedule with the overall goals of improving quality of care, patient safety, and medical knowledge through education and research.

The DSc.P.A.S.-GS Program provides physician assistants an opportunity to develop advanced competencies in clinical research as well as in both operative assistance, and clinical management of General Surgery/ Trauma Surgery/ and Critical Care patients. This rigorous comprehensive training is conducted at Joint Base San Antonio Military Medical Center, Texas. Graduates will use the surgical and critical care skills acquired during the program to assist General Surgeons in the operative treatment of injured and critically wounded warriors on and off the battlefield, perform Critical Care for post-operative trauma/surgical patients, provide surgical care to military dependents and enhance the knowledge of medicine through education and research.

Admission

Candidates for admission must hold a Master's Degree in Physician Assistant Studies and be currently on active-duty as a member of the U.S. Military. Applicants must meet all service specific requirements prior to beginning the program. Applicants must have an overall minimum grade point average of 3.0 and obtain a score on the GRE general exam that is predictive of successful completion of the program. Candidates must also meet the entrance requirements of the Graduate School of Baylor University. Uniformed-services candidates will be selected by a competitive board process by their respective uniformed service.

Curriculum

The Doctor of Science in Physician Assistant in General Surgery degree (DSc.P.A.S.) is an 18 month, 86 semester hours, Doctorate of Science Program. The DSc.P.A.S.-GS program is taught by U.S. Military personnel under the supervision of the U.S. Army General Surgery Physician Assistant Program Director and General Surgery Physician Assistant Medical Director at Brooke Army Medical Center, Joint Base San Antonio Fort Sam Houston Texas. The program consists of approximately 4,000 clinical training hours, approximately 800 hours of classroom instruction, lectures, substantial reading assignments, oral presentations, monthly end of rotation exams (written and oral), bi-monthly high and low fidelity SIM, monthly procedure labs, and a research requirement. The D.Sc.P.A.S.-GS Program requires the completion of an evidence-based research project. During the final portion of the course of study, each resident will defend their research study and submit the results in a written format. The results of the project will be presented at an appropriate national conference and the manuscript will be submitted to a peer-reviewed journal for publication.

The curriculum is structured as follows:

Code	Title	Hours
MGS 6210	Surgical Basic Principles	2
MGS 6211	Perioperative Management	2
MGS 6212	The Abdomen	2
MGS 6213	Surgery of the Esophagus and Stomach	2
MGS 6214	Surgery of the Small Intestine, Large Intestine, Rectum, and Anus	2
MGS 6215	Surgery of the Liver and Biliary Tract	2
MGS 6216	Surgery of the Pancreas and Spleen	2
MGS 6217	Endocrine Surgery	2
MGS 6218	Breast Surgery	2
MGS 6219	Neurosurgery, Pediatric Surgery	2
MGS 6220	Burn/Critical Care Surgery	2
MGS 6221	Trauma Surgery	2
MGS 6222	Surgical Critical Care	2
MGS 6223	Surgery on the Lung, Chest Wall, and Mediastinum	2
MGS 6224	Surgical Oncology	2
MGS 6225	Vascular Surgery	2

Practical Clinical Rotations

Code	Title	Hours
MGS 6330	Orientation to General Surgery	3
MGS 6331	General Surgery Team A (Colorectal, General Surgery, Pediatric)	3
MGS 6332	General Surgery Team B (Minimally Invasive Surgery)	3
MGS 6333	General Surgery Team C (General Surgery)	3
MGS 6334	General Surgery (WH)	3
MGS 6335	General Surgery Team D (Surgical Oncology)	3
MGS 6336	Interventional Radiology	3
MGS 6337	Trauma Surgery (Rotation 1)	3
MGS 6338	Vascular Surgery	3
MGS 6339	Burn Surgery/Burn Critical Care (Rotation 2)	3
MGS 6340	Plastic Surgery	3
MGS 6341	Neurosurgery	3
MGS 6342	Trauma Surgery (Rotation 2)	3
MGS 6343	Trauma/Surgical Intensive Care Unit (Rotation 1)	3
MGS 6344	Trauma/Surgical Intensive Care Unit (STICU) (Rotation 2)	3
MGS 6345	Burn Surgery/Burn Critical Care (Rotation 1)	3
MGS 6346	Elective Concentration	3
MGS 6347	Clinical Research	3

Physical Therapy, D.P.T.

Doctoral Entry-Level Program (D.P.T.)

Program Director: LTC Carrie W. Hoppes

Through an affiliation with Baylor University, students enrolled in the U.S. Army-Baylor University D.P.T. Program at the U.S. Army Medical Center of Excellence may qualify for a Doctor of Physical Therapy degree. The program is located at Joint Base San Antonio-Fort Sam Houston, Texas and is 30 months in length and includes 18 months of didactic coursework, a clinical affiliation during Semester II, and 12 months of clinical internship. Students are commissioned officers in one of the three uniformed services: Army, Navy, or Air Force. Due to the students' active duty obligations and association with the uniformed services, certain policies and procedures governing students are unique to this program and may be found in the current DPT Program Manual or the Individual Student Assessment Plan (ISAP) published by this graduate program. The program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). Graduates of this program are eligible to take the National Physical Therapy Licensure Examination offered by The Federation of State Boards of Physical Therapy (FSBPT).

Mission

To produce active duty, commissioned physical therapists who are clinician scientists and leaders prepared for worldwide military health system practice.

Uniformed service physical therapists are generalist practitioners who might be assigned across the continuum of care in a variety of practice settings, including the deployed environment. However, the majority of physical therapists are working in a primary care role with an emphasis in prevention, examination, diagnosis, and intervention for patients with neuromusculoskeletal conditions. Our program focuses on academic, clinical, and research excellence to provide students with the knowledge, skills, evidence, problem solving ability, duties, responsibilities, and ethics to deliver high quality physical therapy patient care. Our program educates and develops physical therapy officers by providing those concepts, principles, methods, and role models which will inspire continuous personal and professional growth and service.

Admission

Applicants for admission to the program must hold a baccalaureate degree in either the arts or sciences from a college or university acceptable to Baylor University and the applicant must submit an application through the Physical Therapy Centralized Application Service (PTCAS). Applicants must present a grade point average and scores on the Graduate Record Examination that are predictive of success in this program. Prerequisite laboratory components must be taken in person. Hybrid formats that deliver didactics online and labs in person are acceptable. Prerequisite courses are listed in semester hour requirements. Course credits awarded in different formats must be equivalent to the semester hour requirement.

Required prerequisites include:

1. **Human Anatomy with Lab:** 4 semester hours
2. **Human Physiology:** 3 semester hours

   Substitution for 1 and 2: Anatomy and Physiology 1 & 2 series with labs - 8 total semester hours.

3. **General Biology with Lab or Exercise Physiology with Lab:** 4 semester hours or equivalent
4. **Additional Biology:** 3 semester hours

   Note: If Exercise Physiology with lab is taken, then General Biology can be used for Additional Biology. Exercise Physiology "without lab" cannot substitute for the Additional Biology prerequisite.

5. **Chemistry 1 with lab:** 4 semester hours
6. **Chemistry 2 with lab:** 4 semester hours
7. **Physics 1 with lab:** 4 semester hours
8. **Physics 2 with lab:** 4 semester hours
9. **General Psychology:** 3 semester hours
10. **Additional Psychology:** 3 semester hours
11. **Statistics:** 3 semester hours

Specific courses which are accepted to meet the prerequisite course requirements are listed on the program website at www.baylor.edu/graduate/pt (http://www.baylor.edu/graduate/pt/).

Candidates must meet the entrance requirements of the Graduate School of Baylor University. In addition, they should be less than 42 years of age, be a U.S. citizen, and meet the medical fitness standards as prescribed by the Departments of the Army, Air Force, and the Navy. They must demonstrate a capacity for graduate study as well as the interest necessary to ensure productive scholarship. This program does not have a foreign language requirement.

Graduate Requirements

Matriculated students must achieve a grade of "C" or better in each course and maintain a grade point average of 3.0 or above. Students must complete a clinical affiliation at the end of Semester II and pass a comprehensive oral examination following the 18-month didactic portion of the course in order to transition to the 12-month clinical internship. Students must achieve entry level competence as a physical therapist, as demonstrated on the Physical Therapist Clinical Performance Instrument (PT CPI.) Students must also exhibit professional behaviors consistent with clinical practice as described by the Army Values and APTA Values within the D.P.T. Program Manual.

Curriculum

The four-semester curriculum includes outlined academic courses and clinical experience, a research project, and a comprehensive oral examination.

Course	Title	Hours
Semester I		
PT 6120	Evidence Based Practice I	1
PT 6131	Clinical Pathophysiology	1
PT 6204	Diagnostic Imaging and Procedures	2
PT 6209	Primary Care Musculoskeletal Physical Therapy	2
PT 6230	Neuromuscular Physiology	2
PT 6240	Clinical Medicine I	2
PT 6250	Therapeutic Interventions	2
PT 6253	Orthotic and Prosthetic Interventions	2
PT 6270	Research Methods I	2
PT 6300	Physical Therapy Fundamentals	3
PT 6410	Anatomy I	4
PT 6601	Musculoskeletal Physical Therapy I - Lower Member	6
	Hours	**29**
Semester II		
PT 6121	Evidence Based Practice II	1
PT 6151	Pharmacology for Physical Therapists	1
PT 6241	Clinical Medicine II	2
PT 6271	Research Methods II	2
PT 6352	Physical Agent Interventions	3
PT 6402	Musculoskeletal Physical Therapy II - Spine	4
PT 6503	Musculoskeletal Physical Therapy III - Upper Member	5
PT 6511	Anatomy II	5
PT 6660	Physical Therapy Practice I	6
	Hours	**29**
Semester III		
PT 6107	Emerging Topics in Physical Therapy	1
PT 6142	Clinical Medicine III	1
PT 6172	Research Methods III	1
PT 6212	Neuroanatomy	2
PT 6280	Executive Leadership and Management	2
PT 6281	Physical Therapy in Deployed Environments	2
PT 6282	Injury Control and Prevention	2
PT 6306	Cardiopulmonary Physical Therapy	3
PT 6308	Lifespan Physical Therapy	3
PT 6313	Neuroscience	3
PT 6333	Clinical Exercise Physiology	3
PT 6354	Advanced Therapeutic Interventions	3
PT 6405	Neuromuscular Physical Therapy	4
	Hours	**30**
Semester IV		
PT 6V98	Physical Therapy Internship	36.000
	Hours	**36**
	Total Hours	**124**

Occupational Therapy, DSc.O.T.

Doctor of Science in Occupational Therapy

Program Director: MAJ Carly Cooper, U.S. Army
Deputy Program Director: Elaina J. DaLomba, Ph.D., OTR/L, MSW

In the Fall of 2009, Baylor University, in affiliation with the U.S. Army Medical Center of Excellence (MEDCoE) established the Doctor of Science in Occupational Therapy degree (DSc.O.T.). This degree is an advanced-practice post-professional clinical doctorate designed to meet Army occupational therapists' professional development and specialty needs. The program focuses on four pillars of foundational content: Behavioral Health, Upper Extremity Rehabilitation, Advanced Occupational Therapy Practice, and Research. Graduates of this program will be able to advance the practice of occupational therapy and expand the scope of care provided to warriors and military healthcare beneficiaries through the application of evidence-based practice and research.

Admission

Candidates for admission must hold a master's degree or entry-level doctoral degree in occupational therapy from a program accredited by the Accreditation Commission on Occupational Therapy Education. Applicants must present a grade point average and scores on the GRE

General Exam that are predictive of success in this program. Candidates must also meet the entrance requirements of the Graduate School of Baylor University. Fully qualified candidates are competitively board-selected for a limited number of program spots.

Curriculum

The 18-month curriculum totals 62 semester-credit hours of didactic study and clinical rotations. The program is offered at Joint Base San Antonio, Fort Sam Houston, Texas, and Brooke Army Medical Center, in San Antonio, Texas. The 18-month curriculum begins in January, with graduation in June of the following year. The DScOT program requires the completion of an evidence-based research project. During the final portion of the course of study, each resident will defend their research study and submit the results in a written manuscript. The results of the project will be presented at an appropriate national conference and the manuscript will be submitted to a peer-reviewed journal for publication.

The curriculum is structured as follows:

Course	Title	Hours
Semester I		
January-June		
MOT 6311	Evaluation and Intervention: Behavioral Health	3
MOT 6212	Behavioral Health Residency	2
MOT 6322	Differential Diagnosis in Occupational Therapy	3
MOT 6327	Quantitative Methods	3
MOT 6325	Evaluation and Intervention: Ergonomics	3
MOT 6319	Essentials of Evidence-Based Practice and Clinical Research	3
	Hours	**17**
Semester II		
June-October		
MOT 6116	Management of Combat and Operational Stress Control Residency	1
MOT 6223	Critical Research Appraisal	2
MOT 6315	Management of Combat and Operational Stress Control	3
MOT 6328	Quantitative Methods II	3
MOT 6341	Evaluation and Treatment of Upper-Extremity Conditions	3
MOT 6242	Upper Extremity Conditions Residency	2
	Hours	**14**
Semester III		
October-February		
MOT 6331	Evaluation and Intervention: Burn and Trauma Rehabilitation	3
MOT 6132	Burn and Trauma Rehabilitation Residency	1
MOT 6228	UE Occupation Centered Intervention & Cultural Awareness	2
MOT 6221	UE Occupation Centered Intervention & Cultural Awareness Residency	2
MOT 6337	Field Research for Occupational Therapy	3
MOT 6317	Qualitative Methods	3
MOT 6213	Evaluation and Intervention: Post-Traumatic Stress & Polytrauma	2
MOT 6214	Post-Traumatic Stress & Polytrauma Residency	2
	Hours	**18**
Semester IV		
February-June		
MOT 6336	Aspects of Pharmacology, Complementary and Alternative Medicine, & Nutrition in Occupational Therapy	3
MOT 6243	Advanced Hand Surgery Outcomes for Occupational Therapists	2
MOT 6344	Advanced Professional Paper Product	3
MOT 6128	Clinical Management in Army Occupational Therapy	1
MOT 6441	Upper Extremity & Behavioral Health Conditions Residency	4
	Hours	**13**
	Total Hours	**62**

Physical Therapy, DSc.P.T.

Post-Professional Doctoral Fellowship/ Residency Programs (DSc.P.T.)

Baylor University offers the Doctor of Science in Physical Therapy (DSc.P.T.) degree, with a major in Orthopaedics, in affiliation with the U.S. Army at two locations. The concentration for the program offered at Brooke Army Medical Center, Fort Sam Houston in San Antonio, Texas, is Orthopaedic Manual Physical Therapy (p. 90). For the program offered at Keller Army Community Hospital at the United States Military Academy, West Point, New York, the concentration is Sports Medicine and Primary Care (p. 91).

At both sites the curriculum lasts approximately 18 months. Cohorts enter the program at Brooke Army Medical Center in January of odd-numbered years and, at West Point, in July of even-numbered years.

- Orthopaedic Manual Physical Therapy, DSc.P.T. (p. 90)
- Sports Medicine and Primary Care, DSc.P.T. (p. 91)

Orthopaedic Manual Physical Therapy, DSc.P.T.

Brooke Army Medical Center Fort Sam Houston, Texas

Program Director: LTC Jose Durbin, U.S. Army
Deputy Program Director: MAJ Andrew Golden, U.S. Army

Through an affiliation with Baylor University, students enrolled in the Army-Baylor University Doctoral Fellowship in Orthopaedic Manual Physical Therapy at Brooke Army Medical Center, Fort Sam Houston, Texas, complete additional requirements and may qualify for a Doctor of Science in Physical Therapy degree. The Graduate School of Baylor University provides academic oversight for the program. The uniqueness of this program necessitates significant differences in policies and procedures. Please refer to the most current Student Handbook published by this graduate program for details.

Objectives

Our mission is to produce postgraduate-level, specialty-trained orthopaedic manual physical therapists who provide state-of-the-art, advanced care and clinically relevant research to benefit the Military Health System. We accomplish this through the advanced training and education of clinical experts, mentors, adult educators, and researchers. Our goal is to continue the U.S. Army's legacy as a leader in orthopaedic manual physical therapy and neuromusculoskeletal evaluation, and to promote evidenced-base clinical practice and research that benefits patients and the physical therapy profession.

Admission

Candidates for admission to the program must hold an entry level doctoral degree in physical therapy (D.P.T.), or a transitional doctor of physical therapy degree from a program accredited by the Commission on the Accreditation of Physical Therapy Education. They must have a minimum of four years experience in orthopaedic physical therapy upon entry into the program and be a board-certified specialist through the APTA in Orthopaedics, Sports, or Electromyography. Applicants must present a grade point average and scores on the GRE General Exam that are predictive of success in this program. Candidates must also meet the entrance requirements of the Graduate School of Baylor University. Uniformed services candidates are selected by a competitive board process by their respective uniformed service.

Curriculum

The curriculum was developed as a clinical fellowship in orthopaedic manual physical therapy based on the Description of Advanced Specialty Practice (DASP) in Orthopaedic Manual Physical Therapy by the American Academy of Orthopaedic Manual Physical Therapists.

The training focuses on an advanced clinical reasoning model with emphasis on a patient-focused, hypothesis-based examination and careful observation of the effects of physical therapy intervention. The academic curriculum emphasizes anatomy, biomechanics, and physiology, with a foundation in clinical research and critical review of the literature. The program was credentialed as a residency by the American Physical Therapy Association in September of 1999, and as a fellowship in 2004. It is recognized by the American Academy of Orthopaedic Manual Physical Therapists. The sixty semester-hour program is divided into four semesters. Fellows are required to complete an individual research project, approved by an institutional review board, and submit the study for publication in an indexed peer-reviewed journal. The Doctor of Science in Physical Therapy (DSc.P.T.) degree will be granted upon successful completion of all credit courses, plus successful completion of an oral defense of their research project.

Course	Title	Hours
Semester I		
PHT 6191	Independent Study I	1
PHT 6391	Clinical Fellowship I	3
PHT 5241		2
PHT 5326	Functional Physical Therapy Anatomy and Biomechanics: Lower Quarter	3
PHT 5382	Evaluation and Mobilization: Lower Quarter	3
PHT 5230	Essentials of Evidence-Based Practice and Clinical Research	2
PHT 5191	Special Topics: Seminar I	1
	Hours	**15**
Semester II		
PHT 6192	Independent Study II	1
PHT 6392	Clinical Fellowship II	3
PHT 5331	Quantitative Evaluation	3
PHT 5327	Functional Physical Therapy Anatomy and Biomechanics: Upper Quarter	3
PHT 5383	Evaluation and Mobilization: Upper Quarter	3
PHT 5323	Pathophysiology of Therapeutic Exercise	3
	Hours	**16**
Semester III		
PHT 6193	Independent Study III	1
PHT 6393	Clinical Fellowship III	3
PHT 6332	Field Research in Physical Therapy	3
PHT 5321	Aspects of Pharmacology and Nutrition in Physical Therapy	3
PHT 5392	Evaluation and Mobilization: Advanced Lower Quarter	3
	Hours	**13**
Semester IV		
PHT 6194	Independent Study IV	1
PHT 6394	Clinical Fellowship IV	3
PHT 6333	Advanced Professional Paper Project	3
PHT 5393	Evaluation and Mobilization: Advanced Upper Quarter	3
PHT 5349	Radiology for Physical Therapists	3
PHT 6101	Advanced Practicum in Physical Therapy	1
PHT 6111	Advanced Orthopaedic/Sports Medicine and Surgery for Physical Therapists	1
PHT 5192	Special Topics: Seminar II	1
	Hours	**16**
	Total Hours	**60**

Sports Medicine and Primary Care, DSc.P.T.

Keller Army Community Hospital West Point, New York

Program Director: LTC Jamie Morris, U.S. Army

Through an affiliation with Baylor University, students enrolled in the Baylor University - Keller Army Community Hospital Sports Division 1 Fellowship at the United States Military Academy, West Point, New York, may qualify for a Doctor of Science in Physical Therapy degree in Orthopaedics, specializing in Sports Medicine. Fellows are commissioned officers in one of the four uniformed services: Army, Navy, Air Force, and Public Health Service. Due to active duty obligations and association with the uniformed services, certain policies and procedures governing residents are unique in this program and may be found in the most current Policy and Procedure Manual published by this graduate program.

The program has two primary purposes: to produce graduates with expertise in evidence-based primary care for examining, diagnosing, managing, and preventing a variety of complex orthopaedic and sports injuries, and to ensure competency in sports medicine research design, execution, analysis, and critical review. The Fellowship provides military

physical therapists an opportunity to develop advanced competencies in triage and management of acute sports injuries while at the United States Military Academy, West Point, New York. Graduates will use these same competencies to return injured U.S. Service Members to a high level of military readiness. The concepts of returning injured athletes to play as quickly and safely as possible and returning injured service members to duty in garrison or combat, share the same goals, thereby preparing fellows for: "Sports Medicine on the Battlefield operational readiness through injury prevention and early intervention."

Admission

Candidates for admission to the program must hold a master's degree in physical therapy from a program accredited by the Commission on the Accreditation of Physical Therapy Education. They must have a minimum of four years of experience and be board-certified in orthopaedic or sports physical therapy upon entry into the program. The GRE General Test is required of all applicants, with a score predictive of success in this program. Candidates must also meet the entrance requirements of the Graduate School of Baylor University. Candidates are selected by a competitive board process by their respective uniformed service. All candidates must accept an active duty service obligation to remain on active duty after completion of the program.

Curriculum

The medical community nationwide recognizes the United States Military Academy at West Point as one of the forerunners in the surgical and rehabilitative management of athletic injuries. Experienced orthopedists, physical therapists, and athletic trainers currently work together to provide the best care possible to the cadet student-athletes. To this end, the curriculum focuses on an advanced clinical reasoning model with an emphasis on acute primary care management. The academic curriculum emphasizes anatomy, biomechanics, physiology, and athletic injury management, with a strong foundation in clinical research and critical literature review. The program was originally credentialed by the American Physical Therapy Association in June of 1999 and recently accredited as a Fellowship by the American Board of Physical Therapy Residency and Fellowship Education in 2015. The primary intent is to make the fellowship the leading institution in sports medicine research. The sixty semester-hour program is divided into four semesters. All Fellows are required to complete an individual research project, and submit the study for publication in an indexed peer-reviewed journal prior to graduation.

Course	Title	Hours
Semester I		
PHT 6387	Research and Statistics I	3
PHT 6391	Clinical Fellowship I	3
PHT 6310	Soft Tissue and Bone Pathophysiology	3
PHT 6320	Athletic Injuries I	3
PHT 6395	Advanced Sports Medicine Practicum I	3
PHT 6150	Orthopaedic Lecture Series I	1
	Hours	**16**
Semester II		
PHT 6388	Research and Statistics II	3
PHT 6392	Clinical Fellowship II	3
PHT 6340	Functional Anatomy and Biomechanics I	3
PHT 6292	Special Topics: Seminar I	2
	Hours	**11**
Semester III		
PHT 6341	Functional Anatomy and Biomechanics II	3
PHT 6393	Clinical Fellowship III	3
PHT 6321	Athletic Injuries II	3
PHT 6396	Advanced Sports Medicine Practicum II	3
PHT 6293	Special Topics: Seminar II	2
PHT 6152	Orthopaedic Lecture Series III	1
	Hours	**15**
Semester IV		
PHT 6389	Research and Statistics III	3
PHT 6394	Clinical Fellowship IV	3
PHT 6379	Advanced Radiology in Sports Medicine	3
PHT 6384	Independent Study	3
PHT 6397	Advanced Sports Medicine Practicum III	3
PHT 6294	Differential Diagnosis in Sports Medicine	2
PHT 6153	PHT 6153::Orthopedic Lecture Series III	1
	Hours	**18**
	Total Hours	**60**

Occupational Therapy, O.T.D.

Entry-Level Program (O.T.D.)

Fort Sam Houston, Texas

Program Director: COL Enrique V. Smith-Forbes

Through an affiliation with Baylor University, students enrolled in the U.S. Army-Baylor University O.T.D. Program at the Army Medical Center of Excellence (MEDCoE) may qualify for a Doctor of Occupational Therapy degree. The program is located at Joint Base San Antonio-Fort Sam Houston, Texas and is 30 months in length and includes 18 months of didactic coursework, and 12 months of two level II fieldwork clinical affiliations and a doctoral capstone experience and project. The Army-Baylor Occupational Therapy Department offers two distinct program tracks, entry-level and post-professional.

Mission

The mission of the Army-Baylor Occupational Therapy Doctorate (OTD) program is to produce active duty, commissioned occupational therapists who are clinician scientists and leaders prepared for worldwide military health system practice. The program focuses on academic and clinical excellence to prepare the students for public servant service with entry level knowledge, skills, clinical reasoning abilities, duties, responsibilities, and ethics to deliver high quality occupational therapy services based on scientific research. This mission is consistent with that of Baylor University, Robbins College of Health and Human Sciences, and the U.S. Army Medical Center of Excellence (MEDCoE) and describes the unique role of the program in preparing graduates to be responsible military citizens, educated leaders, dedicated scholars and skilled professionals who meet the workforce and healthcare needs of the U.S. Army.

General Information for the Army-Baylor Entry-Level OTD Program Description

The Entry-Level Army-Baylor Occupational Therapy Doctorate (OTD) program provides an accelerated, learner-centered, occupation based, educational program that emphasizes academic excellence, life-long-scholarship, and servant leadership. This 30 month, educational

program prepares doctoral-level, U.S. Army commissioned Occupational Therapy practitioners with the requisite clinical reasoning skills and professional values to be responsive to the occupational needs of persons, organizations and populations within the military they serve. Graduates are employed as U.S. Army Occupational Therapists in such settings as hospitals, mental health facilities, combat stress control units, operational field units, rehabilitation hospitals, out-patient settings, administrative and leadership positions within the Army community. The Entry-Level Army-Baylor OTD program was granted CANDIDACY status by the accreditation by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Blvd., Suite 200, North Bethesda, MD 20852-4929. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its Web address is https://acoteonline.org/. We are working to acquire approved accreditation prior to the first cohort graduation in 2024. For the graduate to sit for the national certification examination for the Occupational Therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). The following must occur:

- The program must hold ACOTE Candidacy Status,
- Have an ACOTE pre-accreditation review,
- Complete an ACOTE on-site evaluation,
- Be granted ACOTE Accreditation Status and,
- Students must complete all academic and fieldwork requirements of the OTD Program.

After successful completion of this examination, the individual will be an Occupational Therapist, Registered (OTR). In addition, all states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Information about NBCOT and the certification examination can be found at https://www.nbcot.org/.

Note: A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure. An individual, who has a felony background and is considering entering an occupational therapy program, can have his or her background reviewed prior to applying for the exam by requesting an Early Determination Review: https://www.nbcot.org/en/Students/Services#EarlyDetermination (https://www.nbcot.org/en/Students/Services/#EarlyDetermination)

For more information about the programs, please contact: usarmy.jbsa.medical-coe.mbx.otd-support@mail.mil

Robbins College of Health and Human Sciences

The Entry-Level Army-Baylor OTD Program is sponsored by Baylor University through the Robbins College of Health and Human Services (RCHHS).

U.S. Army Medical Center of Excellence

The Entry-Level Army-Baylor OTD program is an in-residence program, housed at the U.S. Army Medical Center of Excellence at Fort Sam Houston, TX. Students are commissioned officers in the U.S. Army. Due to the students' active duty obligations and association with the uniformed services, certain policies and procedures governing students are unique to this program and may be found in the current OTD Program Manual or the Individual Student Assessment Plan (ISAP) published by this graduate program.

The Army-Baylor Entry-Level OTD Program Admission Requirements

The following requirements apply to the Entry-Level Army-Baylor OTD program and must be met by every applicant to be considered for admission. All applications must be submitted through the Occupational Therapy Centralized Application Service (OTCAS) accessible via the following website: https://otcas.liaisoncas.com/applicant-ux/#/login

Program Admission Requirements

Admission to the Entry-Level Army-Baylor OTD program closely follows the admission criteria for all health science programs in the Robbins College of Health and Human Sciences with differences reflecting the need for prerequisite courses unique to, and in support of the OTD curriculum. Students applying to the Army-Baylor OTD program should have the requisite skills and demonstrated potential to navigate the academic rigors of an accelerated military based OTD education.

Prerequisites for Admission

All applicants must hold a Baccalaureate Degree in Arts or Sciences from an accredited university or be in the last semester of coursework at the time of the board. Minimum 3.0 overall GPA is required. The following prerequisites (or their approved transfer equivalents) are required for admission:

- Biological Science with Lab (3 semester hours)
- Human Anatomy and Physiology I with laboratory (4 semester hours)
- Human Anatomy and Physiology II with laboratory (4 semester hours)
- Kinesiology, Biomechanics, or Physics (3 semester hours)
- Human Development (lifespan) (3 semester hours)
- Social Sciences (200-level) (6 semester hours)
- Abnormal Psychology (3 semester hours)
- Statistics (3 semester hours)

The Graduate Record Examination (GRE) must be completed within the past five years of the board. Minimum 300 overall GRE score; Minimum 145 Verbal Score; Minimum 149 Quantitative Score; Minimum 3.5 Analytical Writing Score.

Applicants must also complete a minimum of 24 observation hours in Occupational Therapy as a volunteer or employee. It is recommended that the applicant complete these hours in a variety of clinical practice settings. Observational experience in a military OT practice or Veteran's Affairs OT practice is highly recommended.

Three Letters of Recommendation (LOR) are required: LORs must be sent directly to the Army Healthcare Recruiter. LORs must be signed by the author, dated, and on official letterhead. LORs should be addressed to the "Army-Baylor Occupational Therapy Doctorate Program Selection Board.

- LOR 1 – From a Professor or Faculty Advisor. This LOR is separate from Dean's Letter stating applicant's projected graduation date.
- LOR 2 – From a current or previous Supervisor
- LOR 3 – From anyone of the applicant's choosing (employer, professor, faculty member, occupational therapist, peer, etc.).
- LOR 4 (Only for applicants currently serving in the military) – Endorsement from the Commander
- Personal Essay/Statement of Motivation (SOM) is required: Must be one page, 11-or-12-point Arial font, and bear the applicant's signature and date.

SOM should clearly state why the applicant seeks Army-Baylor OTD training and motivation for desire to commission as an occupational therapist in the U.S. Army.

SOM should include information on professional, leadership, and volunteer activities, research involvement, and military experience as applicable.

Application

Admission to the Army-Baylor OTD program is conducted by a formal application and recruitment process. All selected applicants must be motivated and capable of becoming a military Army officer undergoing rigorous academic and clinical preparation, and developing into a military occupational therapist consistent with the program mission and goals. Qualified students will be admitted regardless of race, color, national or ethnic origin, or gender. Potential candidates for the program must first apply through their local Army Healthcare Recruiting Office, www.goarmy.com, to compete for a seat in the program via an U.S. Army Recruiting Command (USAREC) accession board. The recruiter ensures the applicant meets military eligibility and confers with a selected OTD program faculty to ensure the candidate meets academic eligibility. The Robbins College of Health and Human Sciences and the Baylor University Graduate School works with the Army-Baylor OTD Program Director to review student candidates for the OTD program to ensure that students who are considered for the program meet admission standards for the Army-Baylor OTD program, Robbins College, and the Baylor University Graduate School.

Application Review

The Army-Baylor OTD Admissions Committee and faculty will review all completed applications (i.e., application and all supporting materials received) in the order of receipt. Applicants are evaluated based on the following items: Applicants are evaluated based on the following items:

- Cumulative GPA
- Pre-requisite GPA
- GRE verbal percentile rank
- GRE quantitative percentile rank
- Observation hours
- Letters of Recommendation
- Personal Essay
- Telephonic/Virtual Interview Score

Other factors considered, but not required:

- Relevant work experience
- Prior military experience

The Army-Baylor OTD admissions committee uses this evaluative process to ensure nondiscrimination and equal opportunity for all applicants. The Army-Baylor OTD admissions committee will grant admission interviews by invitation only. The Army-Baylor OTD program does not offer credit for previous work experience, coursework or experiential learning, nor is advanced placement credit available for this program.

Interview Process

The Army-Baylor OTD Program Director or designee will contact selected applicants and provide further instructions for completing the interview process.

Application Deadlines

The Army-Baylor OTD Application deadline is 10 February 2022. The Army-Baylor OTD Selection Board convenes March 2022. Applicants will be notified of board results by their Army Healthcare Recruiter in accordance with current policies and procedures. The Army-Baylor OTD Program will provide an official OTD Welcome Letter to board selected applicants after individuals have been notified of selection by their Army Healthcare Recruiter.

How to Apply

All Army-Baylor OTD Applicants (civilians, military service members, or ROTC Cadets) must work with their local Army Healthcare Recruiting Office to apply. Visit www.goarmy.com/amedd (https://www.goarmy.com/careers-and-jobs/specialty-careers/health-care.html) to find your local Army Healthcare Recruiter and to determine eligibility.

Academic Eligibility

- Bachelor's degree from a regionally accredited institution prior to Army-Baylor OTD classes beginning. Provisional admission may be granted pending completion of the undergraduate degree. Students are required to successfully complete and document a minimum of four (4) FTE academic years of pre-professional preparation.
- Must complete all prerequisite courses with a prerequisite coursework as listed above
- Graduate Record Examination (GRE) completed within the last 5 years, including the analytical writing portion.
- Must NOT be a graduate of an entry-level occupational therapy program (U.S. or foreign), regardless of the level of degree conferred. Note: this requirement does not restrict pre-occupational therapy degrees, or those with COTA certification from applying. Only graduates of entry-level OT programs from any degree level are NOT eligible for admission to the entry-level Army-Baylor OTD program.
- Must NOT have ever matriculated into another OTD program.

Military Eligibility

- Applicants must be U.S. Citizens.
- Applicants must be between 21 and 42 years old.
- Applicants must be eligible for a 'Secret' security clearance and achieve a favorable security background screening.
- Applicants must meet the medical screening standards for commissioning. Applicants will complete a physical examination where the Department of Defense screens for certain conditions that may be disqualifying for military service. All applicants must meet height and weight standards to be deemed eligible for commissioning.
- Applicants must meet U.S. Army physical fitness standards. For more information, please visit: https://www.army.mil/acft/.
- ***Students incur a 90 months service obligation (30 months training + 60 months Active Duty obligation) if selected for the program. ***

Special Circumstances:

- Current Service Members must obtain a Conditional Letter of Release from their current branch prior to the application deadline.
- Current military officers with greater than eight years Active Federal Commissioned Services (AFCS) by 01 November of the year the applicant is boarding are ineligible to apply. AFCS waivers may be considered on a case-by-case basis by the Army Medical Specialist Corps.
- ROTC Cadets are eligible to apply prior to graduation and do not require an approved Education Delay since the OTD is an Active Duty

Program. ROTC Cadets will work with their local Army Health Care Recruiter to apply.

Minimum Technology Specifications Computer Requirements

The student is required to have a laptop computer and a mobile device that can support the technology programs and resources used by the Army-Baylor OTD program. The student is required to have the laptop computer (with a full version of Chrome browser), and mobile device in possession at the time of the Army-Baylor OTD Program Orientation.

Laptop:

- The minimum system requirements for a PC or Mac laptop computer are listed below.
- System performance (processing speed and available RAM) will vary based upon installed software, actively running software/ applications, and internet speed.
- Laptop computer with Windows or iOS operating system, is acceptable with the minimum requirements below.
- Each student should ensure a laptop, internet speed/capacity, a working microphone, and webcam that can support the technology programs and resources used throughout the Army-Baylor OTD Program.

Additional Requirements Once Accepted into the Program

Once accepted into the Army-Baylor Occupational Therapy Program, and prior to beginning classes, the student must:

- Attend Army Medical Department (AMEDD) Direct Commissioning Course (DCC) and Basic Officer Leader Course (BOLC) prior to the OTD program start date.
- Attend the mandatory Army-Baylor OTD Program Orientation.
- Purchase all required OTD textbooks, manuals and laboratory supplies.
- Assume all responsibility for transportation to and from all facilities used for educational experiences, including clinical agencies assigned.
- Adhere to the Army-Baylor OTD Program Dress Code (i.e. military appropriate uniform, scrubs, graduate school research uniform)

Army-Baylor OTD Program Curriculum

The professional curriculum leading to the Doctor of Occupational Therapy degree requires students to complete 120 semester credit hours of coursework in 8 continuous academic semesters over a 30- month period. Students are enrolled into the Army-Baylor OTD program as a cohort and complete required courses in a prescribed, sequential manner. Course sequencing within the curriculum is designed to optimize the student's ability to learn and integrate course material into future didactic and clinical education experiences, culminating in the doctoral capstone. The curriculum is dynamic to keep abreast with best evidence in both clinical and educational practice.

The Army-Baylor OTD faculty believe that student-centered teaching promotes discovery and clinical reasoning based client-centered service delivery characterized by ethical treatment decisions. This approach challenges students to expand their understandings of the relevance of occupational therapy to include considerations about the dynamic interaction of occupational performance, social participation and Army values. The Army-Baylor OTD curriculum design is comprised of the OTD Practice Sequence developed to prepare students for Fieldwork II and the OTD Scholarship Sequence developed for doctoral-level preparation for research and for application of in-depth knowledge required for the Doctoral Capstone. Stemming from the program's five curricular threads the faculty have established the following curricular learning outcomes.

At the time of graduation from the program, the student will be able to:

1. Utilize clinical reasoning in the occupational therapy process based on critical analysis, reflection and a dedication to excellence;
2. Articulate the positive relationship between occupation and health and appreciate the occupational nature of humans as a core philosophical assumption of the profession;
3. Provide client-centered care based on the principles, beliefs, and values of occupational therapy and a steadfast commitment to Army values and identity;
4. Demonstrate servant-leadership roles leading to an in-depth understanding of a specialized competency in the profession that contributes to solving problems facing people and communities worldwide;
5. Demonstrate a commitment to scholarly practice and research through lifelong learning and critical inquiry.

Code	Title	Hours
Semester I		
OTD 6315	Foundations of Occupational Therapy	3
OTD 6213	Pathophysiology in Occupational Therapy	2
OTD 6214	Research Methods I	2
OTD 6216	Professional Practice and Ethical Formation Seminar	2
OTD 6515	Clinical Anatomy and Lab	5
OTD 6218	Evidence Based Practice Research Proposal	2
Semester II		
OTD 6224	Research Methods II	2
OTD 6328	Neuroscience	3
OTD 6323	Human Movement	3
OTD 6226	Occupational Therapy Across the Lifespan	2
OTD 6228	Occupational Therapy Clinical Skills	2
OTD 6229	OT Theory	2
Semester III		
OTD 6431	Occupational Therapy in Mental Health (OTD 6431::Occupational Therapy in Mental Health)	4
OTD 6235	Level IA Fieldwork (Mental Health)	2
OTD 6334	Physical Rehabilitation: Neurorehabilitation (OTD 6334::Physical Rehabilitation: Neurorehabilitation)	3
OTD 6236	Physical Rehabilitation: Lab	2
OTD 6233	Clinical Education Seminar	2
OTD 6239	Level IB Fieldwork: Adults and Older Adults	2
OTD 6435	Occupational Therapy with Adult and Older Adult Populations (OTD 6435::Occupational Therapy with Adult and Older Adult Populations)	4
Semester IV		

OTD 6241	Doctoral Mentorship and Research I (OTD 6241::Doctoral Mentorship and Research I)	2
OTD 6243	Management and Program Development	2
OTD 6245	OT Psychosocial COSC and Wellness	2
OTD 6247	Level IC Fieldwork: Children and Youth	2
OTD 6445	Occupational Therapy with Children and Youth Populations (OTD 6445::Occupational Therapy with Children and Youth Populations)	4
OTD 6140	Professional Leadership and Advocacy	1
Semester V		
OTD 6451	Upper Quarter Evaluation and Intervention (OTD 6451::Upper Quarter Evaluation and Intervention)	4
OTD 6250	Level ID Fieldwork: Upper Quarter	2
OTD 6259	Doctoral Mentorship and Research II	2
OTD 6150	Pedagogy- Issues in Teaching and Learning in Higher Education (OTD 6150::Pedagogy)	1
OTD 6350	Human Performance Optimization (Human Performance Optimization)	3
OTD 6155	Military Healthcare Policy and Injury	1
OTD 6258	(OTD 6258::Professional Competency)	2
Semester VI		
OTD 6V60	Level IIA Fieldwork	12
OTD 6167	Doctoral Mentorship and Research III (OTD 6167::Doctoral Mentorship and Research III)	1
Semester VII		
OTD 6V65	Level II B Fieldwork (OTD 6V65::Level IIB Fieldwork)	12
OTD 6177	Doctoral Mentorship and Research IV (OTD 6177::Doctoral Mentorship and Research IV)	1
Semester VIII		
OTD 6V85	Doctoral Capstone Experience (OTD 6V85::Doctoral Capstone Experience)	15
OTD 6387	Doctoral Capstone Project (OTD 6387::Doctoral Capstone Project)	3
Total		121

Courses of Instruction

Prefixes for Courses of Instruction

Subject	Prefix
Accounting	ACC
Akkadian	AKK
Theology	THEO
Anthropology	ANT
Apparel Design and Merchandising	ADM
Aramaic	ARA
Archaeology	ARC
Art	ART
Art History	ARTH
Asian Studies	AST
Aviation Sciences	AVS
Bioinformatics	BINF
Biology	BIO
Biomedical Engineering	BME
Biomedical Studies	BMS
Business	BUS
Business Law	BL
Chemistry	CHE
Child and Family Studies	CFS
Chinese	CHI
Classics	CLA
Communication Sciences and Disorders	CSD
Communication Studies	CSS
Computer Science	CSI
Curriculum and Instruction	EDC
Doctor of Physical Therapy	DPT
Ecology, Earth, Environmental Science	EEES
Economics	ECO
Educational Administration	EDA
Educational Leadership	EDL
Educational Psychology	EDP
Electrical and Computer Engineering	ELC
Engineering	EGR
English	ENG
Entrepreneurship	ENT
Environmental Science	ENV
Family and Consumer Sciences	FCS
Film and Digital Media	FDM
Finance	FIN
Forensic Science	FORS
French	FRE
Geosciences	GEO
German	GER
Gerontology	GRT
Global Engagement	GBL
Great Texts	GTX
Greek	GRK
Health Education	HED
Healthcare Policy and Administration	HPA
Hebrew	HEB
History	HIS
Human Performance	HP
Health Services Research	HSR
Information Security	ISEC
International Business	INB
Journalism	JOU
Latin	LAT
Latin American Studies	LAS
Library Science	LS
Management	MGT
Management Information Systems	MIS
Marketing	MKT

Mathematics	MTH
Mechanical Engineering	ME
Medical Humanities	MH
Middle East Studies	MES
Modern Languages and Cultures	MLC
Museum Studies	MST
Music Ensemble	MUEN
Music	MUS
Neuroscience	NSC
Nursing	NUR
Nutrition Sciences	NUTR
Philosophy	PHI
Physics	PHY
Political Science	PSC
Psychology	PSY
Public Health	PUBH
Quantitative Business Analysis	QBA
Recreation and Leisure Services	RLS
Religion	REL
Russian	RUS
Slavic and East European Studies	SEES
Social Innovation Collaborative	SIC
Social Work	SWO
Sociology	SOC
Spanish	SPA
Sport Management	SPM
Statistics	STA
Syriac	SYR
Teacher Education	TED
Theater Arts	THEA
Theology	THEO
Ugaritic	UGA

Affiliated Programs

Subject	Prefix
Business	MBUS
Business Law	MBL
Clinical Orthopedics	MCO
Economics	MECO
Emergency Medicine	MEM
Finance	MFIN
Health Care Administration	HCA
Management	MMGT
Marketing	MMKT
Master's Program Nutrition	MPN
Military General Surgery	MGS
Military Nursing Anesthesia	MNUR
Military Occupational Therapy	MOT
Occupational Therapy Doctor	OTD
Physical Therapy	PT
Physical Therapy (Doctoral)	PHT

Accounting (ACC)

ACC 5121 Accounting Planning (1)
Pre-requisite(s): Admission to MBA program
Technical accounting concepts that students must master in order to plan an operation effectively. These topics, typically identified as managerial accounting, include traditional cost allocation procedures, cost behavior and cost estimation, contribution margin income statements, and budgets. The general approach will be the use of accounting information rather than its accumulation and distribution.

ACC 5122 Accounting Implementation (1)
Pre-requisite(s): ACC 5121
Operating issues as operations are begun. Topics include controlling day-to-day operations and responsibility accounting, and short-term operating decisions. Additional topics include accounting for cash, accounts receivable, inventories, plant and equipment, current and long-term liabilities, installment notes payable, and bonds. Using the information provided by the accounting system and establishing appropriate operating procedures will be emphasized.

ACC 5123 Accounting in a Changing Environment (1)
Pre-requisite(s): ACC 5122
Skills used in evaluating and adapting to change. Topics include the income statement, the balance sheet, the cash flow statement, analysis of financial statements, transfer pricing, and international operations. Emphasis will be upon providing non-accounting professionals with the accounting knowledge they need to be successful in today's rapidly changing environment.

ACC 5300 Accounting Tools for Management Decision Making (3)
Pre-requisite(s): Admission to graduate business program
This course covers a range of financial accounting and managerial accounting topics designed to provide managers with the accounting information needed for effective decision-making. Topics include cost behavior, break-even analysis, budgeting, standard costs, relevant costs, equity and dividend policy, statement of cash flows, investments, and other timely accounting topics.

ACC 5301 Business Foundations - Accounting (3)
This course is required for MBA and MSIS students who do not have an undergraduate degree in business from an AACSB-accredited institution. The course will provide students with a foundation in accounting which is expected of all business graduate students.

ACC 5305 Financial Accounting (3)
Pre-requisite(s): Admission to the Executive MBA program
This course exposes students to accounting from the perspective of managers, investors, and creditors. Reading and interpreting financial statements is a primary focus. Course topics include the limitations of financial statements, use of financial statements in the determination of company value, and internal controls.

ACC 5308 Management Accounting Seminar (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Role of accounting analysis in managerial planning and control, with an emphasis on facilitating the development and implementation of business strategies.

ACC 5311 Energy Accounting and Law (3)
This course provides an overview of the oil and gas industry with respect to the accounting, tax, and legal functions of an organization. This includes the introduction of general terminology, history, and technical advances in the oil and gas industry as well as detailed analyses of industry-specific accounting methods and cost recovery systems as well as financing and organizational structure trends in the industry.

ACC 5312 Data and Analytics in Accounting (3)
Students apply data and analytics skills to audit, tax, operations management, and other accounting issues, focusing on data visualizations and applied statistics. Students examine current developments in technology and analytics and relate them to the accounting profession.

ACC 5317 Information Systems Auditing (3)
Pre-requisite(s): Admission to MAcc, MTax, or MSIS program; or consent of instructor
An examination of theories and practices of information systems auditing. Practical exposure to information systems audit tools and risk assessment will be emphasized.

ACC 5320 Managerial Accounting (3)
Pre-requisite(s): Admission to the Executive MBA program
Students examine accounting's role in the information flow of an organization while focusing on measurement of decision-making and performance. Topics include budgeting, variance analysis, direct costing, profit centers, investment centers, transfer pricing, and ethics. Participants learn to effectively use accounting information in their decision-making process.

ACC 5325 Governmental and Nonprofit Accounting (3)
Pre-requisite(s): Admission to MAcc or MTax program or permission of instructor
Examination of accounting, financial reporting, and budgeting for state and local governments, the Federal, and not-for-profit entities.

ACC 5330 Seminar in Auditing and Assurance Services (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
A study of auditing and assurance services theories and methodologies through use of case studies, video simulations and reading of current literature. Topical coverage includes emerging issues in auditing, attestation, and assurance services.

ACC 5331 Fraud Examination (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
An in-depth study of the nature of financial fraud, its legal elements and criminology, and the methods used to prevent and detect it. Included is exposure to the process by which financial fraud, including computer fraud, is investigated. Litigation techniques, including the giving of expert testimony, are studied. Fraud prevention techniques for business entities are also covered.

ACC 5335 Business and Professional Ethics for Accountants (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Examination of moral and ethical issues within the accounting profession and the broader business environment. Includes a broad study of ethical behavior and decision making and an examination of various professional codes of conduct within the accounting profession. Central to this examination will be the discussion of integrity, independence, and objectivity, as well as accountants' legal liability.

ACC 5340 Tax Considerations in Business Decisions (3)
Pre-requisite(s): Admission to MAcc program; or consent of instructor
Tax principles, rules, and alternatives: emphasis on effect on business decisions. Includes income and deductions, employee incentives and fringe benefits, cost recovery, tax-free exchanges, gains and losses, form of business organization (proprietorships, partnerships, or corporations), estate and gift taxes, international taxation.

ACC 5350 Advanced Auditing Analytics (3)
Pre-requisite(s): ACC 5330
Auditing theory and analytical techniques through the use of cases, problems, and current literature. Specific topics include changing standards, data and analytics, exploration of analytical methodologies, and current issues in auditing.

ACC 5355 Cases in Accounting (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Case-study applications of accounting theory to actual business situations. Emphasis is on an in-depth understanding of elements of financial statements, problem recognition and problem solving as well as the impact of various business situations upon financial reporting practices.

ACC 5361 Corporate Taxation (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Federal income taxation of corporations and their shareholders: problems of organizing and capitalizing a corporation, determinants of the corporate income tax base, non-liquidating and liquidating distributions, reorganizations, and penalty taxes.

ACC 5362 Partnership and S Corporation Taxation (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Major aspects of taxation affecting flow-through entities and their owners. Emphasis on tax law by studying the Internal Revenue Code, Treasury Regulations, IRS Rulings, and case law. Tax planning and preparation of entity tax returns.

ACC 5364 International Taxation (3)
Pre-requisite(s): Admission to MAcc of MTax program or consent of instructor
Introduction to jurisdictional tax issues and laws surrounding foreign taxation of United States taxpayers and United States taxation of foreigners doing business in the United States.

ACC 5365 Advanced Individual Taxation (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
In-depth coverage of selected areas of taxation relevant to individuals including the alternative minimum tax system; limitations on losses and deductions; acquisitions; uses and dispositions of interests in property; depreciation methods; characterization and reporting of gains and losses; deferral techniques; and other current topics.

ACC 5370 Tax Research (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
In-depth treatment of the process necessary to research a tax problem efficiently, to arrive at a defensible solution, and to communicate that solution effectively. Students will also learn the process necessary to research a tax problem efficiently, to arrive at a defensible solution, and to communicate that solution effectively.

ACC 5378 Seminar in International Accounting (3)
Pre-requisite(s): Graduate standing
Official and unofficial generally accepted accounting principles (GAAP) used in other major countries. International accounting standards, which are used by many countries that do not have well-developed national GAAP, will also be studied. The course is designed to facilitate the understanding and financial analyses of international corporations.

ACC 5380 Advanced Financial Accounting Topics (3)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Business combinations and consolidated financial statements, accounting for partnerships, governmental and not-for-profit accounting, and other topics of contemporary interest.

ACC 5385 Financial Statement Analysis (3)
Pre-requisite(s): Admission to MAcc or MTax program or permission from Department Chair of Accounting or Director of Accounting Graduate Programs
An analysis of financial statements in order to examine cash flows, make judgments about earnings quality and uncover hidden assets and liabilities as part of the strategic analysis of firms. Financial statement analysis is used prospectively to forecast and value firms using cash flow based and accounting based methods. Tools are applied specifically to the valuation of equities.

ACC 5390 Accounting Research and Pedagogy (3)
Seminar to introduce graduate students to the application of advanced research skills to a variety of current accounting issues and to the exploration of curricular issues, including course development and content, across a variety of technical topics relevant to the professional accountant.

ACC 5395 Internship in Accounting (3)
Pre-requisite(s): Admission to MAcc or MTax program and Consent of Director of Accounting Internships
Directed real-world learning experience under the supervision of a practicing accountant. The internship assignment must be approved by the Director of Accounting prior to enrollment.

ACC 5420 Managerial Accounting (4)
Students examine the role of accounting in the information flow of an organization while focusing on measurement of decision-making and performance. Topics include budgeting, cost-volume-profit analysis, activity costing, planning, forecasting, performance evaluation, and ethics. Participants learn to use accounting information effectively in their decision-making process.

ACC 5V98 Special Studies in Accounting (1-6)
Pre-requisite(s): Admission to MAcc or MTax program; or consent of instructor
Individualized research in accounting. Students' proposals for special study project must be approved by the supervising faculty member. Offered on demand and by consent of the adviser for one to six semester hours.

Akkadian (AKK)

AKK 5307 Akkadian (3)
Cross-listed as REL 5326
Pre-requisite(s): HEB 3302 or equivalent
An introduction to the grammar, syntax, and vocabulary of Akkadian.

American Studies (AMS)

AMS 4385 Seminar in American Studies (3)
Pre-requisite(s): Senior standing or consent of program director
Studies the theory and practice of American Studies, presents students with the opportunity to analyze written and visual texts, and requires a major paper. Through written work and oral presentations, the course gives students a broad perspective on the American culture.

AMS 5304 Bibliography and Research Methods (3)
Cross-listed as ENG 5304
See ENG 5304 for course information.

AMS 5306 Literary Criticism: Seminar (3)
Cross-listed as ENG 5306
See ENG 5306 for course information.

AMS 5308 Independent Study in Literature (3)
Cross-listed as ENG 5308
See ENG 5308 for course information.

AMS 5310 Research Methods in Mass Communication (3)
Cross-listed as JOU 5310
See JOU 5310 for course information.

AMS 5315 Foundations of the American Economy (3)
Cross-listed as EDC 5315
See EDC 5315 for course information.

AMS 5316 Basic American Documents (3)
Cross-listed as EDC 5316
See EDC 5316 for course information.

AMS 5320 Theory of Mass Communication (3)
Cross-listed as JOU 5320
See JOU 5320 for course information.

AMS 5330 American Political Development (3)
Cross-listed as PSC 5330
See PSC 5330 for course information.

AMS 5332 Human Growth and Development (3)
Cross-listed as EDP 5332
See EDP 5332 for course information.

AMS 5333 Psychology of Learning (3)
Cross-listed as EDP 5333
See EDP 5333 for course information.

AMS 5335 Research in Education (3)
Cross-listed as EDP 5335
See EDP 5335 for course information.

AMS 5336 History of American Christianity (3)
Cross-listed as REL 5336
See REL 5336 for course information.

AMS 5340 The American Founding (3)
Cross-listed as PSC 5340
See PSC 5340 for course information.

AMS 5350 Seminar in Mass Communication (3)
Cross-listed as JOU 5350
See JOU 5350 for course information.

AMS 5360 Seminar in United States History (3)
Cross-listed as HIS 5360
See HIS 5360 for course information.

AMS 5365 Seminar in Public History (3)
Cross-listed as HIS 5365
See HIS 5365 for course information.

AMS 5367 Seminar in Oral History (3)
Cross-listed as HIS 5367
See HIS 5367 for course information.

AMS 5370 Advanced Graduate Research and Writing (3)
Cross-listed as HIS 5370
See HIS 5370 for course information.

AMS 5371 Religion in the American South (3)
Cross-listed as HIS 5371
See HIS 5371 for course information.

AMS 5389 Contemporary American Literature (3)
Cross-listed as ENG 5395
See ENG 5395 for course information.

AMS 5391 Early American Literature (3)
Cross-listed as ENG 5391
See ENG 5391 for course information.

AMS 5393 Nineteenth Century American Literature (3)
Cross-listed as ENG 5393
See ENG 5393 for course information.

AMS 5394 Modern American Literature (3)
Cross-listed as ENG 5394
See ENG 5394 for course information.

AMS 5395 Seminar in American Educational Thought (3)
Cross-listed as EDA 6370, EDL 6370
See EDA 6370 for course information.

AMS 5396 American Studies: Seminar (3)
Cross-listed as ENG 5396
See ENG 5396 for course information.

AMS 5V90 Independent Study in Mass Communication (1-3)
Cross-listed as JOU 5V90
See JOU 5V90 for course details.

AMS 5V99 Thesis (1-9)
hrs.

Anthropology (ANT)

ANT 4302 Archaeological Theory (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Use of archaeological data in reconstruction of past human cultural systems, with an emphasis on the role of archaeological theory in the process of interpretation.

ANT 4305 Anthropological Theory (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Theoretical approaches to modern-day anthropology, with emphasis on political economy, Marxism, hermeneutics, ecology, and feminism.

ANT 4310 Societies and Cultures of East Asia (3)
Cross-listed as AST 4310
Cultural traits and social structures of China, Korea, and Japan in the context of their development from the traditional to the modern. Special attention on Japanese society in comparison with American society.

ANT 4312 Societies and Cultures of Africa (3)
Current social issues and policies in the light of historical and cultural foundations of selected African countries.

ANT 4320 Culture, Personality and Identity (3)
Cross-listed as SOC 4320
Pre-requisite(s): Upper-level standing or consent of instructor
A thorough investigation of the relationship between the individual and culture/society, with emphasis on the "culture and personality" school of contemporary humanistic social science.

ANT 4321 Climate Anthropology (3)
Cross-listed as ENV 4322
Pre-requisite(s): Upper-level standing or consent of instructor
An introduction to the causes and effects of climate change as it relates to people and power, ethics and morals, environmental costs and justice, and cultural and spiritual survival.

ANT 4325 Medical Anthropology (3)
Biological and sociocultural aspects of human health, disease, development, aging, and health care. Especially emphasized are the developmental, holistic, and cross-cultural perspectives on disease and the life cycle.

ANT 4327 Human Catastrophe and Cultural Response (3)
Cross-listed as ENV 4327
Impact of major catastrophes on human society with emphasis on coping strategies and the utility of disaster theory to help in the recovery process. Issues include disaster, toxic disaster, famine, epidemic, war and natural oppression.

ANT 4330 Epidemiology (3)
Pre-requisite(s): Some facility with quantitative methods, preferably with elementary knowledge of statistics
Epidemiological concepts and skills pertinent to the understanding of diseases. Assessment of cultural, ecological, environmental, occupational, and behavioral factors.

ANT 4332 Global Health Disparities (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Principles of modern medical, biological, and psychological theory are applied to understand how economic and social inequities affect child development and health.

ANT 4334 Child and Family Health in Global Perspective (3)
Pre-requisite(s): Upper level standing or instructor consent
Principles of modern medical practice and evolutionary biology are used to understand family relationships and how/why they affect child development and health in global context.

ANT 4335 The Human Fossil Record (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Seminar on the evolutionary history of humans. Emphasis on fossil evidence and primary texts.

ANT 4340 Environmental Archaeology (3)
Cross-listed as ARC 4340, ENV 4340
Pre-requisite(s): Upper-level standing or consent of instructor
Distributional patterns of archaeological sites within specific environments. Archaeological/environmental field work in Texas, with respect to recent conservation laws protecting nonrenewable archaeological resources.

ANT 4341 Archaeology of the Mediterranean (3)
Pre-requisite(s): Upper-level standing
Environmental and cultural factors that led to the rise and fall of civilizations in the Mediterranean region.

ANT 4344 African Archaeology (3)
Pre-requisite(s): Upper-level standing
A survey of the African archaeological record, from emergence of stone tool technology 2.6 million years ago to the rise of complex civilizations and the African Diaspora.

ANT 4348 Geoarchaeology (3)
Cross-listed as GEO 4348
See GEO 4348 for course information.

ANT 4351 Futuristics (3)
Cross-listed as ENV 4351
Pre-requisite(s): Upper-level standing or consent of instructor
Biological and cultural forces that will likely shape humankind's future. Emphasis on trends in demography, globalization, science, and technology.

ANT 4353 Archaeology of North America (3)
Cross-listed as ARC 4353
An archaeological survey of human societies in the United States and Canada from their earliest appearance in the New World to the arrival of Europeans. One-third of the course will focus on historical archaeology.

ANT 4355 Forensic Anthropology (3)
Cross-listed as FORS 4355
Pre-requisite(s): ANT 3331 or FORS 3331
Forensic anthropological techniques used in civil and criminal court cases, including analysis of skeletal material for sex, age, stature, and biological affinity.

ANT 4360 Anthropology of Religion (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Myth, ritual and religion in social and cultural anthropology. Emphasis on structural and functional analysis, including critiques of pertinent classical and contemporary works.

ANT 4361 Ethnographic and Analytical Methods in Ethnomusicology (3)
Cross-listed as MUS 4360
See MUS 4360 for course information.

ANT 4362 Applied Anthropology (3)
Cross-listed as ENV 4362
Pre-requisite(s): Upper level standing or consent of instructor
An introduction to applied anthropology where major research components are identified and specific fields such as medical, nutritional, environmental anthropology, and Third World development are discussed.

ANT 4365 Primate Behavior (3)
Pre-requisite(s): Upper-level standing or consent of instructor
The complex social behavior of primates. Includes field trips. Graduate students produce a comprehensive research paper.

ANT 4369 Seminar in Anthropology (3)
Cross-listed as ENV 4369
Pre-requisite(s): Consent of instructor
Debate of current theoretical issues that reflect the continually changing nature of the discipline. Students will address all sides of a currently debated issue, drawing upon their studies in anthropology and related fields. Faculty participation.

ANT 4371 Evolutionary Medicine (3)
Pre-requisite(s): Upper level standing or instructor consent
Application of evolutionary theory to medicine using insights from evolutionary theory (biology) and human evolutionary ecology (biological and cultural anthropology) to inform our understandings of human health, development, and disease.

ANT 4372 Sex, Hormones, and Behavior: Human Reproductive Ecology (3)
Pre-requisite(s): Upper level standing or instructor consent
Recent developments in human reproductive biology, human reproductive ecology, and fertility analysis. The major features of the human reproductive process are considered using a combination of demographic, physiological and evolutionary approaches.

ANT 4373 One Health: Connecting Global Health and Conservation Medicine (3)
Pre-requisite(s): Upper level standing or consent of instructor
Analysis of the collaborative efforts among physicians, public health professionals, veterinarians, and social scientists to understand infectious disease exchange at the interface of human, wildlife, and livestock populations, and the varying ecological and cultural contexts in which these disease spillovers take place.

ANT 4416 Human Evolutionary Anatomy (4)
Cross-listed as BIO 4415
Pre-requisite(s): Upper-level standing or consent of instructor
Survey of regional and systemic human anatomy viewed from a comparative evolutionary perspective. Non-human primate and non-primate vertebrates will be used to illustrate the unique characteristics of human anatomical structures that have been honed by natural selection throughout our evolutionary history.

ANT 4670 Field School in Archaeology (6)
Pre-requisite(s): Consent of instructor
Field training in archaeological excavation, survey, artifact processing, and analysis of material culture.

ANT 4680 Field School in Cultural Anthropology (6)
Cross-listed as ENV 4680
Pre-requisite(s): Consent of instructor
Residence for five to six weeks in a selected area to observe and analyze social, economic, and environmental systems.

ANT 4690 Field School in Biological Anthropology (6)
Pre-requisite(s): Consent of instructor
Training in research techniques to gain an understanding of the methodology and its application in field research in various topics related to biological anthropology.

ANT 4V15 Research Methods in Cultural Anthropology (3-6)
Pre-requisite(s): Consent of instructor
Lecture and field experience in the methods and techniques of social and cultural anthropology. May be repeated for a total of six semester hours with different topics.

ANT 4V16 Archaeological Research (3-6)
Cross-listed as ARC 4V16
Pre-requisite(s): Consent of instructor
Independent library and lab research focused on a current topic in archaeology. May be repeated for a total of six semester hours with different topics.

ANT 4V70 Special Topics in Anthropology (1-6)
Pre-requisite(s): Consent of instructor
A reading-research project in selected areas of ethnology, archaeology, or physical anthropology. May be repeated for credit up to a total of six semester hours, provided topic is different.

ANT 5305 Multicultural Societies (3)
Pre-requisite(s): Consent of instructor
Multicultural societies will be examined with respect to cultural histories as well as modern problems. Special attention will be given to the cultural complexity of the continental United States.

ANT 5310 Advanced World Food Problems (3)
Cross-listed as ENV 5311
This course focuses on chronic deficiencies of certain key ingredients in the diet, their causal factors, the impacts these deficiencies have, and solutions to these problems in the contemporary world. The course explores the consequences of world hunger with particular attention to food and nutritional security as it influences health status, ability to work, education outcomes, economic security, and social connectedness.

ANT 5311 Descriptive and Exploratory Methods in Anthropology (3)
Pre-requisite(s): Consent of the instructor
Modern approaches to descriptive, exploratory, and formative anthropological research, with foundational concepts underlying research design as well as core methodologies. Students develop a domestic research project to collect primary data and gain experience in ethnographic methods, including participant observation, mapping, interviewing, survey design, data management and analysis (indexing, coding, transcribing, and related methods).

ANT 5312 Laboratory Methods in Anthropological Reserach (3)
Pre-requisite(s): Consent of the instructor
Experience conducting actual research in human evolutionary biology. Students collect data on living humans, perform laboratory analyses, statistical analyses, and manuscript preparation and presentation. Students gain experience with scientific methodology, hypothesis generation and study design, human subjects committees, biosafety and bioethics, biological sample collection, biomarker assays, survey design, and statistical analyses.

ANT 5313 Professional Skills and Grant Writing (3)
Pre-requisite(s): Consent of the instructor
Students learn how granting at the National Science Foundation and National Institutes of Health works, identify research and publication biases, recognize ethical issues in research, distinguish good science from bad attempts at it, identify potential granting opportunities, develop general writing and oral presentation skills, and develop peer reviewing skills.

ANT 5314 Advanced Human Biological Variation (3)
This course examines human biological variation, with a focus on human genetic and phenotypic diversity, adaptation, and health disparities in contemporary global populations. The overall framework for understanding human variation is evolutionary and biocultural. It draws from various scientific disciplines, including anthropology, evolutionary biology, genetics, physiology, nutrition, psychology, and global health.

ANT 5315 Advanced Human Genetics: Evolution and Health (3)
This course covers advanced topics in human genetic and genomic research. We focus on the application of genetic principles to human populations with an emphasis on population history, human evolution, and genes underlying human health and disease. Students are introduced to population genetic statistics, human genomics from an evolutionary standpoint, and standard forms of genome-wide data analysis.

ANT 5325 Advanced Medical Anthropology (3)
Students are taught key concepts in Medical Anthropology to examine how health and wellbeing are socially and culturally constituted in contexts of cultural diversity. We bring key insights from anthropological cross-cultural comparisons to public health and medical practice.

ANT 5331 Advanced Global Health Ethics (3)
Pre-requisite(s): Consent of the instructor
Study of social theory that informs historical transformations in the ethics of global public health, including the history of research and practice in international and population health. Topics include equality and equity, access and competition, homogeneity and diversity, legitimacy and power, responsiveness and exploitation, and moral reasoning and justice, among others.

ANT 5334 Advanced Child and Family Health in Global Perspective (3)
Principles of modern medical practice and evolutionary biology are used to understand family relationships and how/why they affect child development and health in global context. We begin with a brief overview of major issues in global child health practice. We then examine these issues from the perspective of developmental biology, psychology, and evolutionary medicine.

ANT 5336 Advanced Global Health Policy (3)
Pre-requisite(s): Consent of the instructor
Critique of existing domestic and international policy goals that include efforts to improve global health. Special attention (via analyses of case-studies) is given to the ethical and legal principles pertaining to global health policies.

ANT 5V90 Special Problems in Anthropology (1-6)
Pre-requisite(s): Instructor consent
Advanced work in Anthropology on variable topics. Subject and hours of credit agreed upon by student and instructor prior to registration. May be taken more than once provided the content differs substantially from that of any prior offering of the course that the student has taken.

ANT 6V97 Research (1-12)
Pre-requisite(s): Only graduate students prior to candidacy may enroll, and only with consent of the Graduate Program Director
Supervised research for doctoral students developing a dissertation proposal and studying for the preliminary examination required for advancement to candidacy. A student may repeat this course for credit with a maximum of twelve total hours.

ANT 6V98 Internship (1-6)
Pre-requisite(s): Graduate Program Director approval required
Provides graduate students opportunity for internship work experience in research positions with consent of advisory committee.

ANT 6V99 Dissertation (1-12)
Pre-requisite(s): Admission to candidacy and approval from Graduate Program Director required
Research, data analysis, writing, and defense of an approved doctoral dissertation project. Student must have been admitted to candidacy before registering for dissertation hours.

Aviation Sciences (AVS)

AVS 4318 Avionics System Design (3)
Cross-listed as ELC 4318
See ELC 4318 for course information.

AVS 4321 Energy Economics (3)
Cross-listed as ENV 4321
See ECO 4321 for course information.

AVS 4323 The Environment and Economic Analysis (3)
Cross-listed as ECO 4323, ENV 4323
See ENV 4323 for course information.

AVS 4386 Remote Sensing (3)
Cross-listed as BIO 4386, ENV 4386, GEO 4386
See GEO 4386 for course information.

AVS 4485 Introduction to Geographic Information Systems (4)
Cross-listed as ENV 4384, ENV 4485, GEO 4485
See GEO 4485 for course information.

AVS 4487 Advanced GIS Analysis (4)
Cross-listed as AVS 4387, ENV 4487, GEO 4487
See ENV 4487 for course information.

AVS 5320 Instrumentation and Test Stand Laboratory (3)
Pre-requisite(s): AVS 4305 and credit or concurrent enrollment in AVS 4320 and 4330
A laboratory-based course where students gain hands-on experience with (i) modern equipment used to measure air pollution levels;(ii) contemporary engine test equipment for both piston and turbine aircraft engines, including dynamometers and exhaust emission analysis instrumentation; and (iii) the computer software and hardware to enable data collection and reduction via either data loggers and computer manipulation, or by direct computer data capture.

AVS 5330 Development of Biofuels in Aviation (3)
Pre-requisite(s): AVS 1312 (or its equivalent); CHE 1301 or AVS 4330 (or their equivalents)
Rationale for developing and using biofuels in aviation. History of the development of biofuels as aviation fuels. History of fossil fuels. International experience in aviation biofuels. Environmental, economic, and energy security factors. Technical considerations and testing procedures including FAA certification procedures.

AVS 5368 Integrated Energy Resource Systems (3)
Cross-listed as ENV 5368
See ENV 5368 for course information.

AVS 5391 Measurement Methods and Data Analysis for Air Pollution (3)
Cross-listed as ENV 5391
See ENV 5391 for course information.

AVS 5393 Atmospheric Chemistry & Physics (3)
Cross-listed as ENV 5393
See ENV 5393 for course information.

AVS 5V99 Research for Master's Thesis (1-6)
Pre-requisite(s): Consent of instructor
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of AVS 5V99 are required.

Bioinformatics (BINF)

BINF 5309 Introduction to Bioinformatics and Systems Biology (3)
Pre-requisite(s): Graduate standing or consent of instructor
A project-orientated approach to defining, understanding, and applying modern tools for genomic and systems biology analysis. Students will gain proficiency at sequence, microarray, and systems biology annotation by following a biological problem through each step of the analysis process.

BINF 5330 Advanced Computational Biology (3)
Cross-listed as CSI 5330
See CSI 5330 for course information.

Biology (BIO)

BIO 4102 General Microbiology Lab (1)
Co-requisite(s): BIO 4302
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Laboratory experiments and techniques to culture microorganisms. Analyses of biochemical tests, quantitative and qualitative procedures, and identification of unknown organisms.

BIO 4104 Medical Entomology Laboratory (1)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; upper-level standing and credit or concurrent enrollment in BIO 4304, or consent of instructor
Collection, preservation, identification, taxonomy and biology of medically important arthropods, especially insects. Survey collection required for graduate credit.

BIO 4106 Molecular Genetics and Genomics Laboratory (1)
Co-requisite(s): BIO 4306
Pre-requisite(s): Either BIO 2306 or CHE 4341; each with a grade of C or better Individual and group projects in computational genomic and genetic analysis using supplied datasets

BIO 4108 Genes and Development Laboratory (1)
Co-requisite(s): BIO 4308
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and BIO 2306
Modern experimental techniques of developmental biology.

BIO 4117 Plant Physiology Lab (1)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and BIO 1306, or BIO 1406; all with grades of C or better; and credit or concurrent enrollment in BIO 4317
Laboratory experiments illustrating modern concepts in plant physiological research, with emphases on form, function relationships, technological innovations, and organismal adaption.

BIO 4123 Laboratory for Parasitology (1)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; credit or concurrent enrollment in BIO 4323 and consent of instructor; and upper-level or graduate standing
Detection and identification of human parasite diagnostic forms. Power Point presentation required for graduate credit.

BIO 4301 Immunology (3)
Pre-requisite(s): BIO 2306 and one of the following: BIO 3342, 4302, 4306, 4308, or CHE 4341 all with grades of C or better
Basic principles of resistance to disease, host-antigen interactions, immunologic response mechanisms, immunologic techniques, and correlations of disease and the immune response.

BIO 4302 General Microbiology (3)
Co-requisite(s): BIO 4102
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
An introduction to the major areas of microbiology, including microbial morphology, metabolism, genetics, evolution, taxonomy, ecology, and disease.

BIO 4304 Medical Entomology (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; upper-level standing or consent of instructor
Identification, biology, and management of arthropod pests, especially insects, transmitting diseases affecting man, livestock and wildlife.

BIO 4306 Molecular Genetics and Genomics (3)
Co-requisite(s): BIO 4106
Pre-requisite(s): Either BIO 2306 or CHE 4341, each with a grade of C or better
Techniques and strategies central to the analysis of genomic and genetic experimental data with emphasis on experimental design. Training in computational methods such as R and Unix; no previous computing experience is required.

BIO 4307 Biochemistry and Physiology of the Cell (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and CHE 3331 or consent of instructor; and credit or concurrent enrollment in BIO 2306
The roles of biologically important molecules in cellular structure and function, emphasizing an integrated understanding of the characteristic of the four major classes of biological molecules and the chemical interactions that support living systems. May not receive credit for both BIO 4307 and CHE 4341.

BIO 4308 Genes and Development (3)
Co-requisite(s): BIO 4108
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; and BIO 2306; all with grades of C or better
Examination of mechanisms that regulate the development of multicellular organisms using biochemical genetic and cell biological approaches. Investigates the role that gene regulation, cell-cell communication, cell adhesion, cell motility, signal transduction, and intracellular trafficking play in the commitment, differentiation and assembly of stem cells into specialized cell types and organs.

BIO 4310 Biogeography (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Patterns of geographic distributions of animals and plants, and the physical and biological factors, and processes affecting geographic distributions.

BIO 4317 Plant Physiology (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Experimental studies of important physical and chemical processes related to plant function.

BIO 4320 Pathophysiology (3)
Pre-requisite(s): BIO 3322 with a grade of B or better
Pathophysiology of disease with emphasis on immunology, communicable disease, neoplasia, heredity, congenital problems, and degeneration as expressed in each organ system.

BIO 4323 Parasitology (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; upper-level or graduate standing or consent of instructor
Introduction to study of parasites and vectors, emphasizing life cycles and control of those affecting humans. Research paper required for graduate credit.

BIO 4333 Science Leadership: Improvement of Science Education (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and upper-level standing and consent of instructor
Development of science leadership skills through community-based research on improvement of science education.

BIO 4339 Advanced Marine Field Studies (3)
Cross-listed as GEO 4339
See GEO 4339 for course information.

BIO 4344 Fundamentals of Toxicology (3)
Cross-listed as ENV 4344
See ENV 4344 for course information.

BIO 4350 Pathogenic Microbiology (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and BIO 4401
Introduction to medically relevant pathogens with an emphasis on bacterial pathogenesis.

BIO 4354 Neglected Tropical Diseases (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Core principles in genetics and cellular and molecular biology to understand the causation, pathogenesis, and control of the major neglected tropical diseases, defined as a group of poverty-promoting chronic infectious diseases.

BIO 4365 Topics in Evolution (3)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and BIO 2306 or consent of instructor
Processes which establish or eliminate variation in populations and how these mechanisms affect biological diversity.

BIO 4381 Restoration Ecology (3)
Cross-listed as ENV 4380
See ENV 4380 for course information.

BIO 4386 Remote Sensing (3)
Cross-listed as AVS 4386, ENV 4386, GEO 4386
See GEO 4386 for course information.

BIO 4405 Limnology (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Lecture, laboratory, and field studies of lakes and streams. Emphasis on analysis and interpretation of physical, chemical, and biological factors relating to metabolism and production of aquatic communities. Overnight trips may be required.

BIO 4406 Aquatic Biology (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Laboratory and field studies of lakes, streams, and estuaries. Primarily for advanced students of zoology and botany who are interested in aquatic organisms and their ecology. Emphasis is on collection, preservation, and identification of all aquatic biota except fishes. Overnight trips may be required.

BIO 4415 Human Evolutionary Anatomy (4)
Cross-listed as ANT 4416
See ANT 4416 for course description.

BIO 4416 Plant Anatomy (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Anatomy of seed plants, with emphasis on structure-function relationships that occur during growth and development.

BIO 4418 Biology of Wetland and Aquatic Vascular Plants (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and any taxonomic course
Taxonomy, ecology, structure, distribution, and economic significance of aquatic vascular plants.

BIO 4420 Biology of the Vertebrates (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
An introduction to the biology of the vertebrates, emphasizing recognition and classification of modern taxa, adaptations to diverse lifestyles, and importance to humans in context of diseases, domestication and conservation.

BIO 4422 Ichthyology (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Fish fauna of the area with emphasis on morphology, ecology, economics, and systematics. Overnight trips may be required.

BIO 4426 Vertebrate Histology (4)
Pre-requisite(s): BIO 3322 with a grade of C or better
Microscopic structure of vertebrate tissues and organs.

BIO 4427 Biology of Mammals (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
An introduction to the biology of mammals, emphasizing recognition and classification of modern taxa, adaptations to diverse lifestyles, and importance to humans in context of diseases, domestication and conservation.

BIO 4428 Ornithology (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better
Evolution, morphology, physiology, behavior, reproduction, ecology, geography, and migration of birds of the world. Includes field identification of Central Texas species.

BIO 4431 Comparative Vertebrate Physiology (4)
Pre-requisite(s): Either BIO 1105 and 1305, or BIO 1405; and either BIO 1106 and 1306, or BIO 1406; all with grades of C or better; and upper-level standing; or consent of instructor
Vertebrate physiology in a comparative evolutionary context. Emphasis on general principles, with unique examples supplied from all major vertebrate taxa.

BIO 5100 Seminars in Biology (1)
Graduate standing in biology and related fields. Topics of current interest in various subdisciplines of biology. Topics change each semester. Involves presentation of seminars by enrolled graduate students. May be repeated only with changes in topics.

BIO 5101 Graduate Scientific Communications (1)
Examination of various methods of scientific communication including leading undergraduate student groups in critical analysis and evaluation of scientific presentations and the current scientific literature.

BIO 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

BIO 5201 Research Methods in Biology (2)
Description and application of the major tools of professional biology, especially instruction on effective writing for obtaining graduate fellowships and research grants, and methods for presenting results of scientific research.

BIO 5202 Res Meth In Bio II (2)
Application of the major tools of professional biology, especially introductory programming, data management and visualization, and exploratory data analysis.

BIO 5203 Tropical and Emerging Infectious Diseases (2)
Provides a comprehensive overview of major neglected tropical diseases, HIV/AIDS, malaria, TB and emerging infections in the context of lecture-based learning and student-led evaluation of current literature emphasizing the rapidly changing global infectious disease climate.

BIO 5204 Applied Epidemiology, Biostatistics, and Public Health (2)
Reinforces the principles of public health as it applies to tropical medicine through epidemiologic investigations, statistical analyses, and evaluation of public health policy.

BIO 5205 Vector Biology and Vector Borne Diseases (2)
Pre-requisite(s): BIO 4102, 4302
Biology, entomology, and transmission dynamics of vector-borne diseases as they relate to the human and animal hosts.

BIO 5206 Biotechnology Operations (2)
Introduction to key principles and practices of a biotechnology operation, including lectures on management and project planning, product discovery, development and testing, clinical development, and the regulatory and quality management systems.

BIO 5207 Preclinical Models in Biotechnology (2)
Fundamentals of pre-clinical models used for vaccine development. The course emphasizes basic immunologic principles applied to vaccine development, natural and experimental animal models for efficacy testing, and design and execution of GXP animal studies. Additionally, fundamentals of US and international regulations governing human therapeutic development are covered.

BIO 5208 Bench to Bedside: Biopharmaceuticals, vaccine antigen production and transition to the clinic (2)
Pre-requisite(s): BIO 4307 or BIO 3342 or the consent of the instructor
Fundamental principles of discovering and designing modern biopharmaceuticals including recombinant vaccine antigens. Discussion of issues facing the transition from bench to bedside.

BIO 5209 Topics in Advocacy and Policy for the Neglected Tropical and Emerging Infectious Diseases (2)
Introduction to key topics of advocacy and policy to communicate scientific or technical information effectively in a variety of public and professional interactions. Lectures include best practices for use of different communication methods and understanding the different types of public audiences.

BIO 5210 GIS and Health (2)
Provides a comprehensive overview of how dynamic geospatial and environmental factors influence human health and how GIS-based tools can be applied for analysis.

BIO 5211 Diagnostics of Neglected Tropical and Emerging Infectious Diseases (2)
Examination and evaluation of modern molecular and other point-of-care methods for detection of tropical and emerging infectious diseases.

BIO 5213 Research Methods in Biology III (2)
Investigation of the parameters necessary for effective experimental design and interpretation in the biological and biomedical research fields.

BIO 5220 Pathophysiology (2)
Pre-requisite(s): At least one year of coursework in chemistry, physics, organic chemistry, and biology
In addition to concurrent enrollment in the Medical Sciences M.S. degree program. Provides a framework for applying fundamental principles of human anatomy and physiology to the diagnosis and treatment of disease.

BIO 5300 Advanced Studies in Biology (3)
Special and advanced topics in biology. May be repeated up to three times with change in content.

BIO 5302 Virology (3)
Cross-listed as BMS 5305
Pre-requisite(s): BIO 4106 and 4306 or equivalent
Material covered includes viral replication, molecular regulation, cellular life cycle, and pathogenesis; evolution, emerging diseases, and epidemiology; and prevention and control of viral diseases. Viruses which infect humans, domestic animals, and plants will be the focus. The global health perspective will be addressed throughout.

BIO 5303 Behavioral Ecology (3)
Pre-requisite(s): BIO 3403 or equivalent
Relationships among animal behavior, ecology, and evolution. Emphasis is on integrating current models with comparative and experimental evidence on how a particular behavior pattern contributes to an animal's chances of survival and its reproductive success.

BIO 5304 Nucleic Acids (3)
This course examines recent developments in both DNA and RNA fields. Topics include nucleic acids structure, protein-nucleic acid interactions, techniques applied to nucleic acids, RNA decay, noncoding RNAs, RNA regulons, riboswitches, RNA bioinformatics and micro RNAs.

BIO 5305 Ecosystem Biogeochemistry (3)
This course provides the opportunity to synthesize the principles and current research in the discipline of Ecosystem Biogeochemistry through student-led teaching modules and a research synthesis project.

BIO 5306 Molecular Evolution (3)
Pre-requisite(s): BIO 2306 and 2106
Research in molecular genetics and its implications for evolutionary theory. Topics to be discussed include the evolutionary role of plasmids, temperate phage, transposons, introns, multigene families, organelle DNA, and DNA sequence divergence.

BIO 5307 Advanced Cell Biology (3)
Cross-listed as BMS 5307
Pre-requisite(s): BIO 4307 or 4308 or equivalents; or consent of instructor
Advanced topics in current cell biology research, including organelle and cytoskeleton structure and function, intra- and inter-cellular signaling, intracellular trafficking, cell cycle regulation, and cell division.

BIO 5310 Advanced Microbiology (3)
Pre-requisite(s): BIO 4401 or consent of instructor
Microorganisms, especially their mechanics of pathogenesis with emphasis on their distribution in nature, their beneficial and detrimental effects on humans, and the potential role of certain organisms in biowarfare.

BIO 5311 Advanced Genetic Analysis (3)
Pre-requisite(s): BIO 1105, 1106, 1305, 1306, 2306, 3342, and 4306 or equivalents; or consent of instructor
Principles and practice of classical and modern genetic analysis as applied to eukaryotic organisms, including yeast, nematodes, Drosophila, mice, and humans; isolation and analysis of mutations; gene mapping; suppressor analysis; chromosome structure; control of gene expression; and developmental genetics.

BIO 5315 Genomics & Infectious Diseases (3)
Pre-requisite(s): BIO 2306, 3342, 4308 or equivalents or consent of instructor
This course concerns new principles of genome science and explores their applications in infectious disease research. Topics include how pathogen and vector genomes are studied, how they function, and how they evolve. The importance of comparative and functional genomics along with use of arthropod disease vectors in identifying control mechanisms of human pathogens are highlighted.

BIO 5320 Ecological Biophysics (3)
Pre-requisite(s): BIO 3303 or BIO 3403; and MTH 1321, PHY 1408 and PHY 1409
First principle approaches that are used to describe microenvironments of living organisms and the energy and mass transfer between organisms and their external environment.

BIO 5325 Advanced Topics in Evolutionary Biology (3)
Pre-requisite(s): Consent of instructor
This course provides an opportunity to explore advanced evolutionary theory and its implementation. Emphasis on evolution as an integrative principle of biological science.

BIO 5330 Conservation Biology (3)
Cross-listed as ENV 5330
Pre-requisite(s): BIO 2306 and 3403 or equivalent
Biological forces influencing scarcity and diversity, emphasizing: genetics, fitness, population viability, extinction, endemism, habitat fragmentation, and community structure and stability.

BIO 5335 Climate Change and Biodiversity (3)
Pre-requisite(s): BIO 3303 and MTH 1320, or equivalents
Biological and conservation responses to naturally and human-induced climate change. Greenhouse gas levels, recent climate trends, range and abundance changes, phenological changes, evolutionary effects, climate change models and projections, designing landscapes and seascapes for change, managing the landscape matrix, and the future of biodiversity.

BIO 5340 Ecosystem Process Modeling (3)
Pre-requisite(s): MTH 1321 (or equivalent) and BIO 3403 (or equivalent)
Interactions among ecosystem elements are formalized in computer simulation. Identification of ecosystem sources/sinks, reservoirs, and flux pathways is presented with the biological interpretation of mathematical representation of ecological processes.

BIO 5345 Molecular Biology of Disease Vectors (3)
Pre-requisite(s): BIO2306 Genetics: BIO4308 Cell and Developmental Biology; or consent of instructor
This course provides an important foundation of knowledge of the biology of disease vectors, followed by current topics in vector biology, cell and developmental biology, physiology, gene drive system, old and new strategies in vector control and control of vector-borne diseases and vector/pathogen/host interactions.

BIO 5349 Research Proposal Writing and Development (3)
Overview of effective grant writing skills, mechanics of proposal writing, and approaches to grantsmanship. Skills are developed for honing a scientific rationale and tailoring a proposal to the interests of specific audiences.

BIO 5350 Biocomputing (3)
Pre-requisite(s): Consent of instructor
An introduction to the Python language and its specific application to genomic, proteomic, and environmental research. Emphasis on strings, data storage/access, and creating custom modules. Weekly coding projects will be based on each student's dissertation research. No coding experience is required.

BIO 5351 Advanced Biocomputing (3)
Pre-requisite(s): Consent of instructor
A Python-based course covering protein structure, phylogeny, DNA sequencing and transcriptome analysis, Markov chains, clustering, and machine learning. Weekly coding projects will be completed which are relevant, where possible, to each student's dissertation research. Strong skills in Python are required.

BIO 5355 Genomic Analysis (3)
Cross-listed as BMS 5355
Provides comprehensive instruction on the analysis of genomic data. An overview of basic genome biology, study design, NGS technology, and galaxy analysis tools is provided in addition to current best practices in the analysis of genomic data. Genomic Analysis focuses on analysis and detection of variants and transcriptomics from next-generation sequencing data including RNA-seq, ChIP-seq, and SNP-seq.

BIO 5360 Biological Invasions: Ecology and Management (3)
Cross-listed as ENV 5360
Pre-requisite(s): BIO 3403 or equivalent
The biology of invasive alien plants and animals, emphasizing evolutionary ecology, impacts on native species, and effects on biodiversity. Biological invasion causes, pathways, vectors, and management strategies in terrestrial and aquatic systems.

BIO 5377 Landscape Ecology (3)
Cross-listed as ENV 5377
Pre-requisite(s): BIO 3403, MTH 1304, or equivalent
Ecological factors influencing landscape structure and dynamics. Emphasis on landscape structure, exchanges among landscape components, and landscape stability and management.

BIO 5380 Integrative Ecophysiology (3)
Pre-requisite(s): BIO 4431 or instructor approval
Application of the basic principles of nutrition to the study of fish, reptiles, birds, and mammals in their natural environments.

BIO 5399 Experimental Design and Research Communications for Molecular Biologists (3)
Cross-listed as BMS 5399
Pre-requisite(s): Consent of instructor
This course provides in-depth training on how to formulate research hypothesis and questions and how to present the specialized areas of student research to general and professional audiences.

BIO 5400 Population Genetics (4)
Pre-requisite(s): BIO 2306 or equivalent
Basic concepts and current research in population genetics. Topics covered include genetic variation in natural populations, evolutionary forces causing change in gene frequency, linkage disequilibrium, quantitative variation, and the genetics of speciation.

BIO 5401 Microbial Ecology (4)
Interactions and transformations of microorganisms in soil, air, and water. Emphasis on methodology and practical relationships of microorganisms in the environment.

BIO 5402 Invertebrate Zoology (4)
Diversity and phylogenic development of all non-vertebrate phyla. Current areas of research in invertebrate biology are examined.

BIO 5403 Population Ecology (4)
Pre-requisite(s): BIO 3403 or equivalent; and BIO 5412 or MTH 2381 or STA 3381 Lectures, discussions, and field studies that illustrate basic concepts and current research in theoretical and applied population ecology
Topics include life tables, census techniques, single-species population and metapopulation dynamics, population regulation, population dynamics in competitive and predator/prey interactions, and the conservation of populations. Includes an independent research project.

BIO 5404 Wetland Ecology and Management (4)
Cross-listed as ENV 5404
Prerequisite(s); BIO 3403 or equivalent. Lecture, laboratory, and field studies of the ecology and management of North American wetland environments. Emphasis will be placed on the ecology of aquatic and wetland plants and their role in determining wetland structure and function. Overnight field trip required.

BIO 5405 Stream Ecology (4)
Cross-listed as ENV 5405
Physical, chemical and biological organization of streams. Topics include geomorphology and hydrology, water chemistry, ecosystem processes in streams, watershed-stream linkages, and bioassessment methods.

BIO 5407 Bioenergetics (4)
Discussion and laboratory experiences on the processes, pathways, and rate of biological energy transformation.

BIO 5408 Plankton Ecology (4)
Pre-requisite(s): BIO 3303 or equivalent; or consent of instructor
Plankton comprise the most important community of oceans and most lakes. Their metabolism drives the global carbon cycle and supports global fisheries. We consider all plankton, but focus on the middle of the food web, i.e., the zooplankton as an intermediary between the phytoplankton producers and the fish consumers. The course has a strong hands-on component with experimental laboratory experiences.

BIO 5409 Cancer Biology (4)
Pre-requisite(s): BIO 4306 or 4307 or 4308 or consent of the instructor
Basic concepts and current research in cancer biology. Topics include the cell intrinsic regulation of growth control, the accumulation of mutations, and the cell biological and micro-environmental changes associated with cancer, as well as therapeutic strategies. Current literature is discussed.

BIO 5412 Biometrics (4)
Pre-requisite(s): MTH 1304 or equivalent
Principles and methods for experimental design, quantitative analysis, and interpretation of biological data, including application of mainframe computer packages.

BIO 5413 Advanced Ecological Data Analysis (4)
Cross-listed as ENV 5413
Pre-requisite(s): BIO 5412 or equivalent
Current approaches to analyzing and interpreting complex biological data. Emphasis on integrative analysis strategies using modern statistical modeling techniques. Hands-on analysis of data sets using the statistical package R.

BIO 5420 Transmission Electron Microscopy (4)
Pre-requisite(s): Consent of instructor
Use and operation of the transmission electron microscope and ancillary equipment as instruments of biological research, with special emphasis on tissue preparation, sectioning, examination, data acquisition, and photography.

BIO 5421 Scanning Electron Microscopy (4)
Pre-requisite(s): Consent of instructor
Use and operation of the scanning electron microscope and support equipment. Specimen preparation, specimen examination, data acquisition, and data analysis are emphasized.

BIO 5425 Molecular Ecology (4)
Pre-requisite(s): Consent of instructor
Basic concepts and current laboratory techniques in molecular ecology. Emphasis is on use of these skills in addressing basic and advanced ecological questions.

BIO 5432 Microbiology and Immunology (4)
Pre-requisite(s): At least one year of coursework in organic chemistry and biology
In addition to concurrent enrollment in the Medical Sciences M.S. degree program. The primary aim of this course is to aid MSMS students in concentrating on the fundamental concepts of immunology and microbiology pertaining to medicine and biomedical science. The topic of microbiology consists of the classification of microorganisms, microbial transmission, and viral multiplication.

BIO 5V90 Special Problems (1-6)
Pre-requisite(s): Consent of instructor
Advanced work in biology. Subject and hours of credit agreed upon by student and professor prior to registration. For master's and doctoral students.

BIO 5V99 Thesis (1-6)
Pre-requisite(s): Consent of major professor
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of BIO 5V99 are required.

BIO 6101 Research Rotation (1)
The research rotation allows students to become familiar with different areas of research, learn new experimental techniques, obtain experience in different research laboratories, and ultimately identify a lab in which to conduct dissertation research.

BIO 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

BIO 6V10 Doctoral Prospectus Research (1-2)
Pre-requisite(s): Consent of Instructor
Supervised research for writing a dissertation research proposal and designing experimental approaches that will be the subject of a preliminary exam that will admit students to candidacy. A student may repeat this course for credit, with a maximum of 4 total hours.

BIO 6V99 Dissertation (1-12)
Pre-requisite(s): Consent of major professor
Research, data analysis, and writing and oral/written defense of an approved doctoral dissertation. At least twelve hours of BIO 6V99 are required.

Biomedical Engineering (BME)

BME 4353 Image Formation and Processing (3)
Cross-listed as ELC 4353
See ELC 4353 for course information.

BME 4370 Biomaterials: Form and Function (3)
Pre-requisite(s): A grade of C or better in ME 3320 and 3322
A traditional mechanical/materials engineering approach will be used to explore the structure and function relationship of naturally occurring biological materials. Emphasis is on mechanical design and function with some discussion of physical properties. Materials used in medical devices will be compared and contrasted with naturally occurring biomaterials.

BME 4372 Bioinstrumentation (3)
Cross-listed as ELC 4372
See ELC 4372 for course information.

BME 4374 Biomechanics (3)
Pre-requisite(s): A grade of C or better in ME 3320
Introduction to biomechanics. Topics covered include: review of fundamental principles of mechanics, human musculoskeletal physiology and anatomy, properties of biological materials, methods and practice of measuring biological signals, biomechanical modeling and simulation, and applications of biomechanical study.

BME 4396 Special Topics in Biomedical Engineering (3)
Pre-requisite(s): Consent of department chair
Study of advanced topics in biomedical engineering. This course may be repeated once under a different topic.

BME 4452 Biomedical Digital Signal Processing (4)
Pre-requisite(s): A grade of C or better in ELC 3335 and STA 3381
Discrete-time signals and systems, sampling theory, z-transforms, spectral analysis, filter design, applications, analysis, and design of digital signal processing systems. Laboratory emphasis on biomedical applications of digital signal processing. Credit cannot be earned for ME 4452 if credit is earned for ELC 4451.

BME 4V97 Special Projects in Biomedical Engineering (1-6)
Pre-requisite(s): Consent of department chair
Advanced topics and/or special project activities in biomedical engineering.

BME 5351 Multidimensional Signal Analysis (3)
Cross-listed as ELC 5351
See ELC 5351 for course information.

BME 5353 Biomedical Signal Analysis (3)
Cross-listed as ELC 5353
See ELC 5353 for course information.

BME 5357 Cardiovascular Engineering and Instrumentation (3)
Cross-listed as EGR 5357, ELC 5357, ME 5357
A quantitative approach to the function and performance of cardiovascular elements, including ECG signal generation, blood flow rheology, and ventricular/vessel wall mechanics. Principles of measurement instrumentation including Fick dilution, ultrasound, and magnetic resonance imaging are explored. Major implant types, as well as FDA submission pathways, are examined.

BME 5360 Introduction to Biomedical Engineering (3)
Pre-requisite(s): Consent of instructor
Introduction to the interdisciplinary nature and broad scope of biomedical engineering. Topics covered will include biomechanics, biomaterials, biosensors, biomedical instrumentation, bioinformatics, prosthetic devices, and other biomedical engineering areas.

BME 5375 Biomechanical Computer Modeling (3)
Pre-requisite(s): Graduate standing in Engineering
An investigation into the methods of computer modeling and simulation for the study of human musculoskeletal biomechanics.

BME 5376 Medical Device Design and Evaluation (3)
Project-based introduction to medical device design and evaluation. Topics include: clinical needs finding, design criteria generation, basic anatomy, design evaluation, prototyping, regulatory process, intellectual property, and validation process. Students work in teams on real medical problems and serve on committees to provide guidance for the project teams on either intellectual property or regulatory standards.

BME 5390 Research Methods and Project Formulation (3)
Cross-listed as EGR 5390, ELC 5390
See ELC 5390 for course information.

BME 5396 Special Topics in Engineering (3)
Cross-listed as EGR 5396, ELC 5396, ME 5396
See EGR 5396 for course information.

BME 5397 Special Projects in Engineering (3)
Cross-listed as EGR 5397, ELC 5397, ME 5397
See EGR 5397 for course information.

BME 5V99 Master's Thesis (1-6)
Students completing a master's program with a thesis must complete six hours of BME 5V99.

Biomedical Studies (BMS)

BMS 5100 Biomedical Seminar (1)
Pre-requisite(s): Enrollment in graduate program
Students are required to register for the weekly seminar (a forum for outside speakers, presentation of student research, and discussion of selected topics) and to present papers. No more than three semester hours may be counted on a master's degree and no more than six may be counted on the Ph.D. degree.

BMS 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

BMS 5301 Survey of Immunology (3)
Pre-requisite(s): BIO 4301
Advanced aspects of the following topics are covered: Innate immunity, antigen recognition and presentation, lymphocyte maturation, autoimmunity, host defense failure, hypersensitivity, and vaccine development.

BMS 5302 Current Concepts in Immunology (3)
Pre-requisite(s): BIO 4301
The manipulation of the immune system to advance therapy and prevention is a special focus of this course. Antigen recognition and presentation, dendritic cell development, vaccine development, and other topics are covered in detail. Each topic is presented from the literature by a researcher working on the topic.

BMS 5305 Virology (3)
Cross-listed as BIO 5302
See BIO 5302 for course information.

BMS 5307 Advanced Cell Biology (3)
Cross-listed as BIO 5307
See BIO 5307 for course information.

BMS 5308 Biotechnology and Cell Biomedicine (3)
Pre-requisite(s): Graduate student enrollment in Biology, Chemistry, or Biomedical Studies program
(BIO 4306 preferred but not required.) Interdisciplinary course that covers basic mechanisms of molecular biology and genetics along with rigorous presentation of state-of-the-art research methodology. Utilization of DNA/RNA/protein regulation technology in biomedical and clinical applications.

BMS 5310 Molecular Biology of the Cell (3)
Pre-requisite(s): BIO 4307
Advanced topics in cell biology. Cell division, replication, and recombination of DNA and mutations and repair of DNA will be reviewed. Application of restriction enzymes, recombinant DNA technology, and sequencing of DNA to study molecular architecture of the cell will be overviewed.

BMS 5343 Studies in Intermediary Metabolism (3)
Pre-requisite(s): CHE 4341 or BIO 4341; or consent of instructor
Investigation of the interrelationships of energy utilizing and producing metabolic pathways. Consideration will be given to glycolysis, Kreb's cycle, oxidative pathways of fatty acids, pathways of lipid and sterol formation, and various aspects of gluconeogenesis and the pentosephosphate shunt, as well as specific functions of amino acid metabolism in oxidative stress and methylation.

BMS 5355 Genomic Analysis (3)
Cross-listed as BIO 5355
See BIO 5355 for course information.

BMS 5399 Experimental Design and Research Communications for Molecular Biologists (3)
Cross-listed as BIO 5399
See BIO 5399 for course information.

BMS 5401 Special Techniques in Immunology (4)
Pre-requisite(s): CHE 4341 and 4342; or consent of instructor
Immune responses of vertebrate animals, including immunochemistry and molecular genetics. Cellular responses will be analyzed by conventional skin tests, in vitro correlates of delayed-type hypersensitivity, histology, and laser-activated cell sorting.

BMS 5V95 Biomedical Research (1-8)
Pre-requisite(s): Consent of student's dissertation or advisory committee
Directed research for those students who have not yet passed the Ph.D. preliminary examination and who have not yet selected a Ph.D. dissertation topic or for master's students desiring in-depth practical training in a specific area of research. May be repeated for no more than 30 semester hours of credit.

BMS 5V99 Thesis (6)
Pre-requisite(s): Consent of student's thesis committee or a minimum of twelve hours of graduate work
A minimum of six semester hours is required.

BMS 6310 Research Rotations (3)
Individual students complete five-week rotations in three research laboratories in order to master a set of biomedical techniques and to choose a home lab and dissertation mentor. Students join ongoing research projects and learn current techniques from lab personnel that will advance their dissertation work. Participation in experimental planning and exploration of the relevant literature is expected.

BMS 6390 Special Problems in Biomedical Studies (3)
Pre-requisite(s): Consent of student's dissertation committee
Selected topics in biomedical studies. May be repeated with change in content. No more than six semester hours total credit allowed.

BMS 6V99 Dissertation (1-12)
Pre-requisite(s): Consent of the student's dissertation committee and admission to candidacy
A minimum of twelve semester hours is required.

Business (BUS)

BUS 5050 Graduate Business Colloquium (0)
Student's attendance at designated Hankamer School of Business sponsored speaker events is required to earn credit for this course. Events will be identified at the beginning of each semester.

BUS 5101 Focus Firm I (1)
Pre-requisite(s): Admission to MBA program
An experiential learning course that provides students with opportunities to apply MBA classroom concepts to solving real-world business issues. Student teams work with a focus firm advisor to define a specific organizational issue, collect and analyze market research data, conduct a strategic analysis, and present alternative solutions to a client

BUS 5102 Focus Firm II (1)
Pre-requisite(s): Admission to MBA Program and BUS 5101
An experiential learning course that provides students with opportunities to apply MBA classroom concepts to solving real-world business issues. Under the guidance of a Focus Firm Advisor, students assume leadership roles in team-based projects to address a specific organizational issue and to oversee the team's problem analysis, definition of alternate solutions, and delivery of recommendations to the client.

BUS 5111 Professional Career Development for First Semester Graduate Students (1)
A one-hour, beginning, graduate career development course designed to enhance personal marketability by providing self-assessments, career passion discovery, career exploration and development experiences, and career resources to help prioritize and focus the student's specific internship and job search.

BUS 5112 Professional Career Development for Second Semester Graduate Students (1)
Pre-requisite(s): BUS 5111
A one-hour graduate career development course designed to introduce personal accountability, networking skills, company/position analysis, job search strategy, interviewing skills, and negotiations to maximize the student's career development and personal marketability.

BUS 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

BUS 5201 In-Residence: Leading in the 21st Century (2)
Pre-requisite(s): Acceptance into the executive MBA program
This course introduces the major dimensions associated with high-performing organizations. The complexities of business, competition, and leadership are explored. Teamwork and critical thinking skills are refined as participants explore global business and leadership challenges in the 21st century.

BUS 5302 In Residence: Government, Business, and Societal Impact (3)
Pre-requisite(s): Policy Process Admission to the Executive MBA program
Course exposes students to issues related to business, public policy, societal impact, and their intersections. Audiences with govt. officials and corporate leaders provide the participant with a global perspective on how these issues influence business strategy and leadership decision-making. Participants build skills in critical thinking and influence as they understand how organizations and industries are impacted by policy and role advocacy.

BUS 5315 Graduate Business Case Competition (3)
Pre-requisite(s): Consent of Instructor
Provides in-depth application of case study techniques in a variety of business contexts. Experiential learning through case analysis projects and competing in national case competitions.

BUS 5330 Global Business Seminar (3)
Study of strategic practices of businesses operating globally. Emphasis on the evolution of market trends and its impact on decision-making of business and global strategic activities. Development of cultural intelligence and increased global awareness. Applied learning of multiple global business perspectives.

BUS 5340 Studies in the Caribbean Region (3)
Pre-requisite(s): Graduate standing
This course is conducted in the Dominican Republic as part of the Baylor in the Dominican Republic program, which allows graduate students to experience life in the Caribbean region first-hand. Students will study the social, cultural, historical, economic, and political issues that impact businesses in the Dominican Republic and the general environment in which they operate. Students will visit a variety of enterprises and consider the dynamics of participation in the economy and society of a Caribbean nation.

BUS 5350 Project Management (3)
Pre-requisite(s): Graduate standing
This graduate course in project management is designed to enhance the work of business professionals and persons involved in construction, environmental remediation, software development, grant writing, new product development, engineering, and design. Project management planning, network building, project control, reporting, and closing will be studied, including critical path and critical chain methodologies. Students will develop expertise in using Microsoft Project and critical chain computer software. This course introduces the tools and techniques necessary for successful and timely completion of projects in a single project environment. While briefly addressed, multi-project environments will not be covered in detail in this course.

BUS 5354 Business Research in Latin America (3)
See ENT 5354 for course description.

BUS 5390 Management Communication (3)
Examines principles and strategies of effective management communication in the areas of audience analysis, ethics, cross-culture, crisis, interpersonal communication, and team dynamics. Provides techniques, skills, and strategies for overcoming communication barriers and for designing and delivering executive presentations. Provides instruction in preparing effective professional reports including research, drafting, revision, format, and documentation. Examines corporate and leadership communication topics including corporate responsibility, integrity and image, communicating with the media, change, principle-centered leadership, and web-based communication, with ample opportunities for application and feedback.

BUS 5395 The Focus Firm (3)
Pre-requisite(s): Admission to MBA program
This course integrates the content of previous courses through an in-depth analysis of the semester's Focus Firm company with attention to day-to-day operations as well as strategic issues. The course emphasizes the practical application of theoretical knowledge in an actual company facing current, challenging problems. Students will experience a team-centered approach to learning and selling their ideas. Participants will be involved in analyzing the Focus Firm company issues, presenting their solutions to faculty and company executives of the Focus Firm. Students will receive feedback from the company executives as well as faculty on their work.

BUS 5401 Business Frameworks (4)
Pre-requisite(s): Graduate business student
The common body of knowledge in business administration comprising the following areas: a background of the concepts, processes, and institutions in the financing of the business enterprise or other forms of organization; and a basic understanding of the concepts and applications of accounting, quantitative methods, and excel software.

BUS 5421 Ethical Leadership (4)
This course explores the causes of unethical behavior and expands students' understandings of the ethical challenges and responsibilities in today's diverse, interconnected, and global society. Students will reflect upon and utilize their faith principles, values, and relevant research as they learn practical techniques for promoting ethical behavior.

BUS 5460 Communicating With Data (4)
Upon completion of this course, students will be able to apply a wide range of ideas, concepts, and multi-disciplinary theories to communicate the results of data more effectively to key constituents both within and external to their organizations.

BUS 5490 Strategic Communication (4)
Students cultivate principles, enhance skills, and develop winning strategies to communicate effectively in a business setting.

BUS 5602 Business Foundations II (6)
Pre-requisite(s): Graduate business student
The common body of knowledge in business administration comprising the following areas: a background of the concepts, processes and institutions in the financing of the business enterprise or other forms of organization; a background of the economic and legal environment as it pertains to profit and/or nonprofit organizations along with ethical considerations and social and political influences as they affect such organizations and basic understanding of the concepts and applications of accounting quantitative methods and statistics.

BUS 5V95 Internship in Business (1-6)
Pre-requisite(s): Minimum of twelve hours of graduate credit
Three to six months of work experience in a domestic or international company. The work experience should be integrated into students' overall graduate program in such a way as to provide meaningful application of previously studied course material. A written report of the work experience shall be submitted to the director of the internship.

BUS 5V98 Special Studies in Business (1-6)
Pre-requisite(s): Instructor and departmental approval required
Individualized research or project in business. Students' proposals for special study project must be approved by the supervising faculty member. Offered on demand with instructor and departmental approval required for one to six semester hours.

Business (MBUS)

MBUS 5220 Organizational Ethics (2)
This course will review major ethical theories, principles, decision-making methods, and the relationship between ethics and leadership. Clinical ethics topics will be considered from an organizational perspective, and topics with a more definitive business focus will be addressed.

Business Law (BL)

BL 5104 Business Foundations - Business Law (1)
Co-requisite(s): FIN 5203
This course is required for MBA and MSIS students who do not have an undergraduate degree in business from an AACSB-accredited institution. The course will provide students with a foundation in business law which is expected of all business graduate students. This course will be required as a co-requisite for FIN 5203.

BL 5105 Employment Law (1)
Pre-requisite(s): Admission to Executive MBA program
The purpose of this course is to analyze the impact of employment-related statutes and court decisions on the business environment. The focus of the class will be on the impact of these laws for managers and those responsible for making employment-related decisions in the workplace. The laws will be examined from a societal (macro) perspective, as well as firm (micro) perspective. Students will participate in reviewing and drafting human-resource-related policies.

BL 5110 International Business Law (1)
Pre-requisite(s): Enrolled in the Executive MBA program
This course provides students with an introduction to the legal environment, issues, and controversies related to conducting business internationally; basic legal research; and logical legal reasoning.

BL 5171 Legal Aspects of Business (1)
Pre-requisite(s): Admission to Executive MBA program
This course provides a comprehensive overview of legal issues currently at the forefront of the increasingly complex body of laws challenging business managers. Students will be able to recognize legal issues and manage legal risks in business decision-making. The course will also acquaint students with the essential processes by which law is created and changed. Students will be challenged to increase their ethical sensitivity by exposing them to business-related legal problems that have ethical issues.

BL 5201 Business Law: Application and Strategy (2)
A study of the application of law to managerial decisions and the relationship between legal and business strategy. Provides students with sufficient understanding to identify and manage legal and ethical issues in global business transactions.

BL 5303 Seminar in Employment Law (3)
Pre-requisite(s): Graduate standing
A study of the legal and regulatory framework governing the employment relationship, with particular emphasis on a business manager's role in providing the informed leadership necessary to maintain a workplace free of discrimination. The course will include topics such as employment contracts, equal-opportunity law (discrimination, sexual harassment, affirmative action), wrongful discharge, and employee privacy.

BL 5304 Legal Aspects of Financial and Commercial Transactions (3)
Pre-requisite(s): Graduate standing
Legal issues encountered in conducting financial and commercial business transactions. Students gain knowledge to prepare them to participate in these transactions, particularly with regard to financial and accounting aspects of the transactions. The course includes a study of laws relating to business organizations, sales, secured transactions, documents of title, bankruptcy, securities regulations, and accountants' legal liability.

BL 5310 Cyberlaw (3)
Pre-requisite(s): Graduate standing
Current legal issues affecting businesses operating online. In an active learning environment, students examine e-commerce law, intellectual property, privacy, data security, cyber-contracts, international cyberlaw, and related ethical issues. How is the law responding to the digital age? How are legal risks increasing in significance for decision-makers? How does the law balance critical and often competing issues such as security and privacy?

BL 5320 International Business Law (3)
Pre-requisite(s): Graduate standing
Detailed review and discussion of laws related to conducting business internationally. Includes examination of Convention of International Sale of Goods and other laws related to contracts, barriers to entry into foreign markets and trade, determination of tariffs, import/export requirements, arbitration, licensing issues, and intellectual property concerns.

BL 5345 Global Trade Compliance Management (3)
Pre-requisite(s): BL 3305
Management of global trade compliance as a strategic business function of international firms and the regulatory requirements of firms participating in international trade. The course provides an overview of U.S. export and import regulatory agencies, current issues in trade compliance, the role of trade compliance in the operations and strategic management of international firms, and skills necessary for a career in global trade compliance.

BL 5445 Global Trade Compliance Strategy (4)
This course provides an in-depth framework for understanding the complexities of export and import regulatory requirements and their effect on firms conducting business in a global environment, and for treating the management of global trade compliance as a strategic organizational function.

BL 5V98 Special Studies in Business Law (1-6)
Pre-requisite(s): Graduate standing
Individualized research in business law. Students' proposal for special study project must be approved by the supervising faculty member. Offered on demand and by consent of the advisor for one to six semester hours. May be repeated under a different topic, but not to exceed six maximum degree hours.

Business Law (MBL)

MBL 5310 Selected Topics in Business Law (3)
This course builds on the material from Health Care Jurisprudence and from Health Care Contracting and Negotiations. Topics reviewed may include sales, negotiable instruments, the corporation qua corporation, debtor-creditor relations, bankruptcy, real property, and the governmental regulation of business. Case studies will be developed by students and analyzed.

Chemistry (CHE)

CHE 4207 Preparative Inorganic Chemistry (2)
Pre-requisite(s): CHE 3238 and 4302
A wide range of experimental techniques currently used in preparative inorganic chemistry research. Such techniques include dry bag, inert atmosphere, ion-exchange, and vacuum line manipulations; electrolytic, non-aqueous solvent, and tube furnace preparations. Emphasis will be given to both the preparation and characterization of compounds prepared in the laboratory.

CHE 4217 Instrumental Analysis Laboratory (2)
Pre-requisite(s): CHE 4225 or 4227, and either credit or concurrent registration in CHE 4316
Laboratory work in instrumental analysis with an emphasis on spectroscopy, separations, and electrochemical methods.

CHE 4227 Physical Chemistry Laboratory I (2)
Pre-requisite(s): CHE 2416 and credit or concurrent enrollment in CHE 4321
Techniques of physical property measurement, data analysis, and interpretation, with emphasis on thermodynamics, electrochemistry, surface chemistry, solutions, and kinetics. Instruction in effective report writing.

CHE 4228 Physical Chemistry Laboratory II (2)
Pre-requisite(s): CHE 4225 or 4227, and credit or concurrent enrollment in CHE 4322
Advanced work in measurement and data analysis techniques, with emphasis on lasers, molecular spectroscopy, and photochemistry. Instruction in effective report writing.

CHE 4237 Advanced Organic Laboratory (2)
Pre-requisite(s): CHE 3238 and 3332
Advanced organic synthesis, purification and analysis techniques, including the use of instrumental methods, such as inert atmosphere techniques and modern analytical and preparative chromatography.

CHE 4307 Modern Inorganic Chemistry II (3)
Pre-requisite(s): CHE 4302
Advanced topics in inorganic chemistry; molecular symmetry with applications to electronic structure and spectroscopy; reaction kinetics and mechanisms; inorganic synthesis and catalysis; bioinorganic chemistry.

CHE 4316 Instrumental Analysis (3)
Pre-requisite(s): CHE 4321 or 4327
Introduction to instrumental methods of analysis including spectroscopy, separations, and electrochemical methods.

CHE 4321 Physical Chemistry I (3)
Pre-requisite(s): CHE 2416, MTH 2321, and PHY 1430; and CHE 3332 or consent of instructor
Gases, liquids and solids, phase changes, electrochemistry, and the principles of kinetics and thermodynamics. (Not applicable to a major in biochemistry.)

CHE 4322 Physical Chemistry II (3)
Pre-requisite(s): CHE 2416, MTH 2321, and PHY 1430; and CHE 3332 or consent of instructor
Postulates of quantum mechanics. Application of quantum theory to simple models: particle in a box, rigid rotor, and harmonic oscillator. Electronic, rotational, and vibrational motion in molecules. Molecular energy levels and spectra. Electronic structure of atoms and molecules. Basic concepts of statistical thermodynamics.

CHE 4334 Organic Spectroscopy (3)
Pre-requisite(s): Either CHE 3238 and 3332 with grades of B or above; or CHE 3332 with a grade of B or above and credit or concurrent enrollment in CHE 4237
The most common spectroscopic methods including infrared, ultraviolet-visible, nuclear magnetic resonance and mass spectroscopies, with emphasis on the practical use of NMR and MS in structure determination problems.

CHE 4341 General Biochemistry (3)
Pre-requisite(s): CHE 3332 with a grade of C or better
Structure and dynamics of compounds of biological interest. (Students may not receive credit for both BIO 4307 and CHE 4341.)

CHE 4342 Topics in Human Biochemistry (3)
Pre-requisite(s): A grade of C or better in CHE 3332; and either a grade of C or better in CHE 4341 or a grade of B or better in BIO 4307 Topics in selected areas of human biochemistry such as hormone action, neurotransmission, vision, digestion, transport

CHE 5050 Chemistry Colloquium (0)
A weekly, graduate-level seminar featuring speakers from science departments at Baylor, industry, medical schools, and other universities.

CHE 5101 Responsible Conduct of Research (1)
Covers ethical and regulatory issues regarding modern scientific research.

CHE 5150 Graduate Seminar (1)
Pre-requisite(s): Enrollment in the graduate program
A seminar program in which students will be required to present a paper for evaluation before the graduate faculty and other graduate students. Must be taken two times for the master's degree and three times for the Ph.D. degree.

CHE 5179 Research Seminar (1)
Pre-requisite(s): Enrollment in the graduate program
A weekly colloquium in which students are required to present papers and study the literature in the area of their research project. May be repeated, but no more than three semester hours may be counted on a master's degree and no more than six may be counted on the Ph.D. degree. May not be used to fulfill course work requirements.

CHE 5260 Scientific Communication (2)
Pre-requisite(s): Graduate standing
This experiential-learning course, designed for first-year graduate students, provides instruction and practice in the development of an original research proposal. Strategies for effective oral and written communication of scientific information are emphasized, along with the importance of mastering primary literature in the chosen field of interest.

CHE 5301 Chemistry of the Elements (3)
Pre-requisite(s): CHE 4301 or consent of instructor
Comparative chemistry of the Main Group and Transition elements; relationships between structure and reactivity; energetics and kinetics of inorganic reactions.

CHE 5302 Symmetry and Group Theory in Chemistry (3)
Pre-requisite(s): CHE 4301 or consent of instructor
Application of symmetry and group theory to chemical bonding and spectroscopic selection rules; use of character tables; electronic and vibration spectroscopy.

CHE 5303 Physical Methods in Inorganic Chemistry (3)

CHE 5304 Special Topics in Inorganic Chemistry (3)
This course concerns characterization of redox active inorganic complexes by a number of physical methods. Topics covered include electronic structure and geometry (Group theory, MO diagrams), orbital energies of ground and excited states (UV-vis absorbance/emission), and ways of accessing and interpreting changes in oxidation states (electrochemistry, Marcus theory). Symmetry and group theory are fundamental to many of these applications, and will be introduced.

CHE 5305 Organometallic Chemistry and Homogenous Catalysis (3)
Pre-requisite(s): Consent of instructor
Chemical reactions of organometallic compounds and their role in homogeneous catalysis with emphasis on the transition metals. Reactivity patterns and reaction mechanisms in organometallic chemistry. Factors influencing stabilities and reactivities of metal-carbon bonds.

CHE 5306 Bioinorganic Chemistry (3)
An overview of the biological chemistry of metal ions. Emphasis will be on the structural motifs of metalloproteins and their associated reactivities in relation to physiological function.

CHE 5310 Advanced Chemical Instrumentation (3)
Pre-requisite(s): CHE 4217 and 4316
Principles of chemical instrumentation, including principles of electronic signal handling, sources of noise and signal-to-noise theory, noise reduction techniques such as modulation and phase-sensitive detection, introductory information theory, introductory geometrical optics, and vacuum systems.

CHE 5312 Advanced X-omics Mass Spectrometry (3)
Understanding of chemical interactions within complex mixtures, such as biological fluids and environmental samples, requires simultaneous characterization of all sample components at the molecular level. State-of-the art high performance mass spectrometers, coupled to various separation techniques, provide the necessary sensitivity, resolving power, and multidimensionality for comprehensive characterization of complex mixtures. This course covers current topics in x-omics research (including genomics, metabolomics, petroleomics, and proteomics) with a focus on bioanalytical aspects of utilizing ion generation methods, ion-molecule reactions, ion fragmentation techniques, particle analyzers/detectors, and multidimensional data generation/analyses. Moreover, fundamental aspects and practical significance of accurate mass measurements and conformational analyses in biomedical research and drug development strategies are presented.

CHE 5314 Separation Science (3)
Pre-requisite(s): CHE 4316 or consent of instructor
Theoretical foundations and practical applications of analytical separations with emphasis on gas, liquid, supercritical fluid, and ion chromatographies.

CHE 5315 Electroanalytical Chemistry (3)
Pre-requisite(s): CHE 4316 or consent of instructor
Modern electroanalytical techniques and their application to analytical, kinetic, mechanistic, and synthetic problems.

CHE 5316 Analytical Spectroscopy (3)
Pre-requisite(s): CHE 4316
Theoretical and practical aspects of analytical optical spectroscopy with emphasis on instrumentation.

CHE 5320 Thermodynamics and Statistical Thermodynamics (3)
Pre-requisite(s): CHE 4322
Principles of classical and statistical thermodynamics.

CHE 5322 Chemical Kinetics and Mechanisms (3)
Pre-requisite(s): CHE 4322
Theory of rate processes and the use of kinetic data in the interpretation of reaction mechanisms.

CHE 5323 Structural Studies by X-ray Crystallography (3)
Pre-requisite(s): CHE 4324
Preliminary studies of X-ray structure determination and solving the phase problem by various techniques to be learned before employing methods of structural refinement. Results and conclusions derived from refined structures will be applied to chemical research problems. Practical experience of crystal structure analysis will be the main emphasis.

CHE 5325 Quantum Chemistry (3)
Pre-requisite(s): CHE 4322
Comparison of classical and quantum mechanics and application of quantum mechanics to electronic structure of the atoms and to the study of molecules and chemical bonds.

CHE 5326 Lasers and Molecular Spectroscopy (3)
Pre-requisite(s): CHE 4321 and 4322
Properties of lasers and the fundamental principles of laser operation. Modern application of lasers to the study of spectroscopy and energy flow in atoms and molecules.

CHE 5331 Stereochemistry (3)
Pre-requisite(s): CHE 3332 and credit or concurrent enrollment in CHE 4322
The stereochemistry of compounds of carbon and other elements, steric effects on physical and chemical properties of compounds, and recent developments in the field.

CHE 5334 Heterocyclic Chemistry (3)
Pre-requisite(s): CHE 3238, 3332 with grades of B or above; or consent of instructor
The chemistry of heterocyclic compounds including substances containing nitrogen, oxygen, and sulfur. Synthesis, typical reactions and reaction mechanisms will be emphasized.

CHE 5335 Physical Organic Chemistry (3)
Pre-requisite(s): CHE 3238 and 3332 with grades of B or above; and credit or concurrent enrollment in CHE 4321; or consent of instructor
Organic reaction mechanisms, including kinetics, steric and electronic effects, and molecular orbital considerations.

CHE 5336 Advanced Synthesis and Natural Products (3)
Pre-requisite(s): CHE 4332 or consent of instructor
A study of modern synthetic organic chemistry with particular emphasis on the synthesis of complex natural products and reaction mechanisms.

CHE 5345 Selected Topics in Bioanalytical Chemistry (3)
This current topics course covers current breakthroughs in the development and application of bioanalytical tools. Applications of bioanalytical tools in fundamental biochemical science, as well as in biomedical applications, are included.

CHE 5346 Chemical Biology (3)
Pre-requisite(s): CHE 4341 or BIO 4307
Revolutionary transformations in chemistry and biology have led to a merging at the boundary of these disciplines where contributions from both fields impact our molecular and quantitative understanding of biology. This course covers current research in chemical biology with a focus on enzyme mechanisms, molecular probes, biological pathways, chemical tools, and analytical methods to study biology, while also harnessing biological activity for chemical syntheses and commercial applications.

CHE 5347 Physical Biochemistry (3)
Pre-requisite(s): CHE 4341 or BIO 4341; and CHE 4321 or 4327; or consent of instructor
Theory and applications of physical chemistry to systems of biological interest including such topics as reaction kinetics, protein folding and denaturation, ligand interactions, x-ray diffraction of proteins and nuclear magnetic resonance spectroscopy.

CHE 5348 Enzymology (3)
Pre-requisite(s): CHE 4341 or BIO 4307
Kinetics, mechanisms, regulation, and other topics related to enzyme-catalyzed reactions.

CHE 5380 Principles of Biochemistry (3)
Pre-requisite(s): At least one year of course work in each of the following: chemistry, physics, organic chemistry, biology
In addition to concurrent enrollment in the Medical Sciences M.S. degree program. Online biochemistry course for students in the Medical Sciences Master's degree program. Foundational principles of molecular structure and function are followed by in-depth study of biomolecules, enzymatic processes, and metabolic pathways.

CHE 5V60 Advanced Special Topics in Chemistry (1-3)
Topics in chemistry that are not covered in other graduate chemistry courses. May be repeated for credit if topic is different.

CHE 5V98 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
Required of all graduate students. For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

CHE 5V99 Thesis (1-9)
Credit for the amount of work done. In no case will fewer than six semester hours be accepted for a thesis. Required of all master's students.

CHE 6V99 Dissertation (1-9)
Required of all doctoral candidates. In no case will fewer than twelve semester hours be accepted for a dissertation.

Child and Family Studies (CFS)

CFS 4359 Parenting Theory and Approaches (3)
Pre-requisite(s): CFS 1315 and CFS 2355, or consent of instructor
Theory-based study of parenting approaches, issues, and outcomes for applied practice with diverse families across the lifespan, including the creation, implementation, and identification of parent education resources to support individual and family well-being.

CFS 4363 Middle Childhood and Adolescent Development (3)
Pre-requisite(s): Upper-level standing and a minimum grade of C in CFS 2355
Physical, cognitive, social, and emotional development from middle childhood through adolescence. Application of program design principles in community-based settings to support development. Requires completion of 20 hours in a community-based setting.

CFS 4368 Family Perspectives on Aging (3)
Pre-requisite(s): Upper-level standing
A study of normative aging processes within the family context.

CFS 5330 Human Development and Family Science (3)
Cross-listed as CRED 7355
See CRED 7355 for course information.

CFS 5335 Child Development (3)
A survey of the physical, intellectual, emotional, moral, social, and spiritual development from birth to middle childhood. An understanding of child development from both theoretical and descriptive perspectives is the goal. This course provides an introductory foundation to the field that enables students to serve children and families in varied settings.

CFS 5354 Family Life Education and Ethics (3)
Cross-listed as CRED 7381
See CRED 7381 for course information.

CFS 5355 Child Development (3)
Cross-listed as CRED 7357
This course surveys physical, intellectual, emotional, moral, social, and spiritual development from birth to middle childhood. An understanding of child development from both theoretical and descriptive perspectives is the goal. This course provides an introductory foundation to the field that will enable the student to serve children and families in varied settings.

CFS 5358 Planning and Administration of Child and Family Programs (3)
Cross-listed as CRED 7380
Administration and planning of programs serving children and families. Emphasis is placed on program planning, evaluation, ethics, and professionalism as they apply to child and family programs.

CFS 5363 Adolescent Development (3)
Cross-listed as CRED 7360
See CRED 7360 for course description.

CFS 5367 Family Transitions, Stress and Resilience (3)
Cross-listed as CRED 7367
See CRED 7367 for course description.

Classics (CLA)

CLA 4331 The Archaeology of Sicily and Southern Italy (3)
Study of monuments and topographical archaeology of southern Italy and Sicily. Readings include primary sources and analyses of excavated material.

CLA 4368 Special Topics in Greek and Roman Art and Archaeology (3)
Cross-listed as ARTH 4368
See ARTH 4368 for course information.

CLA 4369 Greek and Roman Sport and Spectacle (3)
Cross-listed as ARTH 4369
See ARTH 4369 for course information.

CLA 4V01 Topics in Classical Literature (1-3)
Pre-requisite(s): Consent of instructor
Various texts to be read (in translation) are selected to meet the needs of the student. With content changed, this course may be repeated up to a total of six semester hours.

CLA 5300 Proseminar in Classics (3)
Introduction to the history, tools and resources, and main methods of research of the discipline of classics. In addition, the course provides an overview of the major subdisciplines of classical studies such as ancient history, epigraphy, papyrology, archaeology, and numismatics.

CLA 5302 Topics in Ancient History (3)
Specific topics in the history of ancient Greece and Rome and related fields with attention to the methodologies of ancient historical inquiry. May be taken five times, provided topics change.

CLA 5V90 Final Project (1-3)
Pre-requisite(s): Consent of project director
Supervised research for final project.

CLA 5V99 Thesis (1-3)
Pre-requisite(s): Consent of the thesis director
Supervised research for master's thesis.

Clinical Orthopaedics (MCO)

MCO 6140 Articular Injuries of the Knee (1)
This course summarizes the current diagnosis, treatment (conservative and surgical) and expected outcomes of articular cartilaginous injuries of the knee. This course will provide the DScPAS-CO resident the knowledge needed to diagnose and guide a patient through the various current treatment options.

MCO 6141 Anterior Knee Pain and Patello-femoral Joint Instability (1)
This course summarizes the possible causes, clinical presentations, and treatment options for anterior knee pain. This will provide the DScPAS-CO resident with the knowledge needed to properly diagnose and treat this common, yet significant problem.

MCO 6142 Genetics I and II, Developmental Dysplasia of the Hip (DDH), Legg-Calve-Perthes Disease and Slipped (1)
This course provides the basic knowledge and skills that the DScPAS-CO resident will require throughout training and in clinic practice regarding genetic disorders and musculoskeletal conditions.

MCO 6143 Orthopaedic Surgery in the Immunocompromised Host (1)
This course brings to light the special requirements and potential complications of orthopaedic surgery in the immunocompromised patient. Being familiar with techniques used to decrease morbidity and mortality in this special subset of the population undergoing orthopaedic surgery is essential for the DScPAS-CO resident in today's society.

MCO 6144 Osteoarthritis (1)
This course is an overview of osteoarthritis, including the epidemiology, pathogenesis, clinical features, evaluation, and management. Clinically, osteoarthritis is a very common diagnosis, and being knowledgeable about this disease entity is essential for the DScPAS-CO resident.

MCO 6145 Benign Bone Tumors (1)
This course addresses the incidence, clinical and radiographic features, and management of benign bone tumors. Benign bone tumors are four to five times more common than malignant bone tumors, making familiarity with benign bone tumors essential for the DScPAS-CO resident.

MCO 6146 Prioritization and Management of the Polytrauma Patient (1)
This course discusses the prioritization and management of the polytrauma patient. The DScPAS-CO resident will become familiar with and utilize established trauma management protocols and learn how to integrate into a coordinated team of traumatologists.

MCO 6147 Ligamentous Injuries of the Foot and Ankle (1)
This course discusses common injuries of the foot and ankle. The DScPAS-CO resident will become familiar with and be able to differentiate surgical versus non-surgical ankle injuries and use well-established treatment options for non-surgical injuries.

MCO 6148 Knee Ligament and Meniscal Injuries: Epidemiology, Mechanism, Diagnosis and Natural History (1)
This course will give the DScPAS-CO resident knowledge necessary to identify, diagnose and determine the appropriate management course for knee ligamentous and meniscal injuries.

MCO 6150 Diagnosis and Management of Musculoskeletal Infection (1)
This course reviews the microbiology, history, physical exam findings, ancillary studies and management options for common musculoskeletal infections.

MCO 6151 Overview of Arthritis (1)
This course is an overview of arthritis. It touches on the impact of arthritis in our society and reviews some unique considerations in the care of the orthopaedic patient with arthritis.

MCO 6152 Pathophysiology of Bone Tumors (1)
This course is an overview of the pathophysiology of bone tumors. Understanding the pathophysiology of bone tumors will help the DScPAS-CO resident when evaluating a patient with an osseous lesion with regards to the expected natural course and the presenting symptoms.

MCO 6153 Orthopaedic Sports Medicine (1)
This course provides the basic knowledge and skills that the DScPAS-CO resident will require throughout training and in clinic practice regarding orthopaedic sports medicine.

MCO 6154 Spinal Pain (1)
This course covers the role of the spine in pathologic pain processes. Spinal pain is frequently non-specific and provides little insight into its source. The spine may be affected by a myriad of pathological disorders--traumatic, neoplastic, inflammatory, metabolic, or degenerative.

MCO 6201 Biomechanics of Fracture Fixation and Classification of Fractures (2)
This course will provide the DScPAS-CO resident with a basic introduction to the classification of fractures as well as the biomechanics of fractures, the biomechanics of implants used to fix fractures, and problems associated with implants and specific fracture patterns.

MCO 6202 The Multiply Injured Patient with Musculoskeletal Injuries and Anesthetic Care of the Trauma Patien (2)
This course will provide the orthopaedic PA resident familiarity with trauma team organization and responsibilities, ATLS guidelines, anesthetic care, DVT prophylaxis and orthopaedic management of the multiply injured patient.

MCO 6203 Non-Operative Fracture Treatment (2)
This course will provide the DScPAS-CO resident familiarity with the history of the evolution of fracture treatment and the effect of today's treatments on the natural skeletal repair process. The resident will also gain familiarity with identifying fractures of the upper and lower extremities, which are commonly treated non-operatively with and without manipulative reduction.

MCO 6204 Principles of Internal and External Fixation (2)
This course discusses the principles of internal and external fixation. Being familiar with the principles of internal and external fixation is essential for the DScPAS-CO resident while developing a treatment plan, assisting during operative procedures, and providing post-operative care and rehabilitation.

MCO 6205 Musculoskeletal Healing, Vascular Injuries and Compartment Syndromes (2)
This course provides the basic knowledge and skills that the orthopaedic PA resident will require throughout training and in clinic practice regarding bone and soft tissue healing, open fractures, vascular injuries, and compartment syndrome.

MCO 6206 Penetrating Trauma/Bone and Soft Tissue Reconstruction (2)
This course focuses on penetrating trauma caused by ballistic projectiles. Emphasis is on ballistic behavior and the resulting orthopaedic injuries. Initial management principles are explained with differentiation between the management of upper and lower extremity injuries.

MCO 6207 War Wounds, Limb Salvage Traumatic Amputations, and Periprosthetic Fractures (2)
This course covers explosive devices such as mortars, bombs, land mines and improvised explosive devices causing multiple torso, abdominal and extremity trauma. Initial management should focus on saving life and limb but also wound debridement and functional limb salvage for long-term functional and prosthesis use and the classification of common causes of pathologic and periprosthetic fractures.

MCO 6208 Complications of Injury to the Musculoskeletal System (2)
This course will give the OPA resident knowledge about the incidence, pathophysiology, examination, diagnostic testing and imaging, classification, and management of select common complications of traumatic, nontraumatic, and surgical (iatrogenic) injury to the musculoskeletal system.

MCO 6209 Fractures and Dislocations of the Hand and Wrist (2)
This course will provide the DScPAS-CO resident with a base knowledge of fractures and dislocations in the hand and wrist with insight into the complexities involved with even the seemingly insignificant appearing fractures.

MCO 6210 Fractures of the Radial and Ulnar Shafts and Isolated Distal Radius Fractures (2)
This course will provide the orthopaedic PA resident with the information and knowledge needed to diagnose, describe, reduce, and recommend for surgical fixation one of the most common fractures in all age groups.

MCO 6211 Fractures and Dislocations of the Elbow and Distal Humerus (2)
This course provides the basic knowledge and skills that the orthopaedic PA resident will require throughout training and in clinic practice regarding elbow dislocations and fractures about the elbow and distal humerus.

MCO 6212 Subluxations and Dislocations about the Glenohumeral, Acromioclavicular, and Sternoclavicular Joint (2)
This course will give the DScPAS-CO resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of select subluxations and dislocations of the glenohumeral joint and surrounding musculoskeletal tissues of the shoulder girdle.

MCO 6213 Fractures of the Shaft and Proximal Humerus (2)
This course discusses the evaluation and treatment of humeral shaft and proximal humerus fractures. Being familiar with the history, physical exam, radiological findings and treatment of humerus fractures is an essential skill for the orthopaedic PA.

MCO 6214 Fractures of the Clavicle and Scapula (2)
This course covers scapular fractures which can occur after high energy mechanisms, and have a significant (35% to 98%) amount of associated injuries. Fractures of the scapula occur infrequently at 0.4% to 1% of all fractures. Not until recently has it been determined that clavicle fractures are anything but routine and that some problematic types of clavicle fractures and non-unions need more in-depth treatment.

MCO 6215 Fractures of the Pelvic Ring and Acetabulum (2)
This course will provide the DScPAS-CO resident with the basic information necessary to diagnose, describe, reduce, and treat fractures of the pelvis and acetabulum.

MCO 6216 Femoral Head, Neck, and Intertrochanteric Fractures and Hip Dislocations (2)
This course will give the DScPAS-CO resident knowledge of the general anatomy, biomechanical pathology, signs and symptoms, examination, diagnostic imaging, and classification of hip dislocations and fractures of the head, neck and intertrochanteric regions of the femur.

MCO 6217 Subtrochanteric Fractures and Fractures of the Shaft of the Femur (2)
This course will give the DScPAS-CO resident knowledge about the general anatomy, biomechanical pathology, signs and symptoms, examination, diagnostic imaging, and classification of subtrochanteric and femoral shaft fractures.

MCO 6218 Fractures of the Proximal Tibia, Fibula and Patella (2)
This course will give the DScPAS-CO resident knowledge about the general anatomy, biomechanical pathology, signs and symptoms, examination, diagnostic imaging, and classification of select common fractures of the proximal tibia, fibula and the patella.

MCO 6219 Knee Injuries and Fractures of the Tibia and Fibula Shafts (2)
This course will give the OPA resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of select common injuries of the knee as well as examination, diagnostic imaging, and classification of select common fractures of the tibia and fibula.

MCO 6220 Ankle Fractures and Fractures of the Talus (2)
This course will give the OPA resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of common select fractures and dislocations of the ankle and talus.

MCO 6221 Fractures and Dislocations of the Midfoot, Forefoot, and Calcaneous (2)
This course will give the OPA resident knowledge about the general anatomy, biomechanical pathology, examination, diagnostic imaging, and classification of common select fractures and dislocations of the calcaneous, midfoot, and forefoot.

MCO 6301 Foot and Ankle Practical Rotation (3)
This is a one-month clinical and surgical rotation on service with a fellowship-trained foot and ankle surgeon and a team of surgical residents.

MCO 6302 Orthopaedic Spine Rotation (3)
This is a one-month clinical and surgical rotation on service with a fellowship-trained orthopaedic spine surgeon and a team of surgical residents.

MCO 6303 Pediatric Orthopaedic Surgery Rotation (3)
This is a one-month clinical and surgical rotation on service with a fellowship-trained pediatric orthopaedic surgeon and a team of surgical residents.

MCO 6304 Orthopaedic Total Joint Rotation (3)
This is a one-month clinical and surgical rotation on service with a fellowship-trained total joint surgeon and a team of surgical residents.

MCO 6305 Orthopaedic Hand Surgery Rotation (3)
This is a one-month clinical and surgical rotation on service with a fellowship-trained hand surgeon and a team of surgical residents.

MCO 6306 Orthopaedic Tumor Rotation (3)
This is a one-month clinical and surgical rotation on service with a fellowship-trained musculoskeletal oncologist and a team of surgical residents.

MCO 6308 Orthopaedic Emergencies and Inpatient Care (3)
Instructs students on appropriate care for orthopaedic emergencies while on call for the Emergency Department and while doing daily rounds on orthopaedic inpatients. Instruction also covers daily wound care for orthopaedic inpatients as well as preoperative and postoperative management.

MCO 6346 Clinical Research (3)
The MCO 6346 course consists of a didactic phase during the first month of training, dedicated research blocks, and individual research days scheduled throughout the eighteen-month course. The research course is designed to familiarize residents with the research process and, more importantly, to facilitate the development of the skills necessary to critically analyze published scientific articles, including statistical aspects of those articles.

MCO 6350 Introduction to Orthopaedic Clinical Evaluation and Procedures (3)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic patients, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6351 Evidence Based Orthopaedic Care (3)
This course introduces the application of evidence-based medicine to the management of orthopaedic complaints, focusing on assessing current peer-reviewed journal articles for sound research design and valid conclusions so as to apply lessons learned from the literature to individual patients and patient populations.

MCO 6352 Orthopaedic Evaluation and Management of Spine Disorders (3)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic spine complaints, and focusing on spine anatomy, biomechanical pathology, physical examination, diagnostic imaging, and classification of common select fractures of the spine.

MCO 6353 Evaluation and Management of Neurologic Disorders (3)
This course introduces advanced principles of orthopaedic evaluation, diagnosis and treatment necessary for regular clinical application, applying evidence-based medicine to the management of neurologic complaints, and focusing on spine and head anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and classification of common select fractures of the head and spine.

MCO 6354 Evaluation and Management of Pediatric Orthopaedic Disorders (3)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of pediatric orthopaedic complaints, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, congenital disorders, and classification of pediatric fractures.

MCO 6355 Advanced Orthopaedic Clinical Evaluation and Procedures (3)
This course furthers critical principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic patients, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6356 Techniques for Medical Research Presentation (3)
Pre-requisite(s): CITI training only
This course introduces various techniques for medical research presentation. It takes information obtained in developing a high-quality clinical research project, demographic and outcome measure data, and statistical analysis, and generates oral and written products for presentation at local and national venues.

MCO 6401 Orthopaedic Sports Rotation (4)
This is a two-month clinical and surgical rotation on service with an orthopaedic sports medicine surgeon and a team of surgical residents.

MCO 6402 Orthopaedic Trauma Rotation (4)
This is a two-month clinical and surgical rotation on service with a fellowship-trained orthopaedic traumatologist and a team of surgical residents.

MCO 6410 Introduction to Upper Extremity Sports Injury Management (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patient athletes, and focusing on upper extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6411 Introduction to Lower Extremity Sports Injury Management (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patient athletes, and focusing on lower extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6412 Evaluation and Management of Hand and Elbow Disorders (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application; applies evidence-based medicine to the management of orthopaedic upper extremity complaints; and focuses on microsurgery, upper extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and classification of common select fractures and dislocations of the upper extremity.

MCO 6413 Evaluation and Management of Foot and Ankle Disorders (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic complaints, and focusing on lower extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and classification of common select fractures and dislocations of the leg, ankle, and foot.

MCO 6414 Evaluation and Management of Complex Wounds (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patients with complex wounds., and focusing on general anatomy, biochemistry, physical examination, diagnostic imaging, laboratory studies, and medical and surgical management of complex wounds.

MCO 6415 Evaluation of Joint Arthritis and Trauma Managed with Joint Reconstruction (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of orthopaedic complaints, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, classification of periarticular fractures, and arthritis.

MCO 6416 Musculoskeletal Oncology Evaluation and Management (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal neoplasms and infections, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of oncologic lesions and pathologic fractures.

MCO 6417 Introduction to Evaluation and Management of Orthopaedic Trauma (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal trauma, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of orthopaedic trauma.

MCO 6418 Introduction to Evaluation and Management of General Trauma (4)
This course introduces advanced principles of surgical evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of multisystem trauma, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of multisystem trauma.

MCO 6419 Introduction to Critical Care Management (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of intensive care unit patients, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and medical management of critical patients.

MCO 6420 Advanced Sports Injury Management (4)
This course further examines critical principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of patient athletes, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, and rehabilitation methods.

MCO 6421 Advanced evaluation and management of orthopaedic trauma (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal trauma, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of orthopaedic trauma.

MCO 6422 Advanced Critical Care Management (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of intensive care unit patients, and focusing on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and medical management of critical patients.

MCO 6423 Medical Research Design (4)
Pre-requisite(s): CITI training only
This course introduces medical research design, focusing on generating a testable research question, developing a research design that addresses the question, and conducting a literature review that supports the study design.

MCO 6424 Approaches to Medical Data Collection and Analysis (4)
Pre-requisite(s): CITI training only
This course introduces approaches to medical data collection and analysis, focusing on executing a research protocol, collecting outcome measures data, and then participating in the analysis of the data.

MCO 6425 Urgent Orthopaedic Evaluation (4)
This course introduces advanced principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application, applying evidence-based medicine to the management of musculoskeletal trauma, and focusing on extremity anatomy, biomechanical pathology, physical examination, diagnostic imaging, laboratory studies, and radiographic classification of orthopaedic trauma.

MCO 6426 Advanced Joint Reconstruction (4)
Pre-requisite(s): MCO 6417
This course advances principles of orthopaedic evaluation, diagnosis, and treatment necessary for regular clinical application. It applies evidence-based medicine to the management of orthopaedic complaints. The course focuses on general anatomy, biomechanical pathology, physical examination, diagnostic imaging, classification of periarticular fractures, and arthritis.

Comm. Sciences and Disorders (CSD)

CSD 4301 Introduction to Clinical Audiology (3)
Pre-requisite(s): Must have completed and earned a "B" or better in each of the following courses: CSD 1308, 2318, 2351, and 3357
Hearing sciences and approaches for evaluating hearing: anatomy and physiology of the ear, the decibel, ear pathology, pure-tone audiometry, speech audiometry, and acoustic-immittance audiometry.

CSD 4302 Language Disorders in Children (3)
Pre-requisite(s): Must have completed and earned a "B" or better in each of the following courses: CSD 1308, 2318, 2351, and 3357
Basic principles of intervention and assessment for children with language impairments.

CSD 4309 Medical Speech Pathology (3)
Pre-requisite(s): Must have completed and earned a "B" or better in each of the following courses: CSD 1308, 2318, 2351, and 3357
Etiologies, characteristics, diagnosis, and treatment of disorders associated with medical speech pathology.

CSD 4312 Advanced Clinical Audiology (3)
Pre-requisite(s): CSD 4301 and must have completed and earned a "B" or better in CSD 1308, 2318, 2351, and 3357
Routine and advanced audiologic measures, including masking and evoked-potential tests. Practical clinical experiences.

CSD 4352 Diagnostic Methods (3)
Pre-requisite(s): Must have completed and earned a "B" or better in each of the following courses: CSD 1308, 2318, 2351, and 3357 or Graduate Online CSD student
A study of diagnostic methods used in speech and language pathology, including interviewing, taking case histories, testing, and counseling. Evaluation of the standardization, reliability, and validity of existing tests. Practical application is required.

CSD 4358 Speech Science (3)
Pre-requisite(s): Must have completed and earned a 'B' or better in each of the following courses: CSD 1308, 2318, 2351, and 3357 or Graduate Online CSD student
Basic sciences underlying speech and hearing: physics of sound, the decibel, instrumentation, speech production, speech perception, and audition.

CSD 4368 Introduction to Aural Rehabilitation (3)
Pre-requisite(s): CSD 4301 or consent of instructor; and must have completed and earned a "B" or better in each of the following courses: CSD 1308, 2318, 2351, and 3357 or CSD Online student
Methods for rehabilitating persons with hearing impairment: evaluating communicative needs, amplification devices, auditory-visual training, and modes of communication for the deaf and hearing impaired.

CSD 4477 Clinical Methods (4)
Pre-requisite(s): CSD 3308; and must have completed and earned a "B" or better in each of the following courses: CSD 1308, 2318, 2351, and 3357 or Graduate Online CSD student
Methods for treating individuals who have communication disorders. Observation of therapy conducted in the Baylor Speech, Hearing, and Language Clinic is required.

CSD 4V85 Special Problems in Communication Sciences and Disorders (1-6)
Pre-requisite(s): Fifteen semester hours in Communication Sciences and Disorders or Graduate Online CSD student
A conference course providing additional study in communication sciences and disorders. May be repeated once for credit.

CSD 5101 Leveling-Observation (1)
Observation of speech and language therapy, to identify methods for treating individuals who have communication disorders, in preparation for graduate coursework.

CSD 5149 Clinical Practicum in Speech Pathology (1)
Practicum in evaluation and treatment of individuals who have communication disorders.

CSD 5150 Introduction to Clinical Practice (1)
Preparation for clinical experiences in the field that will establish clinical website accounts and review professionalism and clinical writing expectations.

CSD 5151 Clinical Practicum Placement 1 (1)
The first practicum placement in the master's program for the evaluation and treatment of individuals with communication disorders.

CSD 5152 Clinical Practicum Placement 2 (1)
The second practicum to be taken in the master's program for the evaluation and treatment of individuals with communication disorders.

CSD 5153 Clinical Practicum Placement 3 (1)
The third practicum to be taken in the master's program for the evaluation and treatment of individuals with communication disorders.

CSD 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

CSD 5201 Leveling-Clinical Methods (2)
Methods for treating individuals who have communication disorders. Observation of speech and language therapy in preparation for graduate coursework.

CSD 5302 Leveling - Anatomy & Physiology (3)
A study of the anatomy and physiology of speech in preparation for graduate coursework.

CSD 5303 Leveling - Speech Science (3)
Basic sciences underlying speech and hearing: physics of sound, the decibel, instrumentation, speech production, speech perception, and audition in preparation for graduate coursework.

CSD 5304 Advanced Aural Rehabilitation (3)
Pre-requisite(s): CSD 4368
Hearing aids, cochlear implants, vibrotactile devices, and therapy programs for hearing-impaired persons.

CSD 5305 Leveling-Survey of Speech Pathology and Audiology (3)
An introduction to the nature and causes of speech, language, and hearing disorders and speech language pathology as an educational and clinical field in preparation for graduate coursework.

CSD 5306 Leveling-Language Development (3)
Linguistic theory and language development in normal children in preparation for graduate coursework.

CSD 5307 Leveling-Introduction to Phonological Science (3)
Introduction to the phonological rules and processes of American English and an examination of descriptive, physiological, and acoustic phonetics in preparation for graduate coursework.

CSD 5308 Leveling-Structures and Functions in Communication and Swallowing (3)
Anatomy and physiology of the subsystems that underlie speech and swallowing—neural bases, respiration, phonation, resonance, and articulation as well as speech science in preparation for graduate coursework.

CSD 5309 Leveling-Introduction to Clinical Audiology (3)
Hearing sciences and approaches for evaluating hearing: anatomy and physiology of the ear, the decibel, ear pathology, pure-tone audiometry, speech audiometry, and acoustic-immittance audiometry in preparation for graduate coursework.

CSD 5311 Aphasiology (3)
Etiology, symptomatology, and treatment of aphasia and kindred disorders.

CSD 5312 Fluency Disorders (3)
Pre-requisite(s): CSD 4307
Nature, evaluation, treatment, and current research trends in stuttering.

CSD 5313 Augmentative Communication and Severe Populations (3)
Exploration of selection and teaching of augmentative and alternative communication, and a focus on populations with severe language disorders including autism.

CSD 5314 Voice Pathology (3)
Pre-requisite(s): CSD 3308 and 4309
Application of principles of voice science to the treatment of organic and functional voice disorders.

CSD 5316 Motor Speech Disorders (3)
Etiologies, symptoms, classifications, evaluative procedures, and treatments of developmental and adult motor speech disorders.

CSD 5317 Cleft Lip and Palate (3)
Etiologies, classifications, evaluation procedures, and management of communication disorders associated with cleft lip and palate and related orofacial dysmorphologies.

CSD 5318 Methods in Graduate Study in Communication Sciences and Disorders (3)
Methods necessary to evaluate literature, to conduct research, and describe results in communication sciences and disorders.

CSD 5319 EBP Evaluation and Interprofessional Practice in a Diverse Society (3)
This course focuses on orienting students to the principles of evidence-based practice (EBP) and evaluations and directs students in utilizing components of the EBP process in making decisions regarding treatment and evaluation.

CSD 5320 Neurology and Advanced Instrumentation (3)
Study of the neuroanatomy and neurophysiology of the mechanisms associated with speech, language, and swallowing, and the instrumentation and latest technological advances used to study speech, language, and swallowing.

CSD 5324 Adolescent Language and Learning Disabilities (3)
Pre-requisite(s): CSD 2318
A neuropsychological approach to the etiology, classification, diagnosis, and treatments of learning disabled children.

CSD 5325 Speech Sound Disorders (3)
Current research, assessment, and treatment of speech-sound disorders (SSD) including articulation and phonological disorders with functional and organic etiologies.

CSD 5328 Diagnosis and Treatment of Dysphagia (3)
Development of swallowing, etiologies, evaluative procedures, and management of swallowing disorders.

CSD 5330 Cognitive Linguistic Communication Disorders (3)
Neuropathology, symptomology, assessment, and treatment of cognitive linguistic communication disorders associated with right hemisphere damage, traumatic brain injury, and dementia.

CSD 5332 Traumatic Brain Injury Seminar (3)
Familiarizes students with research literature regarding the neuropathology, symptomatology, assessment and treatment of persons having traumatic brain injury.

CSD 5334 Multicultural Issues in Speech-Language Pathology (3)
Relates cultural background to normal development of speech and language. Topics include sound system acquisition, syntax, pragmatics, and professional issues and concerns.

CSD 5337 School-Age Language and Literacy Disorders (3)
Contemporary research on language and reading disorders, evidence-based practice, and language/literacy methods of prevention, assessment, and treatment.

CSD 5338 Instrumentation and Advanced Speech Science (3)
Pre-requisite(s): CSD 4307 or consent of instructor
Principles and techniques of electronics and new technology used in the diagnosis and treatment of pathologies of speech and swallowing, including videostrobolaryngoscopy, digital signal analyses, and flexible fiberoptic endoscopic evaluation of swallowing.

CSD 5341 Birth to Five Language Disorders (3)
This course is an advanced study of language impairments in children from birth to five years of age.

CSD 5351 Speech and Language Neurology (3)
Neuroanatomy and neurophysiology as applied to the evaluation of normal and pathological speech and language behaviors.

CSD 5353 Advanced Medical Speech Pathology (3)
Advanced medical diagnostic procedures and treatment techniques associated with speech pathology patients in an advanced medical setting.

CSD 5354 Mentored Research Experience in Communication Sciences and Disorders (3)
Pre-requisite(s): CSD 5318 and/or consent of instructor
Advanced study and application of research methods in communication sciences and disorders. Supervised by a faculty member in CSD.

CSD 5549 Clinical Internship (5)
Class meetings in conjunction with a supervised, full-time clinical placement at a therapy site commensurate with the student's graduation requirements and clinical hour competency needs.

CSD 5649 Speech Pathology Internship (6)
Supervised off-campus experience in speech pathology. Intern placement will be related to students' specialized area of interest.

CSD 5V07 Seminar in Audiology (1-9)
hrs.

CSD 5V35 Problems in Communication Sciences and Disorders (1-9)
Designed to give students opportunities for additional work in their area of concentration. May be repeated for a maximum of nine semester hours.

CSD 5V39 Advanced Clinical Practicum in Audiology (1-6)
Pre-requisite(s): Nine semester hours in audiology including CSD 4301 and 5304
Supervised practicum in audiology using speech audiometry. Hearing aid selection.

CSD 5V48 Seminar in Speech Pathology (1-9)
Published research, theoretical and clinical, in speech and hearing and allied fields.

CSD 5V99 Thesis (1-6)
Research, data analysis, writing, and/or oral defense of an approved master's thesis. At least three hours of CSD 5V99 are required for thesis.

CSD 6101 Mentored Research in CSD I (1)
Pre-requisite(s): Instructor approval required
Research apprenticeship in area of expertise in CSD. Design, implementation, and dissemination of study outcomes.

CSD 6102 Mentored Research in CSD II (1)
In this course doctoral students work with a research mentor in a collaborative area of research. This course may not be repeated for credit.

CSD 6103 Mentored Teaching in CSD I (1)
In this course doctoral students develop knowledge and skills associated with teaching in higher education. Content includes principles of adult learning, course design, equity and inclusion, teaching philosophy, student engagement, and student assessment.

CSD 6104 Mentored Teaching in CSD II (1)
In this course, doctoral students apply the knowledge and skills associated with teaching in higher education that they developed in Mentored Teaching I. Each student works with a mentor to teach an undergraduate or graduate course. This course cannot be repeated for credit.

CSD 6200 Proseminar in Communication Sciences and Disorders (2)
This course exposes students to current research and topics in the field. The proseminar provides an opportunity for both students and faculty to present reports of research projects that are in the initial stages of formulation, in progress, or completed.

CSD 6205 Professional Writing for Doctoral Students (2)
Development of technical and scientific writing skills. Emphasis on critical review and writing of scientific papers.

CSD 6302 Introduction to Doctoral Studies in CSD (3)
This course includes critical thinking, problem-solving, and synthesis of topics to introduce students to doctoral studies. The history of science in CSD, Ph.D. shortages, IRB, issues in scientific conduct, mentoring models, preparation for study, and servant leadership as well as launching a successful academic career post-graduation are discussed.

CSD 6306 Advanced Neuroscience of Speech, Language, Swallowing, and Hearing (3)
This course is designed to provide a comprehensive introduction to the neuroscience of speech, language, swallowing, and hearing, incorporating current research findings with current perspectives on assessment and treatment of language disorders. It will cover speech, language, swallowing, and hearing mechanisms in the human brain as well as the various types of research methods used in human neuroscience, and their intended uses.

CSD 6308 Doctoral Seminar in Communication Sciences and Disorders (CSD) (3)
Advanced study of special topics associated with speech, language, hearing, and/or swallowing. The course may be taken three times when content differs.

CSD 6314 MATLAB® Programming for Speech, Language, and Hearing Sciences (3)
The course introduces basics of MATLAB® programming and trains students on managing data, plotting data, and graphical user interfaces. The course anticipates and promotes increased reliance on quantification and automation in the field of Speech-Language Pathology and Audiology.

CSD 6316 Single-Subject Design (3)
This course provides a solid foundation in single-subject design (SSD). Specific designs discussed and analyzed include withdrawal, alternating treatments, multiple baseline, and changing criterion designs. By way of contrast, methodologies such as group designs and case studies are also discussed. Students learn to obtain, analyze, interpret, evaluate, and design experimental single-subject studies.

CSD 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

CSD 6V10 Doctoral Independent Study in Advanced Communication Sciences and Disorders (1-3)
Focuses on advanced topics in speech, language, hearing, and/or swallowing. Permission of instructor is required. This course may be repeated when content differs for a maximum of 12 semester hours.

Communication (CSS)

CSS 4301 Organizational Communication (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Communication within the organization and its relationship to organizational structure, roles, leadership, and management orientations.

CSS 4302 Communication Training and Development (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Theory and practice of performing and supervising training activities in an organizational setting. Emphasis on the design, execution, and evaluation of communication training and development programs and strategies.

CSS 4303 Leadership and Communication (3)
Pre-requisite(s): Upper-level standing or consent of instructor
The intersection between leadership and communication, emphasizing the theory, research, and practice of leadership communication.

CSS 4304 Advanced Small Group Theory and Practice (3)
Pre-requisite(s): CSS 1301 or 1302 and CSS 3304; and upper-level standing or consent of instructor
Examines advanced and complex types of small-group interaction, leadership, and collaboration. Taught in London.

CSS 4305 Nonprofit Organizational Communication (3)
Pre-requisite(s): CSS 4301
Survey of communication dynamics and issues in nonprofit organizations. Emphasis on assessing and developing best practices in external and internal communication. Course topics include: stakeholder messaging, interorganizational collaboration, member relationships, and role development.

CSS 4306 Advanced Interviewing (3)
Pre-requisite(s): CSS 3306 or consent of instructor
Application of survey and probing interview techniques with emphasis on career development.

CSS 4310 Politics and Communication (3)
Cross-listed as PSC 4310
See PSC 4310 for course information.

CSS 4311 Conflict and Communication (3)
Pre-requisite(s): Upper-level standing or consent of instructor
The role of communication in managing conflict in interpersonal, group, organization, and community contexts.

CSS 4312 Systemic Inquiry (3)
Pre-requisite(s): Upper-level standing
Examines advanced and complex types of communication contexts involving relational and group facilitation strategies, systemic interviewing practices, and the development of a basic understanding of systemic inquiry as a communication management strategy. Taught in London.

CSS 4313 Communication and the Family (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Survey of communication issues related to theory and research regarding relationships within the modern family system.

CSS 4314 Communication Assessment in Organizational Settings (3)
Pre-requisite(s): CSS 4301 or consent of instructor
Design and implement a communication assessment of for-profit or non-profit organizations.

CSS 4315 Health Communication (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Health communication theory and practice, including patient-provider communication, healthcare organizational communication, and health information technology.

CSS 4316 Advanced Interpersonal Communication (3)
Pre-requisite(s): CSS 3311 and upper level standing or consent of instructor
Advanced survey of theory and research regarding communication and personal relationships.

CSS 4317 Narrating Health Across Culture (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Examines pervasive health narratives, including best practices for the communication surrounding illness both from those living with the illness and those in support roles.

CSS 4318 Communication and New Technology (3)
Pre-requisite(s): Upper-level standing or consent of instructor
The ways in which communication is facilitated by new technologies with an emphasis on various theories related to computer-mediated communication and new communication technology.

CSS 4319 Cultural Approaches to Health Communication (3)
Pre-requisite(s): Upper level standing or consent of instructor
Examination of the influence of culture on communicative aspects of individuals' health.

CSS 4336 Seminar in Contemporary Communication Issues (3)
Pre-requisite(s): Consent of instructor
Seminar topics vary each semester. May be repeated once with change in topic.

CSS 4350 Rhetoric of Women and Gender (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Analyzes the historical fight for women's rights and contemporary arguments about gender-based rights through the tools of rhetorical criticism.

CSS 4351 Criticism of Contemporary Public Address (3)
Cross-listed as PSC 4351
Pre-requisite(s): Upper-level standing or consent of instructor
Significant public speeches in contemporary society, with emphasis on applying principles and methods of rhetorical criticism.

CSS 4352 Corporate Advocacy and Public Policy (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Influence of contemporary organizations on public attitudes and public policy through analysis of communication campaigns during both favorable and unfavorable conditions.

CSS 4353 Public Discourse and Foreign Policy (3)
Cross-listed as PSC 4335
Pre-requisite(s): Upper-level standing
An analytical approach to the discourse generated by United States foreign policy in the post-World War II era. Topics covered include the nature of public opinion and foreign policy, rhetorical and political constraints on foreign policy discourse, and in-depth analysis of the arguments for and against the conflict in Vietnam.

CSS 4354 African American Communication (3)
Cross-listed as PSC 4340
Pre-requisite(s): Upper-level standing
Rhetorical strategies of African Americans, focusing on the historically important documents of oratory, argumentation, homiletic, and narrative.

CSS 4392 Rhetorics of Race (3)
Exploration of ideas about communication, rhetoric, and race. Emphasis on rhetorical criticism as a methodological approach to public discourse and analysis of race as understood in contemporary American culture.

CSS 4394 Rhetorical Theory (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Selected theories of persuasion in Western culture from the Greco-Roman period to the present. Topics covered include the relationship of rhetoric and poetic, arguments for a behavioristic approach to rhetoric, and contemporary claims concerning rhetoric as a way of knowing.

CSS 4395 Visual Rhetoric (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Theories and methodologies pertaining to visual rhetoric.

CSS 4396 American Rhetoric (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Origin and development of rhetoric in American social movements, with emphasis on the characteristics of various types of communication situations and the discovery, analysis, and evaluation of common persuasive strategies.

CSS 4397 Public Discourse and the Classic Liberal Tradition (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Analysis of major speeches, pamphlets, and essays in England and America on politics and political change from the early seventeenth century through the American Revolution. Topics addressed include the birth of the public sphere, church and state relations, and natural rights.

CSS 4399 Workshop in Directing the Speech Program (3)
Pre-requisite(s): Consent of instructor
Intended primarily for directors of speech activities in high schools and colleges. May be repeated once for credit.

CSS 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

CSS 5310 Modern Communication Theory (3)
An overview of criticism regarding continuing developments in communication theory.

CSS 5311 Seminar in Interpersonal Communication (3)
An in-depth analysis of interpersonal theory and research.

CSS 5312 Seminar in Argumentation (3)
Pre-requisite(s): CSS 4352; or consent of instructor
Advanced theoretical work on the form and function of argumentation. This course explores field theory, examines the utility of argument diagram, and considers approaches to ordinary language argument.

CSS 5313 Seminar in Rhetoric and Society (3)
An analysis of the function of rhetorical discourse in contemporary society.

CSS 5314 Seminar in Small-Group Communication (3)
An analysis of small-group communication theory and research with a focus on topics such as decision making, leadership, social influence, and interaction analysis.

CSS 5316 Seminar in Organizational Communication (3)
An analysis of organizational communication theory and research.

CSS 5317 Seminar in Organizational Change and Communication (3)
Organizational change is viewed from a communication perspective with special attention placed on the conversational architectures that create sensible and coherent change.

CSS 5318 Seminar in Rhetoric and the Public Sphere (3)
Pre-requisite(s): Graduate standing or consent of instructor
Analysis of major theoretical statements on the changing nature of the public sphere in western democracies and the related implications for the role of argumentation and rhetorical discourse in the formation of public policy.

CSS 5319 Seminar in Family Communication (3)
An advanced examination of scholarly theory, research, and quantitative/qualitative research methods used for academic investigation of topics and issues related to communication within the family.

CSS 5320 Leadership and Persuasion (3)
Explores the interwoven relationship between educational leadership and persuasive communication. By the end of the class students should be able to fashion compelling persuasive messages as well as interpret the attempts at persuasion by others.

CSS 5321 Organizational Membership and Identification (3)
Explores the relationship between communication and one's self-concept as it is defined and shaped by membership in workplaces, civic organizations, churches, clubs, and other social groupings. Discussion and analysis of the processes and practical consequences of organizational identification.

CSS 5322 Communication and Organizing in Disruptions (3)
Examines the theory, research, and communicative processes related to disruptive events in organizations.

CSS 5323 Seminar in Organizational Rhetoric and Discourse (3)
This seminar focuses on how rhetoric and discourse shape organizational life in terms of power, culture, change, identity, and crisis.

CSS 5341 Rhetoric and Cultural Studies (3)
Methods of rhetorical criticism influenced and intersected by cultural studies, beginning with early twentieth century and continuing into present day.

CSS 5350 Seminar in Presidential Rhetoric (3)
Cross-listed as PSC 5350
See PSC 5350 for course information.

CSS 5351 Methods of Graduate Study (3)
Methods of quantitative inquiry in the study of communication theories. Emphasis on application theory and methods in a variety of communication research contexts, e.g., organizational communication, mass communication.

CSS 5352 Seminar in Methods of Rhetorical Criticism (3)
Quantitative/critical methodology utilized in the analysis of public discourse.

CSS 5353 Rhetorical Theory (3)
Examines the lines of inquiry that guide rhetorical theorizing and lenses that inform the practice of rhetorical criticism from ancient to contemporary usages.

CSS 5354 Quantitative Research Methods in Communication (3)
Introduction to the approaches and procedures used in designing and analyzing communication research studies.

CSS 5380 Internship in Communication (3)
Pre-requisite(s): Consent of graduate program director
Provides graduate students opportunity for application of communication-related skills and knowledge under the supervision of a professional employer in a corporate organization.

CSS 5V35 Problems in Communication (1-6)
Designed to give individual students opportunities for additional work in their area of concentration. May be repeated in a different semester for a maximum of six semester hours.

CSS 5V36 Seminar in Communication (1-3)
Seminar topics vary each semester. One to three semester hours may be earned in a semester. May be repeated once with change in topic for a maximum of six semester hours.

CSS 5V90 Professional Paper in Communication (1-3)
Satisfies the non-thesis option for the master of communication. Under the direction of a supervising professor, a student will select a problem or topic in communication and will write a substantial paper or produce a substantial project for submission to the faculty. Maximum three hours.

CSS 5V98 Praxis Practicum (1-6)
Pre-requisite(s): CSS 5V35 and 5351
At least 150 hours of applied learning in a communication-centered role/field. Final project that includes a written and verbal report and draws from scholarly literature, original research, and field experiences.

CSS 5V99 Thesis (1-6)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of CSS 5V99 are required.

Computer Science (CSI)

CSI 4321 Data Communications (3)
Pre-requisite(s): Minimum grade of C in CSI 3336
Fundamentals of computer networking including data transmission, communication software, protocols, simple networks and internetworking.

CSI 4322 Numerical Analysis (3)
Cross-listed as MTH 4322
See MTH 4322 for course information.

CSI 4328 Numerical Linear Algebra (3)
Cross-listed as MTH 4328
See MTH 4328 for course information.

CSI 4335 Database Design I (3)
Pre-requisite(s): CSI 3342
Concepts for current relational database design and implementation, including SQL, ER diagrams, normalization, JDBC, XML and DBMS components. Semester project designing a relational database.

CSI 4337 Introduction to Operating Systems (3)
Pre-requisite(s): C or better in CSI 3336
Operating system design and implementation. Topics include process control and synchronization, memory management, processor scheduling, file systems, and security. Course projects implement parts of an operating system.

CSI 4341 Computer Graphics (3)
Pre-requisite(s): C or better in CSI 3334 and MTH 2311 or 2321
Introduction to graphic representation and display of information and objects by computer. Topics include hardware display technology and algorithms for two-dimensional and three-dimensional graphics. A current graphic system model will be used for programming assignments.

CSI 4344 Object-Oriented Development (3)
Pre-requisite(s): CSI 3342
Object-oriented analysis and design methods. Group software projects.

CSI 4352 Introduction to Data Mining (3)
Pre-requisite(s): Minimum grade of C in CSI 3335, Minimum grade of C in CSI 3344
Introduction to the concepts, techniques, and applications of data warehousing and data mining. Topics include design and implementation of data warehouse and OLAP operations; data mining concepts and methods such as association rule mining, pattern mining, classification, and clustering; applications of data mining techniques to complex types of data in various fields.

CSI 5010 Graduate Seminar (0)
Pre-requisite(s): Graduate standing in computer science
Research presentations by the graduate faculty, outside speakers, and select advanced graduate students. Attendance at various functions is also required.

CSI 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

CSI 5301 Foundations of Algorithms (3)
This course provides a comprehensive introduction to computer algorithms taken from diverse areas of application. The course concentrates on algorithms of fundamental importance and on analyzing the efficiency of these algorithms.

CSI 5302 Foundations of Database (3)
The course covers current relational database design concepts including ER diagrams, database access techniques such as SQL, database issues including performance and security, and web-database applications.

CSI 5303 Foundations of Software Engineering (3)
Pre-requisite(s): Consent of instructor
Fundamentals of software engineering; software development processes, requirements analysis, modular design, design patterns, software testing and evolution, configuration management, and implementation of software systems. A small project to illustrate and extend concepts from lectures.

CSI 5304 Foundations of Data Communications (3)
Introduction to the the fundamentals of computer networking, including communication issues/solutions at various layers, socket programming, and internet protocols.

CSI 5305 Foundations of Operating Systems (3)
Online only. Operating system design and implementation. Topics include process control and synchronization, memory management, processor scheduling, file systems, and security. Course projects implement parts of an operating system.

CSI 5306 Foundations of Mathematics for Computer Science (3)
A survey of mathematical topics for computer scientists. An introduction to differential and integral calculus, matrices, proof techniques, and statistics.

CSI 5310 Introduction to Computation Theory (3)
Several models of computation (including finite automata, pushdown automata, and Turing machines) and their related languages. Topics include closure properties, regular languages, context-free languages, decidability and recognizability, and time and space complexity (including NP-completeness and randomized complexity).

CSI 5321 Advanced Data Communications (3)
Pre-requisite(s): CSI 4321 or equivalent
Survey of current and seminal research in networking.

CSI 5324 Software Engineering (3)
Pre-requisite(s): Consent of instructor
Methods for developing and maintaining software systems; system software life cycle, requirements elicitation, specification and design methods, planning, maintenance, configuration management, documentation and coding standards, cost estimation, metrics and quality attributes; class project.

CSI 5325 Introduction to Machine Learning (3)
Pre-requisite(s): CSI 4336 or consent of instructor
An introduction to topics in machine learning, including supervised and unsupervised learning, modeling for regression and classification, naive Bayes methods, kernel-based learning, support vector machines, statistical and mathematical models for learning, and model assessment and prediction.

CSI 5328 Applied Artificial Intelligence (3)
Traditional machine learning algorithms, neural networks, etc., are pieces of a greater puzzle required for machines to qualitatively learn, rather than just statistically remember. Therefore, students learn new AI approaches and AI architectures: autonomy, deep sensing, measuring trust, complexity analysis, security, ethics, multi-state, and quantum for producing systems for challenging human settings like deep-sea, space, and disaster recovery.

CSI 5330 Advanced Computational Biology (3)
Cross-listed as BINF 5330
Advanced course of computational methods for understanding biological systems. Topics include string matching, suffix tree analysis, sequence alignment, and other graph theoretic algorithms for gene mapping and sequencing, phylogenetic inference, and biological network analysis.

CSI 5335 Advanced Database (3)
Pre-requisite(s): CSI 3334 and 3335
A continuation of database system implementations to include object-oriented and knowledge-based systems. Additional topics covered are physical-data organization, database integrity, security, transaction management, and distributed database management.

CSI 5336 Data Models (3)
Pre-requisite(s): CSI 4334 and 4335
Conceptual and abstract parts of databases. Topics include commonly used data models (hierarchical, network, relational, semantic network and infological) and the use of data models for database design and operation.

CSI 5337 Advanced Operating Systems (3)
Pre-requisite(s): CSI 4337 and STA 4385; or PSY 4300
Advanced topics in operating systems including queuing models, performance measurement and evaluation, security and protection, and design issues involved in operating system design.

CSI 5338 Advanced Computer Organization (3)
Pre-requisite(s): CSI 3338 or consent of instructor
Advanced topics in computer systems organization, including techniques used in large-scale computer systems, parallel and pipeline architectures, stack machines, and other non-von Neumann architectures.

CSI 5342 Software Verification and Validation (3)
Pre-requisite(s): Consent of instructor
Advanced topics in software engineering research, including techniques used in software verification and validation with a particular focus on software specification and testing.

CSI 5343 Introduction to Human Computer Interaction (3)
Introduction to Human Computer Interaction is a research seminar designed to explore the issues of design, organization, implementation, communication, training, and management which confront humans as users of computer environments.

CSI 5344 Analytic Models (3)
Pre-requisite(s): STA 3381
Computer modeling of a variety of systems. Topics include selections from: linear programming, network analysis, queuing theory, game theory, and statistical methods and models.

CSI 5345 Parallel Systems (3)
Description and evaluation of parallel hardware and software. Distributed-memory versus shared-memory. Design and implementation of parallel programs using parallel hardware and software.

CSI 5346 Design Automation (3)
This course is about automating the design of Very Large Scale Integrated circuits. The curriculum covers compiled and event driven simulation algorithms, differential simulation techniques, current literature in electronic simulation, channel routing algorithms, Lee routers, partitioning, current literature in placement and routing, synthesis algorithms, and current literature in logic and circuit synthesis.

CSI 5347 Distributed Systems (3)
Pre-requisite(s): Consent of the instructor
Design and implementation of distributed systems with up-to-date software architecture and relevant development frameworks. Topics include inter-module communication, asynchronous processing, security, concurrency, parallelism, and an overview of contemporary enterprise technology and challenges.

CSI 5350 Advanced Algorithms (3)
Pre-requisite(s): CSI 3344 or graduate standing
Advanced data structures, algorithm design, and analysis. Topics include common data structures, algorithms, implementation, classes of algorithms, algorithm analysis, computational tradeoffs, and adaptation of familiar algorithms to new problems.

CSI 5351 Data Visualization (3)
An in-depth exploration of the techniques and algorithms for creating effective visualizations based on principles from graphic design, visual art, psychology, and cognitive sciences. Explores how to better understand data, present clear findings, and tell engaging data stories.

CSI 5352 Advanced Object-Oriented Development (3)
Pre-requisite(s): Consent of the instructor
Object-oriented design and development with best practices in solving recurring engineering problems. Topics include core object-oriented concepts, such as composition, inheritance, polymorphism, and templates; an overview of design pattern-based problem solving and design practices; and advanced design patterns applicable for enterprise solution development.

CSI 5353 Multimedia Systems (3)
Overview of systems requirements to handle multimedia information. Topics include synchronization, content-based information retrieval, protocols, and media type definitions. Theory and applications are covered.

CSI 5354 Advanced Software Engineering (3)
Pre-requisite(s): CSI 5324 or consent of instructor
Advanced topics in software engineering research, including techniques used in the modeling and analysis of complex systems.

CSI 5355 Data Mining and Analysis (3)
Pre-requisite(s): Graduate standing
Advanced topics in Data Mining are presented. These include the pattern analysis of numerical, categorical, time, and textual data. The course focuses on algorithms for clustering and predictive modeling with special attention to extracting useful information from raw data, and methods for data validation.

CSI 5357 Cloud Computing (3)
Programming and data storage with cloud architectures. Topics include the Apache Hadoop Ecosystem and related programming frameworks.

CSI 5358 Applied Data Science (3)
This course surveys practical areas of data science using an applicationbased approach. Additionally, students are introduced to new content and coding paradigms for developing more intelligent data processing environments. Students participate in guided projects intended to replicate the integration of scalable computing, integration of very large passive and active high-speed data sets, and new analytic approaches.

CSI 5360 Information Retrieval & Natural Language Processing (3)
Pre-requisite(s): CSI 3344, MTH 2311 or equivalent
Introduce fundamental and advanced algorithms in Information Retrieval and Natural Language Algorithms. Topics include Language Modelling, Retrieval Algorithms and Evaluation, and Language Processing techniques such as tagging, parsing, and lexical semantics. Applications and research topics are also covered.

CSI 5361 Cybersecurity Concepts (3)
Introduction to concepts in cybersecurity, including cryptography; instruction detection/prevention; attacking/defending; cybersecurity tools; malware and reverse engineering; and defensive programming.

CSI 5362 Advanced Cybersecurity Concepts (3)
Pre-requisite(s): CSI 5361
Advanced topics in cybersecurity, including threat modeling, policy, hardware systems, network/wireless/protocol security, cloud security, risk analysis/management/mitigation, and compliance.

CSI 5365 Secure Systems, Software Architecture, Development, and Operations (3)
Pre-requisite(s): CSI 5361 Development and analysis of secure system lifecycles, software and hardware flaws and detection, secure repository/deployment, secure supply chain, and compromise mitigation architectures

CSI 5367 Cybersecurity Analytics (3)
Pre-requisite(s): CSI 5362
Fundamentals of data analytics approaches and applications for cybersecurity; algorithms for analysis of structured and unstructured data; applications of machine learning to anomaly detection in software and system; exploration of automated detection techniques, various attacks, and post-compromise activities.

CSI 5388 Advanced Topics in Human-Computer Interaction (3)
This class investigates the "emerging" next generation of user interaction with a focus on the design and evolution of interaction techniques. Variety of user interaction styles may include gesture, virtual reality, augmented reality, ubiquitous, tangible, lightweight, tacit, passive, affective, perceptual, context-aware, and multi-modal interfaces.

CSI 5V90 Special Problems (1-9)
Pre-requisite(s): Consent of instructor

CSI 5V92 Master's Research (1-3)
Pre-requisite(s): Consent of instructor
Concentrated research for the purpose of determining whether the thesis or project option is most appropriate, and for the initial selection of a topic area.

CSI 5V93 Special Topics in Computer Science (1-4)
May be repeated for credit, provided topic is not duplicated, for a maximum of eighteen semester hours total.

CSI 5V95 Internship Experience (1-3)
Pre-requisite(s): Graduate program director approval required
Provides graduate students opportunity for internship work experience in computer science-related positions with consent of major advisor.

CSI 5V96 Master's Project (1-3)
Pre-requisite(s): Consent of instructor

CSI 5V99 Thesis (1-9)
Pre-requisite(s): Consent of instructor
Research, data analysis, writing, and oral defense of an approved master's thesis. At least three hours of CSI 5V99 are required.

CSI 6V10 Doctoral Prospectus Research (1-6)
Pre-requisite(s): Instructor approval
Supervised research for developing a dissertation prospectus. Prepares students for the preliminary exam required for students to advance to candidacy. A student may repeat this course for credit with a maximum of ten total hours. Registration for this course is sufficient for achieving full-time status.

CSI 6V90 Special Topics in Computer Science (1-3)
Special topics in Computer Science. This course may be taken up to 6 times, on a different topic each time, for up to 18 hours of credit.

CSI 6V99 Dissertation (1-12)
Research, data analysis, writing, and oral defense of an approved doctoral dissertation topic.

Curriculum & Instruction (EDC)

EDC 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

EDC 5300 Advanced Elementary Social Studies Methods (3)
Preparation to become effective social studies educators capable of teaching elementary students the content knowledge, the intellectual skills, and the civic values necessary for fulfilling the responsibilities of citizenship in a participatory democracy.

EDC 5302 Linguistics: Implications for Improving Reading Instruction (3)
Several linguistic fundamentals of the American English language and the manner in which these fundamentals may affect children's reading development. The linguistic fundamentals investigated are origin of the language, language development, phonology, morphology, and syntax. Special emphasis is placed on the function dialects have in children's reading development. An integral strand of the course is instruction strategies for implementing the linguistic fundamentals in classroom reading instruction.

EDC 5303 Models of Teaching and Learning (3)
Teaching-learning situations. Emphasis on learning techniques, methods, and materials of instruction, functions of the different subject matter areas. Special projects assigned to each student.

EDC 5304 Reading Intervention for Students (3)
This course focuses on research-based reading interventions that support K-8 children.

EDC 5310 Principles and Strategies for Effective Discipline and Classroom Management (3)
A study of the principles of classroom discipline and management, including analysis of the dynamics of the classroom, application and evaluation of interactive models of classroom management, and legal issues of student discipline.

EDC 5311 Introduction to Qualitative and Quantitative Research (3)
An introduction to the research process applied to Curriculum and Instruction topics, including design of the study, data collection, and analysis using qualitative and quantitative methods. Includes a discussion of variables, sampling, reliability, validity, and ethics of research. Students will read and interpret published research and develop a research proposal.

EDC 5312 Literacy, Equity, and Children's Lives (3)
Adapting materials and methods of reading instruction to aid teachers meet the identified needs of learners.

EDC 5313 Media Literacy Across the Curriculum (3)
An examination of media literacy and its place in the curriculum. Students will examine major themes and issues in media literacy education; acquire skills in deconstructing, using, and creating various media; and develop curriculum involving media literacy including appropriate methods of assessment.

EDC 5314 Clinical Experiences in Teaching Reading (3)
Pre-requisite(s): EDC 5304 or 5312; or consent of instructor
Remedial and clinical methodologies and techniques utilized with pupils referred because of reading disabilities.

EDC 5315 Foundations of the American Economy (3)
Cross-listed as AMS 5315
Behavior of households and business firms in determining the allocation of scarce resources among competing needs in a free market economy for those with no or little previous training in economics. Basic economic analysis is introduced as an aid in understanding the problems of energy, consumerism, unemployment, inflation, and pollution, among others. The course is designed to meet the requirements of Texas state law mandating instruction in free enterprise and economics education.

EDC 5316 Basic American Documents (3)
Cross-listed as AMS 5316
The development of the American political, economic, and social system by reference to the basic documents which undergird that structure. Emphasis is placed on understanding how the system developed and how that development reflected the thoughts of the American public as reflected in those documents. Particular emphasis is placed on the Constitution, court interpretation, and landmark Federal legislation.

EDC 5317 Special Techniques in Secondary Schools (3)
Special techniques and methodology that the modern teacher must now master. Emphasis is given to diagnosing learning difficulties, specified techniques in directing learning activities, and ways of meeting the individual differences found among high school pupils.

EDC 5318 Elementary Language Arts (3)
Development of strategies for facilitating communication skills in the elementary grades and integration of language arts across the curriculum.

EDC 5319 Reading in the Secondary School (3)
The application of developmental reading precepts to the reading requirements of the secondary content subjects. Peer teaching emphasizes techniques and materials for individualized reading assignments.

EDC 5320 Elementary Science and Social Studies (3)
A study of the national standards and Texas requirements for science and social studies content in the elementary classroom with an emphasis on teaching strategies to promote active learning.

EDC 5321 Contemporary Curriculum-Designing and Implementing (3)
Contemporary philosophies and practice for designing and implementing the school's instructional program for administrators, supervisors, and teachers. In addition to placing an emphasis on the changing philosophies and patterns for implementing the curriculum, stress will also be given to current innovations and experimentation in curriculum.

EDC 5322 Learning and the Young Child (3)
Relation of theories of learning and concept development to the young child.

EDC 5323 Contemporary Curricula for the Young Child (3)
Application of learning and developmental theories to the design and evaluation of curricula for the young child.

EDC 5324 Alternative Models of Instruction for the Young Child (3)
Use of research literature to examine, understand, and evaluate various models of instruction for the young child.

EDC 5325 Current Issues and Concerns in Educating the Young Child (3)
Legal, social, and economic issues that affect educational processes for the young child.

EDC 5326 A Process Approach to Teaching Writing (3)
A process approach to teaching writing K-12 explored in a workshop environment.

EDC 5327 Research and Advanced Methods of Teaching Writing (3)
Recent practices and research in teaching writing K-12. Students will engage in some aspect of classroom research in writing.

EDC 5328 Language and Learning across the Curriculum (3)
Emphasis on teaching writing across the curriculum.

EDC 5329 Secondary English Curriculum (3)
Content of secondary English, instructional methods, and teaching materials for grades 7-12. Contemporary concerns relevant to the curriculum development of the English language arts in the components of language, composition and literature. Includes a review of recent research in the teaching of English.

EDC 5330 Contemporary Models of Character Education (3)
Current practices in character education (K-12) with an emphasis on schoolwide models and the materials and resources available to support character education initiatives. The arguments of both advocates and critics of character education will be considered.

EDC 5331 Assessment Issues in Mathematics Education (3)
Students will explore current issues related to assessment, multiple dimensions of assessment, and the process of assessment for mathematics education.

EDC 5332 Mathematics in the Elementary Grades (3)
Introduction to a constructivist approach for teaching mathematics in grades K-5, emphasizing NCTM Principles and Standards. Includes a field-experience working with elementary and/or middle school students.

EDC 5333 Mathematical Immersion to Advance Understanding (3)
This course is designed to engage students in mathematical problem solving and problem posing and examining related research while immersing them in mathematics. The emergence of advanced mathematical understandings will aid students in the development of strategies that promote mathematical learning, particularly related to their professional educational work.

EDC 5334 Numerical Understanding: Rational Numbers (3)
Designed to allow graduate students to explore and analyze research, experiences, case studies, and theory related to the teaching and learning of numerical thinking across grade levels. In particular, students will focus on rational numbers. Students will be able to investigate curriculum standards for K-12, instructional strategies in teaching rational numbers, and recent research on conceptual approaches.

EDC 5335 Research in Algebraic Thinking (3)
Research in Algebraic Thinking is designed to allow graduate students to explore and analyze research, experiences, case studies, and theory related to the teaching and learning of algebraic thinking across grade levels. Students will investigate algebraic curriculum standards for K-12, instructional strategies in teaching algebra, and recent research on conceptual approaches.

EDC 5340 Advanced Elementary Curriculum Development (3)
Analysis of the unique needs of the elementary aged child with special emphasis on EC-6 content standards, lesson and unit planning in the elementary classroom, and elementary curriculum programs.

EDC 5341 Curriculum Theory and Practice (3)
Students read and discuss the most influential works in the history of curriculum development and deliberation from the past 100 years. Students also are introduced to the main philosophical traditions within curriculum theory and practice.

EDC 5342 Data and Instructional Design (3)
An in-depth analysis of standardized assessments given at national, state, district, campus, and individual student levels. Participants make extensive use of technological tools to analyze instructional data sets. Data will be related to curricular analysis and instructional design at appropriate levels.

EDC 5347 Philosophy of Education (3)
An in-depth analysis of curriculum philosophies, including perennialism, idealism, realism, experimentalism, and existentialism. Emphasis on curriculum planning using the philosophies and learning theory to meet needs of contemporary students.

EDC 5348 Issues in Curriculum Development (3)
Designed essentially for administrators, supervisors, and curriculum coordinators, this course investigates and analyzes current issues in curriculum theory and development with particular attention to curriculum revision and reform.

EDC 5349 Comparative Education (3)
Comparative study of social, political, cultural and factors which influence international education. Emphasis on reform movements, curriculum and pedagogical characteristics of schools throughout the world.

EDC 5350 Teaching for Understanding (3)
Exploration and analysis of research, experiences, technology, and theory related to the teaching and learning of major concepts across grade levels. Students will investigate curriculum standards for K-12, National and International test results and implications, and recent research on conceptual approaches. Opportunities for exploring grade-level and content interests will be provided.

EDC 5358 Seminar: Organizing and Administering School Reading Programs and Reading Clinics (3)
Cross-listed as EDL 5358
See EDL 5358 for course information.

EDC 5360 Advanced Elementary Science Curriculum (3)
An in-depth analysis of the fundamental issues related to science curricula, primarily at the K-6 levels, including the role of curricula in historical and current reform efforts in science education.

EDC 5361 Curriculum and Teaching in Informal Education Environments (3)
Cross-listed as TED 4361
See TED 4361 for course information.

EDC 5363 Observation and Participation in Middle and Secondary Schools (3)
Provides the teacher candidate with foundational knowledge in inquiry-based, project-based, and problem-based learning, as well as providing opportunities to interact with middle and high school students during informal education experiences. The experiences will provide the teacher candidate with opportunities both to observe students and to participate as counselors/instructors.

EDC 5370 Applications of Technology to Teaching and Learning (3)
The course explores multiple frameworks for integrating technology into the teaching and learning process. Current research on the positive and negative impacts of technology is examined. Personalized learning experiences are based on the individual student's assessment of her or his technological expertise and professional trajectory.

EDC 5372 The Instructor and Technology (3)
Pre-requisite(s): EDC 5370 or consent of instructor
Focuses on the participant's future role as an instructor and the participant's personal and professional use of various technologies (data/computer, communication, and video) to gather information, to conduct research, to communicate with learners and colleagues, and to prepare material for publication and/or presentation.

EDC 5374 Curriculum and Technology (3)
Pre-requisite(s): EDC 5370 or consent of instructor
Prepares future instructional personnel to integrate technology (data/computer, communication, and video) into curricular applications. Emphasizes the application of technology in student learning activities.

EDC 5375 Courseware Development (3)
Pre-requisite(s): EDC 5370 and 5374; or approval of instructor
Examines technology-driven instructional systems. After reviewing existing systems, participants will design and develop technology-based course materials. An emphasis will be placed on the use of authoring languages and/or applications to present course material and to track student interaction.

EDC 5376 Multimedia Development (3)
Pre-requisite(s): EDC 5370 and EDC 5374; or approval of instructor
Examines the instructional design and production of multimedia curricular materials. Principles of human and machine interaction, hardware and software configurations, and production practices will be studied as participants create multimedia curriculum in a designated subject area.

EDC 5377 Practicum in Technology (3)
Pre-requisite(s): EDC 5370 and 5372; or consent of instructor
Placement in a "technology-rich" environment will expose the participant to addressing the technology needs of end users.

EDC 5385 Religion and Education in America: Exploring the Tensions and Possibilities (3)
A critical examination of the historical and contemporary relationship between religion and public education. Particular attention will be paid to the history of religion and education, contemporary church-state law and education, and how religion can and should be addressed in the curricula in constitutionally appropriate ways.

EDC 5390 Seminar: Education (3)
Designed to meet the individual needs of graduate students. May be repeated.

EDC 5391 Social Foundations of Education (3)
This course will provide students the opportunity to encounter several highly influential books, ideas, and individuals from the fields of Social Foundations of Education and Curriculum. As an interdisciplinary, Foundations course, the instructor will assist students as they consider the field of education from a broad liberal arts perspective.

EDC 5392 Issues in Diversity (3)
An analysis of issues related to diversity in learning settings and the exploration of culture in educational contexts.

EDC 5663 Montessori Preprimary and Elementary Curriculum Design and Teaching Strategy (6)
Pre-requisite(s): EDC 5660
Introduction to the Montessori preprimary and elementary method of education, emphasizing the continuum of development in the young child (birth to age 9). Curriculum areas and classroom management skills as well as philosophical principles. Preparation for assisting in Montessori preprimary classrooms.

EDC 5690 Teaching Associate EC-6 (6)
Pre-requisite(s): EDC 5304
Practicum in a local elementary school where teacher candidates teach small groups of students within a variety of disciplinary areas as associated with the elementary teaching certificate.

EDC 5691 Teaching Associate Middle Grades (6)
Practicum in a local middle school where teacher candidates teach small groups and large groups of general education students within their content area as associated with the middle level teaching certificate.

EDC 5692 Teaching Associate Secondary (6)
Practicum in a local school (grades 7-12) where teacher candidates teach small groups and large groups of students within their content areas of mathematics, science, social studies, or ELAR as associated with specific secondary level teaching certificates.

EDC 5699 Graduate Teaching Internship (6)
Pre-requisite(s): Acceptance into the Master's with initial certification program
Designed for student participating in the Master's degree with initial teaching certification. A supervised teaching experience in an area public school.

EDC 5V95 Special Problems in Education (1-4)
Designed to meet the individual needs of graduate students. May be repeated.

EDC 5V99 Thesis (1-6)
Credit received when the thesis is finally approved.

EDC 6101 Professional Seminar (1)
Introduction to responsibilities of university faculty, including applying for university tenure-track positions, preparing presentation proposals, writing for publication, and teaching university students, as well as discussion of resources to support research and writing.

EDC 6199 Problem of Practice Dissertation (1)
Research, data analysis, writing, and of an approved problem of practice dissertation.

EDC 6310 Seminar in Curriculum and Instruction (3)
Data collection/analysis, writing, and defense of an approved doctoral dissertation. At least nine hours of EDC 6V99 are required for the PhD degree in curriculum and teaching. EdD students take required Problem of Practice hours in the form of EDC 6391, 6392, 6333, and 6393. EdD students requiring more hours to complete and defend their Problem of Practice as well as satisfy graduation requirements may enroll.

EDC 6311 Fundamentals of Curriculum (3)
Exploration, analysis, and evaluation of various trends in curriculum and their impact on classrooms, as well as their causes and contexts and major scholars who advocate these ideas.

EDC 6312 Curriculum Inquiry and Analysis (3)
Pre-requisite(s): EDC 6311
Examination of the varied lenses for understanding curriculum.

EDC 6330 The History of American Education (3)
Seminar focusing on the philosophical history of American education with emphasis on primary source documents. Includes a discussion of the social, cultural, and historical contexts for development of this distinct intellectual tradition.

EDC 6331 Sociopolitical Contexts of Schooling (3)
Provides doctoral students with increased understanding of historical and contemporary landmark policies that have influenced the landscape of schooling and education for students. Using a policy analysis framework, students analyze and offer critiques on reform-based educational initiatives.

EDC 6333 Problem of Practice Phase Three (3)
Pre-requisite(s): EDC 6391 and 6392 This is the third course in the sequence of four courses for Ed.D. students to work on and complete the dissertation project
In this course, students complete the data analysis, results, and conclusions.

EDC 6336 Qualitative Research and Data Analysis (3)
Cross-listed as EDP 6336
See EDP 6336 for course information.

EDC 6338 Grant Writing (3)
Cross-listed as EDP 6338
See EDP 6338 for course information.

EDC 6339 Ethnographic Research Methods in Education (3)
Cross-listed as EDP 6339
A study of ethnographic research methods, data collection and procedures for data analysis.

EDC 6340 Research in Mathematics Education (3)
Pre-requisite(s): EDP 5335
Research in mathematics education with emphasis on understanding current research, applied methodologies, and implications for teaching and learning mathematics. Includes practical skills in data collection and analysis with individualized and critical assistance given in application of technological tools, research types (qualitative and quantitative), and analysis techniques.

EDC 6341 Advanced Studies of Issues in Mathematics Education (3)
In-depth investigation of critical issues in the nature of knowledge and inquiry in school mathematics.

EDC 6342 Cognitive Processes in Mathematics Education (3)
Various theoretical approaches used to understand the teaching and learning of mathematics are examined. Experiences in this course will allow for insight into the existing evidence accumulated on issues related to how people think about mathematics and how an understanding of mathematics develops.

EDC 6345 Christian Faith and Education (3)
This course examines the historical and contemporary relationship between the Christian tradition and education. It specifically addresses historical and contemporary proposals that consider how Christianity influences teaching, research, and service within educational institutions.

EDC 6346 Mentoring and Supervision (3)
A theoretical and practical overview of mentoring and supervision. Through the examination of theoretical perspectives and current issues in the field of mentoring and supervision, the course uses a variety of interactive exercises to assist in the development of a mentoring stance and a developmental approach to supervision.

EDC 6352 Trends in Educational Thought (3)
See EDA 6352 for course information.

EDC 6355 Concepts of Teaching and Teacher Education (3)
Focuses on the profession of teaching and preparation of teachers; definitions, history, role in American society; diverse means of studying and conceiving of teaching and teacher education; research in teaching and teacher education; the teaching life; the teaching career; teacher leadership; pedagogical reflection; and trends and issues in national and international teacher education.

EDC 6358 Design Research (3)
This course introduces students to different design-based research methods in educational research and provides students with an intensive experience in carrying out their own design-based research studies.

EDC 6359 Mixed Methods Research Design and Analysis (3)
Cross-listed as EDP 6359
This course focuses on applied mixed method designs that address the unique settings and systems of education, including data collection strategies for field work.

EDC 6360 Instructional Design (3)
Examination of issues related to instructional design in K-12, post-secondary, and corporate environments. Effective instructional design includes an assessment of specific needs, an understanding of the learner, and the implementation and assessment of effective learning experiences for content and skill mastery.

EDC 6361 Leadership and Organizational Change (3)
Through the examination and application of theories, including but not limited to leadership, decision-making, communication, motivation, power and influence, group dynamics, and change, this course develops diagnostic and problem-solving skills necessary for successful leadership of various organizational structures.

EDC 6362 Community Leadership & Collaboration (3)
This course helps students to understand the context of healthy community partnerships. They engage with community partners to generate new knowledge and practices for all constituents. The culminating projects from the course will be disseminated to both academic audiences and public audiences.

EDC 6365 Philosophy and Ethics in Leadership (3)
Analysis of the intersection of education, ethics, philosophy, and leadership in order to build ethical educational leadership capacity in ourselves and in our organizations.

EDC 6368 Future Trends in Leadership (3)
This course focuses on future trends that impact leadership and call for new leadership competencies. The course examines these trends as well as successful examples of leadership excellence in various fields. Students discuss emerging leadership frameworks, profiles, and case studies as the students develop in their own roles as future leaders in their organizations.

EDC 6370 Case Study Research Methods and Analysis in Education (3)
Cross-listed as EDP 6370
Case study research methods, data collection and procedures for analysis.

EDC 6372 Teaching and Learning in Online Environments (3)
Survey of the technologies, methods, strategies, assessments, and research-related synchronous, asynchronous, and hybrid environments for teaching and learning. Learning experiences will be customized to meet the participant's target instructional environment.

EDC 6374 Technology as a Curricular Approach (3)
Survey of technology frameworks designed to facilitate the integration of technology and instruction. Research related to effective implementation and documented outcomes will be reviewed. Learning experiences will be customized to meet the participant's desired target environment (K-12, higher education, informal settings, etc.).

EDC 6376 Organizational Change in a Technological Society (3)
This course examines short, medium, and long-range trends in the nature of professional work, organizations, and change as a result of rapid and pervasive technological development. The legal, ethical, and moral dimensions associated with these changes are addressed. Tools for trend analysis, innovation implementation, and professional development are introduced.

EDC 6390 Seminar: Education (3)
Designed to meet individual needs of doctoral students and address current issues in teaching, learning, curriculum, and educational research.

EDC 6391 Problem of Practice Phase One (3)
Pre-requisite(s): EDC 6359 and EDP 5327 This is the first course in the sequence of three courses for Ed.D. students to work on and complete the dissertation project
In this course, students complete the review of literature.

EDC 6392 Problem of Practice Phase Two (3)
This is the second course in the sequence of three courses for Ed.D. students to work on and complete the dissertation project. In this course, students complete the research methodology.

EDC 6393 Problem of Practice Final Phase: Capstone (3)
Pre-requisite(s): EDC 6391, 6392, and 6333
This is the final course in the sequence of three courses for Ed.D. students to work on and complete the dissertation project. In this course, students complete the data analysis, results, and conclusions.

EDC 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

EDC 6V99 Dissertation (1-6)
Data collection/analysis, writing, and defense of an approved doctoral dissertation. At least nine hours of EDC 6V99 are required for the PhD degree in curriculum and teaching. EdD students take required Problem of Practice hours in the form of EDC 6391, 6392, 6333, and 6393. EdD students requiring more hours to complete and defend their Problem of Practice as well as satisfy graduation requirements may enroll.

Doctor of Physical Therapy (DPT)

DPT 6100 Professional Physical Therapist Practice I (1)
Pre-requisite(s): Admission to Doctor of Physical Therapy program
This course introduces the physical therapy profession, history, physical therapist roles, contemporary professional issues and advocacy, and the APTA. The student explores professional ethics and values, communication/collaboration, and cultural competence. Students self-reflect on their own values and mission to develop personal leadership and begin their journey as physical therapists and their lifelong professional identity development.

DPT 6110 Doctoral Synthesis I (1)
Pre-requisite(s): Successful completion of Trimester 4 courses
This course comprehensively reviews body systems, pathophysiological mechanisms, examination procedures, and management strategies consistent with evidence-based practice and clinical guidelines. Students participate in independent study and sample examinations with a musculoskeletal and neuromuscular systems focus, preparing students for an exit examination based on FSBPT Content Outline.

DPT 6120 Capstone II (1)
Pre-requisite(s): Successful completion of Trimester 5 courses
Builds upon DPT 6110 Capstone I to integrate prior coursework and clinical experiences. Comprehensively reviews body systems, pathophysiological mechanisms, examination procedures, and management strategies consistent with evidence-based practice and clinical guidelines. Focuses on cardiovascular, pulmonary, other-systems, and non-systems domains. Culminates in completion of an exit examination based on the FSBPT Content Outline.

DPT 6151 Pain Science (1)
Pre-requisite(s): Successful completion of Semester 4 DPT courses
This course introduces students to managing patients with chronic pain syndromes and associated psychosocial factors using emerging and contemporary concepts of assessment, education, treatment, and outcomes. Current best practice techniques and research are integrated to provide discussion of the multi-dimensional and multi-disciplinary nature of chronic pain, to enhance evidence-informed patient care, and to advance societal health.

DPT 6212 Functional Movement (2)
Pre-requisite(s): Admission to the Doctor of Physical Therapy Program
This course introduces students to the science of movement and movement analysis. It begins by introducing physical therapy as a movement profession that uses the International Classification of Function, Disability and Health as vital in the process of clinical decision making. This course emphasizes concepts of neuroplasticity, theories of motor control, motor development, and motor learning.

DPT 6214 Clinical Medicine I (2)
Pre-requisite(s): Admission to Doctor of Physical Therapy Program
This course introduces and initiates the integration of medical screening, pathophysiology, diagnostic imaging principles and techniques, and pharmacotherapeutics across various practice settings. The application uses a system-based approach to identify disabilities across the lifespan.

DPT 6220 Assistive Technologies (2)
Pre-requisite(s): Successful completion of Trimester 3 courses
This course applies student knowledge of functional anatomy, impairments, and movement analysis to advancing patient management with common braces, orthotics, and prosthetics utilized across physical therapist practice settings. Related pathophysiology and surgical conditions are integrated with didactic coursework. Lab activities emphasize gait and movement analysis, orthotics, residual limb management, prosthetics, and amputee rehabilitation.

DPT 6221 Clinical Medicine II (2)
Pre-requisite(s): Successful completion of Trimester 1 courses
This course continues the integration of medical screening, pathophysiology, diagnostic imaging principles and techniques, and pharmacotherapeutics across various practice settings with an emphasis on the musculoskeletal, neurologic, cardiovascular, and respiratory systems. The knowledge gained will be used to provide evidence-informed care across the lifespan.

DPT 6270 Professional Competencies II (2)
Pre-requisite(s): Successful completion of Semester 5 DPT courses
Prepares student professionally and emotionally for clinical practice, as a lifelong learner and educator in the physical therapy profession. Explores major forms of health care delivery and how they interact with physical therapy services, including but not limited to medical ethics, health care regulations, and risk management strategies.

DPT 6300 Human Physiology (3)
Pre-requisite(s): Admission to Doctor of Physical Therapy program
This course introduces students to the various physiological systems and principles that impact human movement and health across the lifespan through a multisystem approach to the human body. Students gain an understanding of how to apply key characteristics of physiological systems into clinical reasoning to enhance evidence-informed care and build the knowledge necessary for physical therapist practice.

DPT 6310 Health and Wellness Promotion (3)
Pre-requisite(s): Successful completion of Trimester 4 courses
This course applies prior coursework to individual and community health promotion and wellness. Students explore various domains and influencers of health and identify appropriate screening and testing procedures, culminating in individual patient and community interventions. An understanding of social determinants of health on culturally competent healthcare, wellness, and education is emphasized.

DPT 6331 Physical Therapy Interventions (3)
Pre-requisite(s): Successful completion of Trimester 1 courses
This course provides an introduction to selection, application, and progression of principles and interventions across the lifespan and various clinical settings. This course incorporates concepts from the International Classification of Function, Disability, and Health into clinical practice. Knowledge from this course will be integrated across the clinical management courses to prepare for physical therapist practice.

DPT 6350 Pediatrics (3)
Pre-requisite(s): Successful completion of Trimester 3 courses
This course expands students knowledge of the practice of pediatric physical therapy by integrating the clinical reasoning framework into contemporary pediatric examination, assessment, interventions, and outcome measures. Students integrate family-focused models of practice in the school and community environment, and incorporate common congenital and childhood diagnosis advancing societal health in populations with childhood disorders.

DPT 6351 Clinical Integration I (3)
Pre-requisite(s): Successful completion of Trimester 3 courses
This course expands on student knowledge from previous patient management courses integrating concepts of clinical reasoning in those with multiple co-morbidities and systems-based impairments. Emphasis is placed on integumentary/wound care, oncologic rehabilitation, edema management, and higher level systems dysfunction. Learning consists of case and problem-based learning in multiple care settings to prepare students for clinical practice.

DPT 6360 Clinical Integration II (3)
Pre-requisite(s): Successful completion of Trimester 4 courses
This course advances student clinical reasoning, examination, differential diagnosis, and interventions for an interdependent practitioner across the lifespan in various clinical settings. Course activities emphasize mindful, wholistic, and evidence-based physical therapist management of patients. Lab activities culminate in a comprehensive practical examination.

DPT 6370 Business Principles for the Physical Therapist (3)
Pre-requisite(s): Successful completion of Trimester 4 courses
This course provides an overview of practice management fundamentals and applies principles to various aspects of leadership and personal development, strategic planning, and business operations. Students gain knowledge in health care management, leadership, strategic planning, human resources, finance, organizational structures, and fiscal management as they relate to physical therapy practice.

DPT 6421 Clinical Research (4)

DPT 6431 Aging Adult (4)
Pre-requisite(s): Successful completion of Trimester 2 courses
This course introduces the management of the aging adult across inpatient and outpatient clinical settings. Topics include normal physiology of aging and common pathologies seen with aging. Coursework emphasizes understanding of ageism, frailty, fall risk, fall prevention, management of falls, and home environmental assessments, along with adaptations of interventions for the older adult.

DPT 6441 Clinical Experience I (4)
Pre-requisite(s): Successful completion of Trimester 3 courses
This course is a full time (8-week) clinical experience, supervised by clinical faculty, during which students develop patient examination and intervention skills. Students are expected to demonstrate professionalism and progress towards competency as clinicians as rated on the Clinical Internship Evaluation Tool. Students work to enhance communication skills and integrate evidence-based management of patient care.

DPT 6450 Applied Neuroscience (4)
Pre-requisite(s): Successful completion of Trimester 1 courses
This course builds on prior knowledge of anatomical cellular structure and function. Emphasis is placed on the central and peripheral nervous system regulation of movement and movement impairments that present from nervous system pathology. Lab activities apply foundational knowledge of neuroscience to the neurologic screen and a comprehensive neurological examination. Common outcome measures and assessment tools are introduced.

DPT 6451 Clinical Experience II (4)
Pre-requisite(s): Successful completion of Trimester 4 courses, and demonstrated readiness for clinical education progression as determined by faculty
This course is a full time (8-week) clinical experience, supervised by clinical faculty, during which students develop patient examination and intervention skills. Students are expected to demonstrate professionalism and progress towards competency as clinicians as rated on the Clinical Internship Evaluation Tool. Students work to enhance communication skills and integrate evidence-based management of patient care.

DPT 6470 Cardiovascular and Pulmonary Systems (4)
Pre-requisite(s): Successful completion of Trimester 2 courses
This course expands students' knowledge of how the cardiovascular, pulmonary, and metabolic systems impact human movement across various practice settings. Students learn, apply, and integrate assessment and management of system impairments into the clinical reasoning framework. Lab activities include ECG analysis, exercise testing, heart and lung auscultation, pulmonary function testing, and chest examination.

DPT 6531 Neuromuscular System (5)
Pre-requisite(s): Successful completion of Trimester 2 courses
This course applies clinical management to the patient with central and peripheral neurologic conditions. Emphasis of this course is on functional movement restoration using the clinical reasoning framework. Laboratory activities concentrate on psychomotor skills for functional interventions, therapeutic exercise, and neuromuscular reeducation. Topics explore concepts of evidence-informed practice across the lifespan.

DPT 6540 Physical Therapy Examination (5)
Pre-requisite(s): Admission to Doctor of Physical Therapy program
This course introduces interview, tests and measures, communication, and documentation skills used in physical therapist practice across multiple clinical settings. Lab activities include psychomotor skill training for vital signs, goniometry, muscle testing, anthropometric measures, and functional mobility skills inclusive of transfers and gait training with assistive devices.

DPT 6610 Human Anatomy (6)
Pre-requisite(s): Admission to Doctor of Physical Therapy Program
This course introduces gross human anatomy and the anatomical basis for various movement system impairments, and prepares the learner for future application and growth across the didactic and clinical learning experiences. Topics include exploration of embryology, histology, and functional anatomy. Laboratory experiences include 3-dimensional anatomy software, cadaver prosections, living/surface anatomy, and anatomical models.

DPT 6620 Musculoskeletal System I (6)
Pre-requisite(s): Successful completion of Trimester 1 courses
This course introduces biomechanics, functional movement, and patient management principles of the spine, ribcage, and hip region. Emphasis of this course builds on prior learned anatomical structures and patient management using the clinical reasoning framework. Lab activities concentrate on psychomotor skills for examination, manual therapy, and therapeutic exercise. Topics explore concepts of evidence-informed practice across the lifespan.

DPT 6630 Musculoskeletal System II (6)
Pre-requisite(s): Successful completion of all Semester 2 coursework or permission of Program Director
This course introduces biomechanics, functional movement, and patientmanagement principles of the lower and upper extremities. This course builds on prior learned anatomical structures and concepts related to patient management, using the clinical reasoning framework. Lab activities focus on psychomotor skills for examination, manual therapy, and therapeutic exercise. Topics explore concepts of evidence-informed practice across the lifespan.

DPT 6V10 Physical Therapy Practice III (15)
Pre-requisite(s): Completion of semester 5 courses
Demonstrated readiness for clinical education progressions (as determined by faculty). Progresses student to entry-level patient management skills during a fifteen-week mentored clinical internship. Students refine interpersonal communication and professional socialization skills with patients/clients, family, and healthcare staff. Develops advanced evidence-based patient management and clinical reasoning skills. PT CPI performance expectations are at entry-level by the conclusion of internship.

DPT 6V20 Independent Study (1-3)
This course is organized as a variable credit (one-credit, two-credit, or three-credit) independent study course under the supervision of an assigned faculty member. It is designed to meet student-specific need and provides the student with an opportunity to receive direct interaction and guidance from a faculty member. This course integrates the core courses and elective courses within the DPT curriculum.

Ecology, Earth, Environ Sci (EEES)

EEES 6100 Seminar in Ecology, Earth, and Environmental Sciences (1)
Pre-requisite(s): Doctoral student standing only
Current topics and readings in earth system science. Variable topics depending on semester and instructor.

EEES 6V99 Dissertation in Ecology, Earth, and Environmental Sciences (1-3)
Pre-requisite(s): Doctoral student standing only
Required of all doctoral candidates. A minimum of 12 hours is expected.

Economics (ECO)

ECO 4312 Business Cycles and Forecasting (3)
Pre-requisite(s): A minimum grade of C in ECO 1380 or a minimum grade of C in ECO 2306 and 2307; BBA students must be admitted to the Business School in order to take this course
Examines basic causes of fluctuation in business activity. Topics include an examination of exogenous and endogenous influences on Gross National Product and other measures of economic activity, and the relationship between cycles in Gross National Product and cycles in particular industries and companies. The course emphasizes methods and techniques currently in use by business forecasters.

ECO 4321 Energy Economics (3)
Cross-listed as AVS 4321
Analysis of energy markets, with a focus on static and dynamic efficiency. Oil, natural gas, coal, nuclear, and renewables (including wind, solar, hydro, geothermal, and biofuels). Regulation and deregulation in electricity and natural gas markets. Energy derivatives. Policy issues related to market externalities, including pollution and climate change.

ECO 4323 The Environment and Economic Analysis (3)
Cross-listed as AVS 4323, ENV 4323
See ENV 4323 for course information.

ECO 4345 Mathematical Analysis in Economics (3)
Pre-requisite(s): A minimum grade of C in ECO 3306
Designed to acquaint the student with rudimentary mathematical techniques and their application to economic analysis.

ECO 5001 Research Seminar (0)
Pre-requisite(s): Graduate standing
Presentation and discussion of current research in economics. Course will be graded pass/fail.

ECO 5002 Research Seminar (0)
Pre-requisite(s): Graduate standing
Presentation and discussion of current research in economics. Course will be graded pass/fail.

ECO 5110 Key Global Economic and Strategic Issues (1)
Pre-requisite(s): Admission to Executive MBA program
This course will enable the participant to see how economic analysis is applied to key global issues that affect management decisions at home and abroad. Questions related to globalization and interdependence among nations will be addressed.

ECO 5115 Pricing and Economic Analysis (1)
Pre-requisite(s): Admission to MBA program
Use of economic analysis by managers to help firms acquire and sustain competitive advantage.

ECO 5116 Economics of Strategic Interaction (1)
Pre-requisite(s): ECO 5115
Use of economic analysis to aid managers in obtaining favorable outcomes in situations involving strategic interaction between and within firms.

ECO 5117 Managerial Macroeconomics (1)
Pre-requisite(s): ECO 5116
Use of macroeconomic analysis by managers in tactical and strategic planning with reference to long-term macroeconomic trends and short-term business cycle fluctuations; sources of disaggregated data; forecasting.

ECO 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

ECO 5305 Business Foundations - Economics (3)
This course is required for MBA and MSIS students who do not have an undergraduate degree in business from an AACSB-accredited institution. It provides students with a foundation in economics which is expected of all business graduate students, and helps them to understand the market environment in which businesses operate.

ECO 5310 Macroeconomic Analysis in the Global Economy (3)
Pre-requisite(s): A minimum grade of C in ECO 5315
This course analyzes national and global economic issues from a macroeconomic perspective. Topics include economic aggregates, interest rates, the balance of payments and exchange rates, aggregate production, economic growth, unemployment, consumption, investment, macroeconomic dynamics, monetary policy, and fiscal policy.

ECO 5314 Seminar in Behavioral and Experimental Economics (3)
Application of the scientific method to economics using laboratory experimentation to test economic theories about individual and group behavior. Exploration of behavioral concepts to expand economic modeling beyond pure rational choice models.

ECO 5315 Microeconomic Theory and Business Decisions (3)
Pre-requisite(s): Six semester hours of economics
A seminar designed to cover aspects of micro theory that are relevant for decision making within the firm. Emphasis is placed on the decision-making process. Numerous problems, cases, and examples are used to illustrate the theory.

ECO 5317 Contemporary Government and Business Relations (3)
Pre-requisite(s): Six semester hours of economics
An examination of the many ways in which government and business interact. Topics covered include the historical development of government regulations of business; the current state of antitrust enforcement; issues involving multinational corporations; the basis for regulated markets and forces favoring deregulation; the impact of consumer protection policies and affirmative action policies on business; and the outlook for government and business relations in the future.

ECO 5318 Game Theory (3)
Pre-requisite(s): Admission to graduate program in Economics or consent of instructor
This course provides a technical treatment of the theory of games and strategic behavior with an emphasis on applications in economics and business. This framework helps us to understand the nature of competition and cooperation. We also study contractual arrangements that affect incentives under different information constraints.

ECO 5320 The Economics of Government (3)
Pre-requisite(s): Six semester hours of economics
Economic rationale and effect of various taxes, user pricing, and the role of government in the allocation of resources, stabilization of the economy, and redistribution of wealth.

ECO 5321 Energy Economics (3)
Cross-listed as ENV 5321
Pre-requisite(s): Six semester hours of economics
Origins of the energy crisis, the effect of oil prices on inflation and the international monetary system, the origins and nature of OPEC, the economic feasibility of alternative energy sources, U.S. energy policy alternatives, and other current issues in the field of Energy Economics. A portion of the course is devoted to examining the energy industry in Texas and the Southwest.

ECO 5325 Seminar in Regional Economics (3)
Pre-requisite(s): Nine hours of economics or consent of instructor
Adaptation of economic theory for use in regional economic analysis. Selected problems: urban renewal, transportation, plant location, individual location decisions, land use, regional economic growth, and structure.

ECO 5327 E-Commerce Economics (3)
Pre-requisite(s): Six hours of economics or consent of instructor
This course applies tools of economic analysis to evaluate the evolving role of electronic commerce in the United States and world economies. The course addresses theories of firm conduct and performance in the electronic marketplace; the role of information and e-commerce intermediaries; the economics of Internet advertising; intellectual property rights of digital products; national and international public-policy issues of e-commerce; the financial and monetary implications of electronic trading; and the broader implications of e-commerce for U.S. and world economic activity.

ECO 5330 Problem Areas in International Economics (3)
Pre-requisite(s): ECO 3306, ECO 5415, or the equivalent, or consent of department chair
World economy with particular emphasis upon emerging problems relating to the international monetary system, the trend toward economic regionalism, the growth of the less developed countries, and economic relations between private enterprise economies and state trading enterprises. Basic theories of international economics are developed as a framework for analysis of policy issues.

ECO 5333 Foreign Exchange Markets and International Monetary Institutions (3)
Cross-listed as FIN 5333
Foreign exchange markets, emphasizing theoretical and empirical issues and their relation to the business environments. Topics include exchange rate regimes, efficiency, forecast measurement and management of foreign exchange risk forward and futures markets, options, swaps, and multi-currency bonds.

ECO 5334 Economic Development (3)
Pre-requisite(s): Six semester hours of economics
Major issues involved in the process of development such as mass poverty, population growth, agricultural transformation, and trade.

ECO 5338 Seminar in World Economic Systems (3)
Pre-requisite(s): ECO 2305, 2306, 3305, or equivalent course work
Economic institutions in a number of capitalist and socialist nations, and their relative success or failure presented in the context of country studies. Topics include the problems involved in making international statistical comparisons, the importance of the rise in the U.S. service sector, the operation of private and nationalized industries in Western Europe, lifetime employment in Japan, central planning in the Soviet Union, socialist economic reforms, international trade among and between Western and Eastern nations, and the convergence hypothesis.

ECO 5340 Economic Tools for Management Decision Making (3)
Pre-requisite(s): Admission to graduate business program
Upon completion of this course, students will be able to apply a wide range of ideas, concepts, and results from the economics discipline to be more effective managers. Topics may include incentives, market structures and pricing, price discrimination, game theory, macroeconomic theory, analysis and application, and exchange rates and international trade.

ECO 5343 History of Economic Thought (3)
Pre-requisite(s): Nine semester hours of economics or consent of instructor
Historical and analytical study of economic thought, beginning with Mercantilism and including the following schools of thought: Physiocratic, Classical, Marxian, Austrian, Neoclassical, Institutional, Keynesian, and Post-Keynesian.

ECO 5347 Econometric Theory and Methods (3)
Pre-requisite(s): Graduate standing
Empirical estimation of economic relationships; behavioral (consumers), technical (firms), and institutional. It teaches proper use of linear estimation techniques along with problem identification and solution.

ECO 5349 Causal Inference and Research Design (3)
Pre-requisite(s): Minimum grade of C in ECO 4347 or department approval
Introduction to modern tools for determining the existence of causal relationships among variables. Emphasizes both the design of the research process and the use of advanced econometric techniques.

ECO 5350 Health Economics (3)
Cross-listed as HPA 5350
Pre-requisite(s): ECO 5115 or 5315; or consent of instructor
Application of economic principles to health care issues; examining economic efficiency in a variety of circumstances including the production and distribution of health services, health insurance, governmental programs, health care personnel and hospitals. Analysis of public in health and medical care from an economic perspective.

ECO 5351 Data Science I (3)
Pre-requisite(s): A minimum grade of B in ECO 4347 or the equivalent, or approval of the department
Best practices in data collection, cleaning, manipulation, and data and code management. Methods and principles of data exploration and visualization. Unsupervised statistical learning techniques, supervised statistical learning techniques, and false discovery principles.

ECO 5352 Data Science II (3)
Pre-requisite(s): A minimum grade of B in ECO 4347 and ECO 5351
Assessing model accuracy, resampling methods, model selection, regularization, and dimension reduction. Machine learning techniques and their applications in economic research.

ECO 5360 Seminar in Corporate Finance (3)
Cross-listed as FIN 5360
See FIN 5360 for course information.

ECO 5362 Seminar in Corporate Short-term Financial Management (3)
Cross-listed as FIN 5362
See FIN 5362 for course information.

ECO 5365 Investment Management (3)
Cross-listed as FIN 5365
See FIN 5365 for course information.

ECO 5368 Seminar in Financial Markets (3)
Cross-listed as FIN 5368
See FIN 5368 for course information.

ECO 5370 Management of Financial Institutions (3)
Cross-listed as FIN 5370
See FIN 5370 for course information.

ECO 5415 Economics for Managers (4)
This course helps students understand and apply a wide range of economics-related theories, concepts, and facts to managerial decision-making. Four areas of economics are considered: (i) managerial economics, with a focus on how to determine what prices a firm should charge for its products; (ii) game theory, with a focus on how issues of strategic interaction arise in business settings and what kinds of decisions in various circumstances are likely to lead to the most favorable outcomes; (iii) macroeconomics, with a focus on applying theories and information about the national economic environment in which firms operate to enhance managerial effectiveness; and (iv) international economics.

ECO 5V98 Special Studies in Economics (1-6)
Pre-requisite(s): Nine semester hours of economics and consent of instructor
This course may be taken for one to six semester hours of credit.

ECO 5V99 Thesis (1-6)
hrs.

Economics (MECO)

MECO 5132 Macroeconomic Analysis in the Global Economy (1)
Pre-requisite(s): HCA 5309 and MECO 5330
This seminar builds upon basic macroeconomic principles, applying economic models/theory to the global economies. Global macroeconomics seeks to explain the nature of association among economic forces in markets around the world, such as the impact of the United States fiscal deficit on increased foreign borrowing and forces causing the economic slump in Japan.

MECO 5133 Seminar in World Economic Systems (1)
Pre-requisite(s): HCA 5309 and MECO 5330
This seminar explores differences among economic institutions, policy, and performance in countries around the world and provides information on the methods used to make economic comparisons across countries, examining the relative success or failure of these various economic states. Topics of discussion will revolve around major developments in the world economy.

MECO 5330 Principles of Macroeconomics (3)
Pre-requisite(s): HCA 5309
This course introduces students to the performance of market economies. It addresses market dynamics that affect organizations and management decision-making in order to enhance the ability of the student to understand the context, source, and potential solutions for various problems and opportunities routinely encountered in the practice of management.

MECO 5331 Managerial Economics (3)
Pre-requisite(s): HCA 5309 and MECO 5330
Managerial Economics concerns the efficient management of resources to achieve organizational or enterprise goals by applying economic theory and methodological techniques in the practice of management. This course is focused on the application of economic models, estimation techniques, and fundamental analysis in contemporary private and public markets.

Education (EDU)

EDU 5350 Teaching Associate: Special Education with Gifted Education (3)
In this course, teacher candidates teach small groups of special education, gifted and talented, and twice exceptional students within specific disciplinary areas that match their certificate areas.

EDU 5354 Curriculum Differentiation (3)
Historical, philosophical, and theoretical background of curriculum differentiation and specific strategies to adapt instruction for individual student differences related to rate, content, and preferences. Emphasis on best practices in differentiated instruction as demonstrated by empirical research.

EDU 5371 Assessment of Students with Exceptionalities (3)
In this course, students learn and apply formal and informal assessments currently used for students with exceptionalities and students considered educationally at-risk. Students practice using assessment data for individual case study.

EDU 5374 Literacy for Learners with Exceptionalities (3)
Students learn about assessment, instructional design, and instructional delivery in literacy. Students practice evidence-based practices in literacy for students with exceptionalities and with students who are considered educationally at-risk. Emphasis is placed on evidence-based teaching techniques, mastery learning, high-leverage practices in special education, acceleration, and best practices in inclusive education.

EDU 5375 Mathematics for Learners with Exceptionalities (3)
In this course students learn and apply direct instruction methods in mathematics with students who have a variety of learning needs including those with exceptionalities. Emphasis is placed on evidence-based teaching techniques, mastery learning, high-leverage practices in special education, acceleration, and best practices in inclusive education.

EDU 5377 Applied Behavior Analysis (3)
A course focusing on the use of applied behavior analysis in classroom settings. Emphasized topics include measuring behavior, functional assessment procedures, individualized behavior interventions, and classroom management.

EDU 5650 Teaching Associate: Special Ed and Twice Exceptionalities (6)
In this course, teacher candidates teach small groups of special education and gifted and talented students within specific disciplinary areas that match their certificate areas.

EDU 5651 Internship: EC-6 Education with Gifted Education (6)
Full-time teaching experience in an elementary classroom with specific emphasis on general education student including gifted and talented students. A mentor teacher and resident faculty will support teacher candidates as they gradually assume complete responsibilities for teaching.

EDU 5652 Internship: Special Education with Gifted Education (6)
Full-time teaching experience in a local school where teacher candidates interact with special education and gifted education students. Includes completion of content modules, conferencing with mentor teacher and university instructor, observation of lessons taught by master teachers, written lesson reflections, and preparation of an evaluation of benchmarks.

EDU 5662 Internship: Early Childhood through Grade 6 (EC-6) Education with Special Education (6)
Pre-requisite(s): EDU 5690, EDU 5350, EDP 5363, EDC 5690, OR EDU 5650
Full time teaching experience in a local elementary school where teacher candidates interact with general education and special education students. Includes completion of content modules, conferencing with mentor teacher and university instructor, observation of lessons taught by master teachers, written lesson reflections, and preparation of a benchmark evaluation.

EDU 5690 Teaching Associate EC-6 with Special Education (6)
Practicum in a local elementary school where teacher candidates teach small groups of general education and special education students within a variety of disciplinary areas as associated with their elementary certificate.

Educational Administration (EDA)

EDA 5378 Capstone Course: Special Problems in Student Affairs Administration (3)
This culminating course uses a problem-based, case study learning approach to apply the competencies gained in other educational administration courses. Students address new trends in college student personnel through attendance at a national conference as well as through a mentoring relationship with a student affairs professional.

Educational Leadership (EDL)

EDL 5100 Professional Seminar in Higher Education and Student Affairs (1)
Orients new graduate students to the HESA program and the student affairs profession, including topics such as writing for the social sciences, APA formatting, critical reading, professional presentations, and apprenticeship success.

EDL 5118 Competency Assessment and Development (1)
A process in which student performance is assessed in several skill areas including leadership, problem analysis, critical thinking, decision-making, sensitivity and communication. A professional development plan is developed for each student.

EDL 5127 Seminar: Personal and Professional Values and Ethics (1)
A study of ethical issues and standards related to the practice of educational leadership with an emphasis on understanding personal values and beliefs that influence practice.

EDL 5128 Seminar: Interprofessional Practice (1)
Seminar designed to promote the collaboration of educators and other human service professionals in solving complex problems of children and youth in today's schools.

EDL 5129 Folio Assessment and Professional Development (1)
Culminating assessment of students' progress in attaining competence for mid-management certification as evidenced by professional folios. Student folios will be evaluated by faculty and practitioner panels.

EDL 5131 Practicum: Contextual Domains (1)
A field-based application of knowledge and skills in the contextual domain of practice including: philosophical and cultural values; legal and regulatory applications; policy and political influences; and public and media relationships.

EDL 5191 Introductory Graduate Seminar (1)
This one-hour seminar will provide an introduction to the field of student service in terms of philosophy, principles of good practice, standards of preparation and professional development. Special focus will be given to the relationship of graduate preparation to the development of a coherent practice.

EDL 5194 Leadership Theory (1)
This one-hour seminar is designed to encourage new student affairs professionals to consider ways in which leadership contributions are made in the context of higher education.

EDL 5195 Seminar: The Art of Advising and Mentoring (1)
Advising and mentoring of students in higher education settings will be examined. Understanding this importance and dynamic nature of mentoring relationships and advising students and student organizations is critical to the success of student affairs practitioners. Current literature on mentoring will be studied.

EDL 5196 Student Services in a Multicultural Society (1)
In this course students will be exposed to theory and research pertaining to student cultures. Emphasis will also be given to exploring the manner in which student services professionals work with minority students in implementing multicultural programs on campus.

EDL 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

EDL 5273 Person-Environment Theories (2)
This course offers an in-depth analysis of person-environment theories, including the history and current use of such theories in higher education and student affairs. How people learn and the design of effective learning experiences and environments is also examined.

EDL 5300 Research Applications in Educational Leadership (3)
Research methods, design, and application related to the practice of educational leadership.

EDL 5301 Christian Faith and P-12 Educational Leadership (3)
The primary purpose of this course is the integration of faith, teaching, and educational leadership. This integration is vital for both public and private school teachers and manifests itself through excellence in instruction and learning that promotes human flourishing. This course connects a theology of education to outcomes for students made in the image of God to ground the leadership and educational theory in this course.

EDL 5302 Instructional Leadership (3)
In this course, school leaders learn to plan, implement, monitor, and evaluate assessment, curriculum, and instruction in public and independent schools for diverse learners. Topics include local, state, and national policy, assessment, curriculum, models of instruction, and multi-tiered support systems. Students will use data to make evidence-based decisions, monitor student progress, and provide accountability.

EDL 5303 Capstone in Educational Leadership (3)
Pre-requisite(s): EDL 5300, 5301, 5302, 5344, 5345, 5353, 5359, 5363, and 5V64 Aspiring leaders examine the complex realities of administration in public or independent schools by developing and implementing an improvement science capstone project
Working with the university advisor and the site supervisor, each candidate uses data analysis and leadership skills to identify a problem of practice and design, conduct, and report the findings of improvement science research.

EDL 5305 International and Comparative Education (3)
Education in the United States compared with that of selected foreign countries. Designed to provide a world view for educational leaders. Foreign study/travel required. (Also available to master's-level students.)

EDL 5322 Principles and Practices of Supervision (3)
Philosophical foundations, principles, and practices of effective supervision in public schools. Special attention is given to the supervisory methods used to improve instruction at all grade levels.

EDL 5323 Problems in Supervision (3)
Treatment of functional relationships in a program of supervision in the public schools. Case studies will be analyzed as practice in making the transition from theory to application of supervisory practice. Emphasis is placed on group interaction and human dynamics as basic constituents of sound supervisory practice.

EDL 5324 Practicum in Supervision (3)
Pre-requisite(s): EDL 5322 and 5323
Practice in planning supervisory in-service programs, problem solving, and procedures for improving supervisory and contemporary supervisory leadership in the public schools. An analysis of current literature as aids in setting up supervisory programs for instructional improvements is also included.

EDL 5327 Educational Evaluation (3)
Cross-listed as EDP 5327
Evaluation of educational programs including instructional as well as guidance programs. The student will be expected to organize and conduct research activities and to interpret the results of the research to teachers, administrators, parents, and other interest groups. Special topics will include construction of assessment instruments, the use of the computer in pupil personnel services, and the development of local norms.

EDL 5329 Philosophical and Cultural Contexts of Education (3)
A study of the philosophical, social, and cultural frameworks impacting schooling in America.

EDL 5330 Policy/Politics/Publ Rel Educ (3)
Pre-requisite(s): EDL 5345
An examination of the political and governance structures and public relations in American public education, including significant issues of policy and practice.

EDL 5336 Qualitative Research in Higher Education (3)
The development of an in-depth understanding of the major methods of inquiry associated with qualitative research is emphasized. Additionally, an appreciation for the strengths and limitations of engaging in qualitative research and a general understanding of the paradigms that undergird qualitative research and their implications for conducting qualitative inquiry are cultivated.

EDL 5344 School Business Management and Finance (3)
Develop a working knowledge of school finance by exploring adequacy, efficiency, and equity and how these issues influence school finance from the federal, state, district and school level. Students will have knowledge of how to relate state funding to district and building level budget preparation. Independent school leaders will develop skills in fund-raising, board facilitation, and budget preparation based on their own contextualized needs.

EDL 5345 Fundamentals of School Leadership (3)
This course examines leadership competencies that focus on and enhance human flourishing, social justice, equity, academic growth in diverse school environments, high leverage turnaround leadership, dynamics of schools in decline, and leadership coaching based on the core tenets of improvement science. Coursework provides opportunities for self-reflection in areas of personal leadership and Christian ethical beliefs.

EDL 5347 Administration of Pupil Personnel Services (3)
Organization and implementation of the pupil services necessary to provide a sound instructional program. The various services are studied from the viewpoint of a total program of services to make possible continuing progress by the pupil through his instructional program. The special services are considered in relation to the basic administrative service provisions.

EDL 5349 Administration of Staff Personnel Services (3)
Studies, practices, and principles of administration with reference to recruitment, selection and promotion, and retention of school personnel. Modern employment and placement practices with reference to incentive pay systems, control of working conditions, job analysis and evaluation, salaries and salary scheduling, maintenance of morale, fringe benefits, and other employee services are studied and analyzed.

EDL 5353 The Principalship (3)
Examine the diverse array of responsibilities of the modern school leader, with an emphasis on the development and growth of the principal in the area of strategic leadership as it relates to improvement science and continuous school improvement while developing a more comprehensive understanding of the role of a school leader within the context of a 21st-century education environment in public and independent schools.

EDL 5355 Transforming Learning Environments: School Facility Planning (3)
Educational leadership students study the planning, funding, and design of student-centered learning spaces incorporating functional efficiencies and applicable State and Federal statutes. Students will focus on how space influences and shapes learning, how design must serve both current and future educational needs, how capital construction is planned and financed, and how to apply TEC: School Facilities Funding and Standards to school facility planning, design, construction and instructional needs.

EDL 5356 School Surveys and Field Studies (3)
Place of the survey in present-day American education; its methods; findings concerning current problems in various types and phases of education; and tendencies in survey recommendations. Extensive reading of surveys required. Typical problems are assigned for investigation and report.

EDL 5357 Community Relations (3)
Principles and practices of successful college and/or K-12 school community relations programs.

EDL 5358 Seminar: Organizing and Administering School Reading Programs and Reading Clinics (3)
Cross-listed as EDC 5358
Orientation for administrators concerning four aspects of reading instruction: (1) Administrator roles and responsibilities essential to effective reading instruction; (2) Strategies for improving instruction that emphasize measurement, the use of varied media, and staff development; (3) Innovative practices in reading instruction at the elementary and secondary school levels; (4) Knowledge of developments in educational research and suggestions concerning bridging the gap between innovation and practice; (5) Preparation of a comprehensive school/district reading program.

EDL 5359 School Law and Governance (3)
Presents legal principles on all major facets of school and institutional operation by examining the relationships among law, public policy, ethics, and current issues in P-12 education. By developing a deeper understanding of legal and ethical requirements as well as multi-tiered systems of support, school leaders will be better prepared to lead in public and independent schools where each student is able to flourish.

EDL 5360 Seminar: Administration of Special Programs (3)
Administration of compensatory and special education, career and vocational programs, basic skills program (reading), and middle management services. May be repeated.

EDL 5361 Seminar: Central Office Administration (3)
Basic administrative concepts, processes, and organization of public school administration. The roles of the superintendent and other central office personnel are examined in relation to effective administration. The relationship of the local school district to the Texas Education Agency, the federal government, and other educational institutions is examined. There will be intensive study in selected areas.

EDL 5362 Seminar: Administration of Career and Technical and Vocational Programs (3)
Application of the principles of administration to vocational education programs. In addition to the study of organizational structures, planning, coordinating, allocation of resources, and decision-making, the course will cover special requirements of vocational education as program standards, state and local policies and regulations, state plans, building and equipment needs, and in-service training of vocational education personnel.

EDL 5363 Administrative Theory and Educational Leadership (3)
This course provides aspiring leaders with a foundation of the theory base for the field of educational leadership. It introduces students to a comprehensive set of historical and current theories, concepts, and approaches in educational leadership. The foundational theories are meant to provide students with an understanding of how organizations, behavior, and management associate with desired outcomes in public and independent schools.

EDL 5370 Psychosocial Development in College Students (3)
This course will offer an in-depth analysis of psychosocial development theories, including models based on gender, race, ethnicity, sexual identity, and socioeconomic/sociocultural class. Erik Erikson's Identity over the Life Span and Arthur Chickering's Theory of Identity Development, along with Josselson, Phinney, Cross Helms, Cass, and others will be used.

EDL 5371 Cognitive-Structural Development in College Students (3)
This course offers an in-depth analysis of cognitive-structural college student development theories, including William Perry's Intellectual Scheme; Mary Field Belenky, et al.'s Women's Ways of Knowing; Marcia Baxter Magolda's Epistemological Reflection Model; and Patricia King and Karen Kitchener's Reflective Judgment Model.

EDL 5372 Culture and Organization of Higher Education (3)
This course provides an overview of the organizational structures and dynamics of higher education governance, leadership, planning, and resource allocation. Particular attention in this course is given to the diversity of post-secondary institutions in the United States, and how varying institutional settings influence organizational behavior, structures and cultural norms of operating. Students should anticipate a rich interaction with related literature. An introductory survey of organizational theories in higher education will also be explored.

EDL 5374 Moral and Faith Development in College Students (3)
An in-depth survey of major theories related to moral and faith development of American college students. Current research on the effect of the college environment on moral and faith development will be explored. Special emphasis will be placed on the integration of theory into student affairs administrative practice.

EDL 5375 Sociology of Higher Education (3)
This course explores the intersection of sociological issues and interests and the study of higher education. The course analyzes issues central to the study of higher education through sociological frameworks, including consideration of the structures and environments that form the context of higher education, and the impact of the institution of higher education on participants and non-participants.

EDL 5376 Human Resource Management and Development in Student Affairs (3)
Human resource management and development in student affairs are examined. Special attention is given to staff selection, training, evaluation, productivity, decision making, job stress, and job satisfaction. Current literature on management and supervision is studied.

EDL 5378 Capstone Course: Special Problems in Student Services Leadership (3)
This culminating course will use a problem-based, case study learning approach to apply the competencies gained in other Educational Leadership courses. Students address new trends in college student personnel through attendance at a national conference as well as through a mentoring relationship with a student services professional.

EDL 5379 Foundations & History of Higher Education Leadership (3)
The history of higher education and student affairs is explored through an introduction to the various fields, organizations, and functions in student affairs, including trends, issues and ethics.

EDL 5380 Technology and Leadership (3)
An overview of technology in the context of organizational leadership. Participants examine the application of data (computer), video, and communications technology to formal and informal leadership responsibilities within educational organizations. Assumes no previous knowledge of advanced technology. Technology lab and field experiences will be required.

EDL 5387 The College Dean (3)
A functional approach to the problems of the dean, treating the phases of administration; instructional personnel; public relations; curriculum construction and organization; faculty selection, assignment, promotion, and retirement; extracurricular activities; student and parent relations.

EDL 5388 College Registrar (3)
A study of duties, functions, and responsibilities of the registrar.

EDL 5390 Seminar-Education (3)
A course designed to meet the individual needs of graduate students. May be repeated.

EDL 5391 Cultural Issues in Higher Education (3)
Cross-listed as EDA 5391, EDP 5391
See EDP 5391 for course information.

EDL 5392 Higher Education & the Law (3)
Legal aspects and issues of constitutional, statutory, and case law concerning public and private two-year and four-year colleges, and universities; their boards, administrators, faculty and students. Interpretations, compliance issues, and implications for institutional practice and policy.

EDL 5393 Supervision of Student Teachers (3)
A course designed to provide students with a study of the principles and procedures for effective supervision of student teachers. Special emphasis is given to the development of contemporary supervisory methods and skills.

EDL 5394 Planning, Budgeting, & Human Resources in Higher Education (3)
Pre-requisite(s): EDL 5379 or consent of instructor
This course explores the interdependent relationship of university strategy formation, strategic planning, finance, and human resources. First, attention is given to theory-based literature from both business and higher education as it relates to strategy formation and planning. Second, financial issues related to college and university administration are examined, including the nature of costs, their impact on students, and the future of higher education. Finally, the course explores the importance of human resources, its relationship to planning and finance, and how a student affairs administrator can enact processes related to management, staff selection, training, evaluation, and productivity.

EDL 5395 Student Services Administration: Practicum I (3)
Broad on-site experiences in a variety of student services in three or more private and public institutions of higher education.

EDL 5396 Student Services Administration: Practicum II (3)
In-depth on-site experiences in two different student services areas. Up to one-half of this practicum may be earned through professionally supervised graduate assistantships in appropriate work settings.

EDL 5399 Faith-Based Higher Education (3)
The course explores the history of higher education in the United States, with special attention to the interplay of forces that have led virtually every major academic institution to abandon historic Christian convictions. It includes reading and thinking about the lessons of history and discusses how to apply them to contemporary context. Topics include staff and faculty hiring and mentoring, student life programming, staff development, and crafting and implementing a Christian collegiate vision.

EDL 5V19 Interpersonal Skills Lab (1-3)
Practical application of theories and skills related to effective interpersonal behavior of school leaders. The foci are motivating, mentoring, and managing human interaction and communication.

EDL 5V21 Practicum: Functional Domains (1-3)
A field-based experience related to performance in the functional domains of leadership, problem-solving, decision-making, organizational management, technology, and research. May be repeated once with different topic not to exceed three credit hours.

EDL 5V25 Practicum: Programmatic Domains (1-3)
A field-based experience that focuses on the programs of elementary and secondary schools with special emphasis on curriculum and supervision of instruction. Advancing Educational Leadership (AEL) and Texas Teacher Evaluation and Support System (TTESS) certifications are covered. May be repeated once with different topic not to exceed three credit hours.

EDL 5V26 Practicum: Programmatic Domains (1-3)
A field-based experience which focuses on the programs of elementary and secondary schools with special emphasis on support services and the resource base.

EDL 5V64 Internship in School Administration (1-9)
(Required for both the principal and the superintendent.) Provides persons aspiring to become administrators with periods of practical clinical experience. Internships are conducted under the supervision of school, college, or other institutional administrators and professors.

EDL 5V65 Internship--Superintendent (1-6)
Pre-requisite(s): Consent of department chairperson
Individuals are assigned to school systems where opportunities will be effected to observe and participate in the superintendent's office, business office, board meetings, and other areas related to the duties and functions of the superintendent. Required for Superintendent's Certification.

EDL 5V95 Special Problems in Education (1-4)
Designed to meet individual needs of graduate students. May be repeated.

EDL 5V99 Thesis (1-6)
Credit received when the thesis is finally approved.

EDL 6118 Leadership Assessment and Professional Development (1)
A systematic process in which performance is assessed in critical skill areas of educational leadership. Assessment and feedback result in a leadership development plan for each student which is monitored throughout the program and becomes a part of the portfolio process.

EDL 6129 Professional Portfolio Assessment (1)
Pre-requisite(s): EDA 6118 or consent of department
Culminating assessment of professional and personal growth and development of students completing the Ed.D. as evidenced by student professional portfolios. Portfolio documents are presented by students and evaluated by faculty and practitioner panels. Review of research and use of professional portfolios are also required.

EDL 6300 Research in Educational Leadership I (3)
Pre-requisite(s): EDA/EDP 5327
Topics related to the development of research projects in educational leadership and decision-making are presented, including the identification of problems to be investigated, the review of the literature, the development of research questions and/or hypotheses, and writing proposals. Skills in Historical, Correlational, and Descriptive Research are developed, including the supporting measurement theory and statistics.

EDL 6301 Research in Educational Leadership II (3)
Pre-requisite(s): EDL 6300
Concepts and skills in experimental research applied to educational leadership and decision-making, development, experimental design, sampling, measurement considerations, probability theory, inferential statistics, and reporting results. Statistical package is utilized as a part of the instructional procedures.

EDL 6302 Teaching and Learning in Higher Education (3)
Pre-requisite(s): Doctoral Standing
A doctoral seminar designed to introduce graduate students to teaching in higher education through the exploration of curricular issues, course development and content, teaching techniques, learning concepts and theories, and the nature of faculty work.

EDL 6303 Seminar: Curriculum Management and Evaluation (3)
Pre-requisite(s): EDC 5321, 5344, 6310 or equivalent; or consent of instructor
Development, management, and evaluation of K-12 curriculum with attention to research and best practice related to providing leadership for improving student performance. Administrative/supervisory responsibilities for curriculum standards, policy development, and curriculum audit procedures are also emphasized.

EDL 6304 Seminar: Politics, Policy and Governance of Education (3)
Pre-requisite(s): Doctoral student or consent of instructor
The political and governance structures of American education with a particular emphasis on Texas. A study and analysis of local, state, and federal policies and policy issues with an emphasis on the critical dimensions of problem-solutions, power relations, and values and ethics.

EDL 6305 Ethics and Values in Educational Leadership (3)
Ethics and values as applied to educational leadership and management, with related philosophical concepts and principles. Designed for advanced graduate students with classroom teaching experience and educational leadership experience.

EDL 6306 Student Success in Higher Education (3)
This course examines the impact college has on students (college-impact models), as well as policies, programs, and practices that promote student learning and development in higher education. Theories concerning environmental or sociological origins of change in college students will be examined. Course topics include several sets of variables (including student, organizational, and environmental characteristics) presumed to influence student success (retention, engagement, achievement, and development).

EDL 6309 Framing K-12 Problems for Inquiry (3)
Students develop a foundation for disciplined inquiry of a Problem of Practice, engage in educational research, and explore approaches to disciplined inquiry in school and organizational contexts.

EDL 6310 Organizational Behavior and Leadership (3)
Students focus on learning about the complex behavioral world of public and private schools and school districts in the life of communities. Acquiring and applying skills necessary for understanding organizational behavior and leadership to engage effectively in executive roles.

EDL 6312 Systemic Inquiry through Data Analytics (3)
Educational leadership students organize, manipulate, analyze, and interpret data specific to the Texas K-12 Public Education Information Management System (PEIMS) and the United States. Students communicate analytics findings relevant to an identified Problem of Practice through visualization of qualitative and quantitative data.

EDL 6335 Research Practicum in Education (3)
Cross-listed as EDP 6335
See EDP 6335 for course information.

EDL 6349 Advanced Studies in Human Resource Management in Education (3)
Pre-requisite(s): EDA 5349 or equivalent; or consent of instructor
Theories and models supporting human resource activities. Topics are subject to change, but generally include equal employment opportunity laws and case rulings, recruitment, selection methods, corrective discipline, total compensation systems, performance evaluation, and conflict resolution. Emphasis is on application of theory to practice.

EDL 6350 Seminar: School Leadership (3)
Basic concepts of educational leadership for doctoral students and advanced studies for school executives.

EDL 6352 Trends in Educational Thought (3)
A general survey and evaluation of recent developments in the various fields of education in the present day.

EDL 6359 Advanced Studies in Education Law (3)
Pre-requisite(s): EDL 5359 or equivalent; or consent of instructor
Legal and regulatory applications as a context and constraint in educational leadership decision-making. Topics are subject to change, but generally include federal and state constitutional provisions; statutory standards and regulations; local rules, procedures, and directives; fundamentals of contract law; and the governance of educational institutions.

EDL 6360 Seminar: Interprofessional Education and Practice (3)
An exploration of approaches to interprofessional care for children and families in school based settings. The seminar involves a study of human service professionals and approaches to collaborative practice using case analyses and field activities.

EDL 6363 Advanced Studies in Educational Leadership (3)
The role of leadership in shaping the quality and character of educational institutions. Topics are subject to change, but generally include identification of personal and organizational values, culture and culture building, formulation of personal and institutional goals, the change process, and vision building.

EDL 6370 Seminar in American Educational Thought (3)
Cross-listed as AMS 5395
Understanding the historical, philosophical, and sociological antecedents of current views on education and educational leadership is a vital link in the formulation of a philosophy of educational leadership. Historical and contemporary works in the general areas of educational history, educational philosophy, sociology of education, and educational leadership are studied.

EDL 6380 Technology in Educational Leadership (3)
This course emphasizes taking a systematic approach to the use of data, communication, and video technology. A review of existing research creates a knowledge base upon which instructional and leadership decisions can be made. Students are encouraged to apply the knowledge and skills gained through class instruction to leadership and instructional duties that they perform. Students are introduced to a number of moral, ethical, and legal issues that require professional evaluation.

EDL 6383 Organization and Administration of the Community College (3)
Doctoral student or consent of instructor. Internal and external relations, planning and development; faculty selection and development; budgeting and finance; basic administrative functions and leadership concepts of higher education and especially the community college.

EDL 6384 Curriculum and Instruction in the Community College (3)
Pre-requisite(s): Doctoral student or consent of instructor
Philosophy, objectives, curricular development, instruction, and administration in academic, technical, and continuing education programs in the community college.

EDL 6385 Higher Education--Business and Finance (3)
Designed to provide the graduate student (or practitioner) with a practical knowledge of the business and financial aspects of higher education administration. Students will gain an understanding of key terminology that will be useful as they relate to financial administrators or seek advancement in the field. Students will learn to identify fiscal challenges facing colleges and will discuss effective means to face these challenges. Topics included are state and federal regulations, legislative issues, tax exempt financing, fund accounting and audits, budgets, legal issues, payroll and personnel, risk management, facilities construction, deferred maintenance, foundations and investments, grant management, and auxiliary enterprises and contracting.

EDL 6386 The Community College (3)
Pre-requisite(s): Doctoral student or consent of instructor
Higher education and the community college: its philosophy, history, present/future trends, administration, instructional programs, student services, finances, public relations, and students.

EDL 6390 Seminar: Education (3)
Designed to meet individual needs of doctoral students. May be repeated.

EDL 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

EDL 6V20 Clinical Experiences for Educational Leaders (1-2)
Students engage with a mentor in authentic field experiences that frame K-12 problems of inquiry and provide opportunities to address complex problems of practice.

EDL 6V64 Internship in Educational Leadership (1-9)
Pre-requisite(s): Consent of department chairperson
A field-based experience designed to meet individual needs of doctoral students preparing for leadership roles in colleges, universities, and/or K-12 schools.

EDL 6V95 Special Problems in Educational Leadership (1-9)
Pre-requisite(s): Doctoral student or consent of department chairperson
Designed to meet the individual needs of doctoral students. May be repeated when topic varies.

EDL 6V99 Dissertation (1-9)
Research, data analysis, writing, and oral/written defense of an approved doctoral dissertation. This course may be taken for up to 9 hours per semester for a maximum of 24 hours applicable to degree.

Educational Psychology (EDP)

EDP 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

EDP 5301 Philosophy in Applied Behavior Analysis (3)
Pre-requisite(s): EDP 5358
This course provides students with an introduction to the philosophy behind the science of behavior analysis. We review the history of behaviorism and transition from methodological behaviorism to radical behaviorism. Students have the opportunity to explore the philosophical underpinnings of behavior analysis and gain a better understanding of what it means to be a behavior analyst.

EDP 5302 Concepts and Principles of Applied Behavior Analysis (3)
This course provides students with an introduction to the concepts and principles of behavior analysis. Students examine the fundamental concepts including operant and respondent conditioning, reinforcement, punishment, extinction, stimulus control, and motivating operations. Students have the opportunity to gain the foundational knowledge necessary to design behavior analytic interventions.

EDP 5308 Gifted Education and Talent Development (3)
This course surveys practices and models of gifted education, including the theories of individual differences, talent development, and differentiated learning. Students explore how these theories and models are applied to learning and development, assessment, curriculum and instruction, learning environments, educational programs, and professional learning.

EDP 5310 Curriculum Development for the Gifted (3)
Development of differentiated curricula for gifted students. Students will learn the components of a scope and sequence in gifted programs, how to adapt for individual differences, how to organize thematic, interdisciplinary content, and how to teach higher-level cognitive skills.

EDP 5311 Creativity and Strategies for Teaching the Gifted (3)
Concept of creativity and its relationship to the development of programs for the gifted and talented. Topics within this course will include instruments and techniques for identifying creativity, theories and models of creativity, instructional strategies for enhancing creativity, futuristics, and problems of creatively gifted.

EDP 5320 Survey of Quantitative Methods (3)
This course provides a basic introduction to quantitative methods needed by educational practitioners to inform professional decisions and guide evidence-based practice. Topics include scientific method, internal and external threats to research validity, research designs, measurement, and statistical conclusion validity. The centrality of quantitative methods to competent practice is emphasized.

EDP 5327 Educational Evaluation (3)
Cross-listed as EDL 5327
See EDL 5327 for course information.

EDP 5328 Psychological Assessment of Children and Adolescents I: Cognitive (3)
Theories of intelligence, practical administration, and interpretation of intellectual measures, including giving, scoring, and interpreting test results.

EDP 5329 Counseling Theories and Techniques (3)
Pre-requisite(s): Graduate standing
Basic theories, strategies, and techniques in counseling and helping relationships. Special focus on the role of the interventionist.

EDP 5332 Human Growth and Development (3)
Cross-listed as AMS 5332
Processes and stages of human growth and development: physical, social, emotional, and intellectual. The impact of social, political, and economic factors on individuals and families is explored.

EDP 5333 Psychology of Learning, Cognition, and Affect (3)
Cross-listed as AMS 5333
Philosophical and historical roots of theories of learning, cognition, and affect. Major constructs of current theories and their application in instructional, administrative, and counseling settings.

EDP 5334 Statistical Methods (3)
Exercises in the computation of the most commonly employed statistical indices in tabulation, graphic representation, and presentation of data in educational reports. The techniques used are also applicable to other fields.

EDP 5335 Research in Education (3)
Cross-listed as AMS 5335
Historical, descriptive, and experimental inquiry. Emphasis on interpretation of research. Use of references and resources; the problem; expression of hypotheses; research design; organizing the review of literature; gathering data; statistical analysis of data; reporting and discussing findings; drawing conclusions. Writing style will be applied to the student's major field of study.

EDP 5337 Psychological Assessment of Children and Adolescents II: Psychoeducational (3)
Pre-requisite(s): EDP 5328 and 5393
Continued knowledge and practice of intellectual assessment will be presented, as well as different types of academic assessment, including both norm-referenced and curriculum-based approaches. Integration of intellectual and academic assessment will be stressed within a problem-solving model.

EDP 5339 Group Counseling Methods (3)
Pre-requisite(s): Consent of instructor
Group counseling theories and techniques. Analysis of group processes. Practice in leading simulated groups.

EDP 5340 Measurement and Evaluation (3)
Overview of psychometrics and its application to psychological and educational decision making. Specific attention given to the design and development of specialized assessment instruments.

EDP 5341 Professional Practice, Law, and Ethics for School Psychologists (3)
An overview of the profession of school psychology is addressed, including the history and foundations of the field as well as service delivery models. Emphasis is placed on the application of current ethical, legal, and professional standards to professional practice in schools and alternative settings.

EDP 5344 Individual Brief/Crisis Counseling (3)
Overview of current methods of brief therapy and simulated experiences using brief therapy. Identification of situations having the potential for crisis, description of clients in crisis, consideration of theories devoted to explanation and possible amelioration of crises. Practice in counseling clients using brief therapy or crises interventions. Visits to appropriate settings.

EDP 5346 Therapeutic Intervention (3)
Pre-requisite(s): EDP 5356
Provides an extended understanding of the philosophy and methodology of applied behavior analysis. Applied behavior analysis is an extremely well developed approach to solving problems in educational settings, and provides one of the best examples of a consistent model for being an accountable, scientifically-oriented practitioner. In this course, students learn to implement assessment and intervention techniques based on the science and theory of behavior analysis.

EDP 5351 Social/Emotional Needs of the Gifted (3)
Differential affective characteristics of gifted students; general counseling theories; communicating with the gifted; assessing affective needs; helping the gifted develop social and interpersonal skills; the defining role of the school in affective development; and measuring the potential of the gifted to achieve and contribute to society and the lives of others.

EDP 5352 Counseling in Religious Settings (3)
Pre-requisite(s): EDP 5329 or consent of instructor
Integration of principles of religious faith with various counseling problems and psychotherapeutic systems. The course includes subject areas such as ethics, the identity of the counselor, and an evaluation of selected psychological theories for their usefulness in a religious setting and/or from a religious perspective.

EDP 5353 Spirituality and Religion in Counseling (3)
This course is designed to help students increase their awareness and knowledge of diverse spiritual and religious traditions, the role of spirituality and religion to human development and mental health, and assessment and treatment approaches to counseling clients' spiritual and religious concerns.

EDP 5354 Ethics in Applied Behavior Analysis (3)
The course provides information on the profession of behavior analysis, including the history, foundations, and ethical principles. The course emphasizes the ethical principles and professional expectations within the field of applied behavior analysis. This includes a detailed review of the Behavior Analysis Certification Board Professional and Ethical Compliance Code for Behavior Analysts.

EDP 5356 Psychological Interventions with Children and Adolescents I: Behavior (3)
An overview of behavior management, including different beliefs as to why behavior occurs. The process of collecting data for the purpose of assessing individual and group behavior and making decisions about the education of children will be studied.

EDP 5357 Single-Subject Research Design (3)
An initial course in the use of single-subject research methodology. Single-subject research designs are empirical designs rooted in the field of applied behavior analysis that are regularly used in the study of individuals with low incidence disabilities, but are also appropriate for other populations. This class examines the characteristics of single-subject research designs.

EDP 5358 Teaching Individuals with Autism and Developmental Disabilities (3)
Covers specific teaching techniques utilized among individuals with developmental disabilities. Data collection techniques used to monitor progress will be introduced, as well as preference assessment(s) and communication intervention(s).

EDP 5360 Psychological Interventions with Children and Adolescents II: Counseling (3)
Pre-requisite(s): Student is enrolled in the School Psychology EdS or Phd Program, or obtains instructor approval prior to enrollment
An overview of developmentally appropriate evidence-based approaches to counseling children and adolescents in school and mental health settings. Addresses foundational techniques, assessment of treatment progress, working with parents and teachers, and ethical/legal considerations.

EDP 5361 Challenging Behavior and Developmental Disabilities (3)
Pre-requisite(s): EDP 5346 5356
Provides a general understanding of severe challenging behaviors, such as self-injury and aggression, including various reasons that individuals with disabilities develop and maintain such behaviors, as well as assessment and treatment methods to address them.

EDP 5362 Psychological Interventions with Children and Adolescents III: Academic (3)
An overview of evidence-based approaches to intervening with children and adolescents who have academic difficulties. Addresses foundational aspects of teaching and learning, assessment of intervention effectiveness, and ethical and legal considerations.

EDP 5363 Teaching Associate Special Education (3)
Pre-requisite(s): EDP 5332
Clinical teaching experience in a local school where teacher candidates interact with special education students. Includes completion of content modules, conferencing with clinical instructor and university instructor, observation of lessons taught by master teachers, written lesson reflections, and preparation of and evaluation of benchmarks.

EDP 5364 Psychological Interventions with Children and Adolescents IV: Cognitive Behavioral Therapy (3)
This course involves in-depth study of basic cognitive behavioral procedures and research specific to the treatment of a number of clinical problems of children and adolescents. This class consists of five units: 1) overview of cognitive behavioral therapy (CBT); 2) critical issues for the field; 3) special applications of CBT; 4) internalizing disorders and problems; and 5) externalizing disorders and problems.

EDP 5365 Interdisciplinary Leadership Training in Autism and Neurodevelopmental Disabilities (3)
This course provides interdisciplinary leadership training in autism spectrum disorders (ASD) and other related disabilities. Content will address integrating services, developing community partnerships, and promoting innovative practices to enhance cultural competency, family-centered care, and interdisciplinary partnerships. The course is modeled after Leadership Education in Neurodevelopmental and Related Disabilities (LEND) programs.

EDP 5366 Psychology of Exceptional Children (3)
Problems of the exceptional child in a developmental framework. Differences in intellectual functioning, academic achievement, and social relationships will be explored. A social psychological perspective will also be presented, i.e., the degree to which society accepts the exceptional and what effect this has upon their development.

EDP 5367 Developmental Psychopathology (3)
Overview of behavioral and emotional disorders of childhood, adolescence, and emerging adulthood from a developmental perspective. This course focuses on the description, assessment, epidemiology, etiology, and evidence-based treatment of each disorder.

EDP 5368 Methods for Teaching the Emotionally Disturbed (3)
Pre-requisite(s): EDP 5366
Techniques for the education of emotionally disturbed children and adolescents. Emphasis is placed on understanding classroom behavior, developing teacher-student relationships, and structuring classroom learning.

EDP 5369 Methods and Media for Children with Learning Disabilities (3)
Pre-requisite(s): EDP 5366
Individual diagnosis of learning disabilities. Experiences will be provided in preparing individual educational plans and materials, both from developmental and remedial approaches.

EDP 5370 Consultation, Collaboration, and Family-School Partnerships (3)
Knowledge of and skills for consulting with parents and teachers; collaborating with teachers, school administrators, and other professionals; and building family-school partnerships. Techniques are provided for gathering information regarding the needs of exceptional children and for involving teachers, parents, and others in better meeting these needs.

EDP 5374 Managing Behavior Change Programs (3)
This course teaches students to apply the principles of applied behavior analysis to develop goals and interventions based on integrated information, utilize a data-based decision-making model to evaluate efficacy of programs, and learn effective supervision techniques. Students learn skills needed to analyze cases and develop appropriate behavior change programs for clients' maximum desired performance.

EDP 5376 Practicum with Exceptional Children (3)
All courses in the certification program. Field experiences with various types of exceptional children.

EDP 5382 Internship in School Psychology I (3)
Pre-requisite(s): EDP 5278 and 5279
A six-hundred-hour field-based experience that must be completed in a public school setting. Details of duties may vary but should emphasize assessment, individual and group counseling/therapy, consultation, in-service presentations, and professional development opportunities. Field supervision must be provided by the district/co-op, and should be directed by a qualified school psychologist from the state of internship (e.g. a Licensed Specialist in School Psychology - LSSP if interning in Texas).

EDP 5383 Internship in School Psychology II (3)
Pre-requisite(s): EDP 5382
A six-hundred-hour field-based experience that is a continuation of EDP 5382. This experience must be completed in a public school or mental health setting. Details of duties may vary but should emphasize assessment, individual and group counseling/therapy, consultation, in-service presentations, and professional development opportunities. Field supervision must be provided by the district/co-op, and should be directed by a qualified school psychologist from the state of internship (e.g., a Licensed Specialist in School Psychology - LSSP if interning in Texas).

EDP 5390 Seminar: Education (3)
Designed to meet individual needs of graduate students. May be repeated.

EDP 5391 Cultural Issues in Higher Education (3)
Cross-listed as EDA 5391, EDL 5395
This course explores topics relevant to providing educational services to diverse student populations in higher education. Students will develop knowledge, attitudes, and skills needed to function within their own microculture, the United States macroculture, other microcultures, and the global community. Students will develop skills and understanding of effective strategies for academic assessment and intervention, and strategies to facilitate student success in higher education.

EDP 5393 Cultural Issues with Children and Families (3)
An overview of the psychosocial and educational needs of ethnically and linguistically diverse children is discussed, including the impact of culture, cross-cultural assessment, and treatment models in a multi-systems approach.

EDP 5394 Psychological Assessment of Children and Adolescents III: Social-Emotional (3)
Pre-requisite(s): EDP 5337
An overview of social-emotional, behavior, and personality assessment techniques. Primary focus is on administering, scoring, and interpreting data from instruments for children and adolescents.

EDP 5662 Internship Special Education (6)
Pre-requisite(s): EDP 5332
Full time teaching experience where teacher candidates interact with special education students. Includes completion of content modules, conferencing with mentor teacher and university instructor, observation of lessons taught by master teachers, written lesson reflections, and preparation of benchmark evaluations.

EDP 5V54 Practicum with Gifted Students (3-6)
Three to six semester hours of practicum experience or two years of successful classroom teaching experience in an approved program for gifted and talented students to meet the requirement for an endorsement in this area. Regular consultation with program faculty to develop teaching skills is arranged in conjunction with the setting, May be repeated for credit.

EDP 5V78 Practicum in School Psychology (1-3)
Pre-requisite(s): Admission to School Psychology program or consent of instructor
Supervised practicum in School Psychology. May be repeated. Graded on credit/no-credit basis

EDP 5V95 Special Problems in Education (1-4)
Designed to meet individual needs of graduate students. May be repeated.

EDP 5V98 Practicum in Applied Behavior Analysis (1-3)
A supervised practicum in applied behavior analysis. Throughout the practicum experience, students receive regular consultation with program faculty and instructors to develop applied assessment and interventions skills within the field experience. This course may be repeated for credit.

EDP 5V99 Thesis (1-6)
Credit received when the thesis is finally approved.

EDP 6155 Reflection of Multidisciplinary Studies (1)
Pre-requisite(s): EDP 6154
Research resulting from the examination of contemporary issues, problems, and/or themes from a multidisciplinary perspective will be shared in a symposium.

EDP 6156 Doctoral Seminar, Part 3 (1)
Pre-requisite(s): Completion of EDP 6354 and EDP 6255
In this course, students will develop ongoing plans for research, teaching, and service as they prepare for graduation. Students will learn how to develop a line of research to continue building on the framework of research initiated during the Ph.D. program. Additionally, students will learn how to identify and interpret academic job postings and prepare successful application documents.

EDP 6157 Doctoral Seminar, Part 3 (1)
Pre-requisite(s): Completion of EDP 6302 and EDP 6201
In this course students develop ongoing plans for research, teaching, and service as they prepare for graduation. Students learn how to develop a line of research to continue building on the framework of research initiated during the Ph.D. program. Additionally, students learn how to identify and interpret academic job postings and prepare successful application documents.

EDP 6201 Doctoral Seminar Part 2 (2)
Pre-requisite(s): EDP 6302, Doctoral Seminar 1
This course provides students with skills necessary for dissemination in research. Students learn the skills associated with participating in peer review, present research, and publish research.

EDP 6302 Doctoral Seminar Part 1 (3)
This course provides students with the skills necessary to begin a successful doctoral experience. This course introduces methods for systematically identifying existing literature, developing research questions, and producing meaningful lines of research.

EDP 6320 Concepts and Foundations of Behavioral Assessment (3)
This course introduces students to the fundamentals of measurement and evaluation in applied behavior analysis (ABA). Students learn the history of behavioral assessment as well as traditional concepts (e.g., reliability, validity) related to assessment development and research. Students also learn to critique and analyze measurement-related research for commonly used assessments in behavior analysis.

EDP 6325 Positive Behavior Interventions and Supports (3)
This course prepares students to work effectively within a positive behavior interventions and supports framework. Positive behavior interventions and supports is a school-wide approach to managing behavior that targets teaching and reinforcing desired, positive behavior among children in a classroom.

EDP 6330 Seminar in Learning and Development Issues (3)
Pre-requisite(s): Doctoral standing
This seminar examines current issues in educational psychology from a historical and research perspective. Readings will focus on the application of psychological concepts to the educational process.

EDP 6332 Advanced Human Growth and Development (3)
Pre-requisite(s): EDP 5332
This course is an advanced study of human development from birth through adolescence. The relationships between the individual, the family, and society are explored within the context of social justice, as are the ways that these relationships vary within and across cultures. Key research studies are examined.

EDP 6333 Advanced Study of Human Learning (3)
Pre-requisite(s): EDP 5333, 5334, and 5335
Individualized, directed study of topics in human learning. Topics include attention and perceptual learning, language acquisition, memory, and social learning. Students choose a research problem in human learning, do a review of the literature, and conduct a pilot study to investigate the problem.

EDP 6335 Research Practicum in Education (3)
Cross-listed as EDA 6335, EDL 6335
Pre-requisite(s): EDP 5335
Educational research writing. Emphasis will be placed on the organization of the prospectus, the thesis, the dissertation, and the abstract which are typically required by graduate schools in professional fields. Individualized and critical assistance will be given in the research writing style and composition mechanics befitting the research design chosen.

EDP 6336 Qualitative Research and Data Analysis (3)
Cross-listed as EDC 6336
Pre-requisite(s): EDP 5335 or EdD online student
The development of an in-depth understanding of the major methods of inquiry associated with qualitative research will be emphasized. These include participant observation, interviewing, and document analysis. Additionally, an appreciation for the strengths and limitations of engaging in qualitative research and a general understanding of the paradigms that undergird qualitative research and their implications for conducting qualitative inquiry will be cultivated.

EDP 6337 Psychometric Theory and Test Construction (3)
Pre-requisite(s): EDP 5340
Review of the theoretical literature and construction of direct and indirect performance tests. Course will cover cognitive, affective, and psychomotor domains, theoretical assumptions underlying test design, criteria for the appropriate construction of discreet item forms, processes used to establish test validity and reliability, and use of test construction software.

EDP 6338 Grant Writing (3)
Cross-listed as EDC 6338
Information about sources of external funding and instruction in the techniques of grant writing.

EDP 6339 Ethnographic Research Methods in Education (3)
Cross-listed as EDC 6339
See EDC 6339 for course information.

EDP 6340 Teaching in Higher Education (3)
Campus-based experiences in a higher education setting. Particular attention will be given to the design of courses of study and instructional strategies that encourage inquiry with the adult learner.

EDP 6341 Practicum in Adult Learning: Field-Based (3)
In-depth experiences in a field-based educational or other setting. Particular attention will be given to the development, implementation, and evaluation of programs for adult learners.

EDP 6343 Consultation and Supervision in Applied Behavior Analysis (3)
This course teaches students to apply the principles of applied behavior analysis to consultation, supervision, and management. Students learn skills needed to analyze cases and provide effective behavioral consultation. There is an emphasis on the practical application of consultation skills within a problem-solving, behavioral consultation framework.

EDP 6345 Adult Learner-Advanced (3)
Characteristics of the young and mature adult learners with an emphasis on intellectual development. An analysis of theories of adult learning will be included.

EDP 6349 Paradigms and Frameworks of Gifted Education (3)
This course explores historical and emerging paradigms of giftedness and gifted education. Topics include paradigms and conceptual frameworks that are based on theory and research. In this course students explore ways paradigms and frameworks influence policy, research, and practice.

EDP 6350 History and Systems of Psychology and Educational Applications (3)
How systems of psychological thought develop in the context of the philosophy of science. Changing systems in psychology are examined, emphasizing their influence on theory, design, and the delivery of educational programs and psychological services.

EDP 6353 Creativity and Problem Solving (3)
Focuses on how to teach and instruct from examining the basic theories, models, and research of creativity and problem solving and their applications to the development of individuals. Differences that result from an interaction among personality, creativity, and ecological factors will be related to the design of programs and curriculum that meet the changing abilities and needs of adult learners.

EDP 6354 Advanced Single Case Design (3)
Pre-requisite(s): EDP 5357
An advanced study of single case research designs. The course prepares students to conduct single-case research utilizing advanced, combined, and modified designs. Additionally, students learn how to conduct meta-analyses of single-case reviews, employing a variety of advanced effect size measures. Finally, students learn to critique and analyze published research employing a variety of single-case designs.

EDP 6355 Advanced Concepts in Applied Behavior Analysis (3)
Pre-requisite(s): EDP 5302
This course is an advanced study of applied behavior analysis. The content of the course is related to principles and advanced concepts in applied behavior analysis. Students learn how to gather information about an advanced topic and how to present that information to others.

EDP 6356 Doctoral Seminar in School Psychology (3)
Pre-requisite(s): Advancement to candidacy for the Doctor of Philosophy degree in School Psychology
In this seminar advanced school psychology doctoral students convene to discuss and critically evaluate key professional and scientific issues. Students read and discuss seminal articles on topics of interest with the aim of generating future research projects to test theory or inform practice. Students learn how to prepare grant proposals, craft journal articles, navigate the peer review process, and integrate science and practice.

EDP 6359 Mixed Methods Research Design and Analysis (3)
Cross-listed as EDC 6359
See EDC 6359 for course information.

EDP 6360 Experimental Design I (3)
Pre-requisite(s): EDP 5334 and 5335
Course focuses on applied experimental designs that address the unique settings and systems of education, including data collection strategies for field work.

EDP 6361 Experimental Design II (3)
Pre-requisite(s): EDP 5334, 5335 and 6360
Course focuses on unique models for research in education settings including advanced experimental designs, path analysis, general linear modeling, hierarchical linear modeling, and structural equation modeling.

EDP 6362 Applied Multiple Regression/Correlation Analysis in Education (3)
Pre-requisite(s): EDP 5334
Applications of correlation and multivariate regression analysis procedures to issues in education research, such as building, evaluating, and validating multiple regression models.

EDP 6363 Verbal Behavior (3)
This course is an advanced study of language conceptually based upon the principles of behavior analysis. The course develops an understanding of language according to the two primary theories in the field of behavior analysis, Skinner's verbal behavior and relational frame theory (RFT).

EDP 6365 Latent Variable Models in Education (3)
Pre-requisite(s): EDP 5334, 6360, and 6362
An advanced statistics class that builds on general multiple regression models to extend to the measurement of latent variables, such as factor analysis and structural equation modeling.

EDP 6366 Item Response Theory (3)
Pre-requisite(s): EDP 6337 and 6362
An advanced psychometrics class designed to introduce the development and testing of item response models, as well as applying the models to measurement instruments.

EDP 6367 Individual Differences (3)
Pre-requisite(s): EDP 6337
An advanced psychometrics and statistics class, introducing selected topics in behavior genetics, intelligence, and personality research.

EDP 6370 Case Study Research Methods and Analysis in Education (3)
Cross-listed as EDC 6370
See EDC 6370 for course information.

EDP 6380 Community Experience in Developmental Disability Services (3)
Students complete a field experience within a publicly funded program for children with developmental disabilities. Approved placements include public school special education classrooms, early childhood services programs, and Mental Health Mental Retardation (MHMR) programs. Students complete activities associated with applied behavior analysis (ABA) and the therapeutic or educational services provided by the supervising entity.

EDP 6385 Internship in Applied Behavior Analysis (3)
A supervised internship in Applied Behavior Analysis (ABA). Students complete 150 hours of field experiences in a pre-approved placement. Students in this course are expected to complete activities associated with the practice of ABA as well as become actively involved in the research activities of the supervising entity. A Board Certified Behavior Analyst supervises all field experiences.

EDP 6390 Seminar: Education (3)
Designed to meet individual needs of doctoral students. May be repeated.

EDP 6V00 Dissertation proposal (1-9)
For doctoral students who have completed all required coursework but have not yet completed preliminary examinations. Students will prepare a doctoral research proposal. The course may be repeated up to three times.

EDP 6V78 Advanced Practicum in School Psychology (1-4)
Pre-requisite(s): EDP 5V78
This course prepares health-service providers to support the academic development and psychological well-being of youth. It provides supervision and opportunities to reflect on the experiences of professional practice in school and clinic settings.

EDP 6V82 Doctoral Internship in School Psychology (1-3)
Pre-requisite(s): Admission to school psychology program or consent of instructor
A field-based experience for doctoral students in school psychology. Experience must meet the requirements specified in the school psychology internship handbook. May be repeated. Graded on credit-non-credit basis.

EDP 6V99 Dissertation (1-9)
Research, data analysis, writing, and oral/written defense of an approved doctoral dissertation. At least nine hours of EDP 6V99 are required.

Electrical & Comp Engineering (ELC)

ELC 4318 Avionics System Design (3)
Cross-listed as AVS 4318
Design of avionics systems for civil and military aircraft. Topics include avionics system technology and architectures; system engineering principles; radar, electro-optical, and radio frequency sensors; displays; and communication and navigation systems.

ELC 4320 Introduction to Optics (3)
Pre-requisite(s): C or better in ELC 3335
Geometrical optics, electromagnetic waves, diffraction, interference, polarization, Fourier optics, laser fundamentals, and optical communication basics. Laboratory sessions include semiconductor laser measurement, fiber optic coupling, and Michelson interferometer setup.

ELC 4330 Introduction to Robotics (3)
Cross-listed as ME 4330
Pre-requisite(s): C or better in MTH 2321; C or better in MTH 3325
Analysis of robot manipulators, including forward and inverse kinematics, rigid-body rotation parameterizations, velocity kinematics, path planning, nonlinear dynamics, single and multi-variable control.

ELC 4332 Automatic Control Systems (3)
Pre-requisite(s): C or better in ELC 3335
Analysis and design of linear feedback control systems. Laplace transforms, transfer functions, signal-flow graphs, electrical and mechanical system modeling, state variables, system stability, time-domain response, root-locus method, Nyquist criterion, and compensator design. Laboratory exercises to illustrate course concepts.

ELC 4340 Power Systems (3)
Pre-requisite(s): C or better in ELC 3335
Analysis of power systems, including energy sources, transmission lines, power flow, transformers, transmission and distribution systems, synchronous generators, stability, power system controls, short-circuit faults, and system protection.

ELC 4345 Power Electronics (3)
Pre-requisite(s): C or better in ELC 3314; C or better in 3114
Introduction to power electronic systems with emphasis on power control and switching circuits for AC/DC, DC/DC, and DC/AC converters. Associated laboratory component.

ELC 4350 Principles of Communication (3)
Pre-requisite(s): C or better in ELC 3335; C or better in STA 3381
Signal analysis, modulation techniques, random signals and noise, digital transmission, information theory, coding.

ELC 4351 Digital Signal Processing (3)
Pre-requisite(s): C or better in ELC 3335; C or better in STA 3381
Discrete-time signals and systems, sampling theory, z-transforms, spectral analysis, filter design, applications, and analysis and design of discrete signal processing systems. Credit cannot be earned for ELC 4351 if credit is earned for BME 4452.

ELC 4353 Image Formation and Processing (3)
Cross-listed as BME 4353
Pre-requisite(s): C or better in ELC 3335 or concurrent enrollment; C or better in STA 3381
Introduction to image formation systems that provide images for medical diagnostics, remote sensing, industrial inspection, nondestructive materials evaluation and optical copying. Image processing, including image enhancement, analysis, and compression. Student specialization through assignments and project.

ELC 4360 Software Systems (3)
Pre-requisite(s): C or better in ELC 3336
Software engineering methods and tools. Topics include the development lifecycle, requirements, specifications, design, implementation, verification, validation, and maintenance, project management and professional ethics.

ELC 4362 Wireless Sensor Networks (3)
Pre-requisite(s): C or better in ELC 3338; C or better in ELC 3314; or consent of instructor
Characterization and design of large-scale wireless sensor networks. Topics include wireless channel utilization, media access protocols, routing, energy management, synchronization, localization, data aggregation, and security. Laboratory exercises using wireless sensor devices, cross-development, and real-time operating systems.

ELC 4372 Bioinstrumentation (3)
Cross-listed as BME 4372
Pre-requisite(s): C or better in ELC 2330
Principles of biomedical instrumentation and their real-world applications. Emphasis on understanding the basic design principles and technologies used in bioelectrical, biomechanical, and clinical instrumentation.

ELC 4377 Solar Energy (3)
Cross-listed as ME 4377
Pre-requisite(s): C or better in ELC 2330; C or better in ME 2345
A first course in the principles of solar energy collection, conversion and storage. Topics include solar photovoltaic and thermal collectors, sun-earth geometry, ground and sky radiation models, and balance-of-system components including stratified tanks, pumps, and power inverters. Students will learn industry-standard TRNSYS energy modeling software.

ELC 4381 Antennas and Wireless Propagation I (3)
Pre-requisite(s): C or better in ELC 3337
Fundamentals of radiation and propagation, antenna parameters, linear antennas, linear and planar phased arrays, and microstrip antennas. Analysis and design principles, simulation and measurement.

ELC 4383 RF/Microwave Circuits I (3)
Pre-requisite(s): C or better in ELC 3337
Introduction to passive RF, microwave, and wireless circuit design. Topics include transmission line theory; network analysis; impedance matching techniques; design of resonators, couplers, and filters; diodes; mixers; and principles and techniques of microwave measurements.

ELC 4384 RF/Microwave Circuits II (3)
Pre-requisite(s): C or better in ELC 4383
This is a second course in radio-frequency and microwave circuits covering microwave amplifier and oscillator design. Topics include the ZY Smith chart, matching network design, gain calculations, design for amplifier stability, noise figure and low-noise amplifier design, gain matching, and negative resistance oscillator design. A final project will require the design, simulation, construction, and testing of an amplifier using microwave CAD tools and hands-on measurements.

ELC 4396 Special Topics in Electrical or Computer Engineering (3)
Pre-requisite(s): Consent of department chair
Study of advanced topics in electrical or computer engineering. This course may be repeated once under a different topic.

ELC 4438 Embedded Systems Design (4)
Pre-requisite(s): C or better in ELC 3336
Design and implementation of embedded computer systems using microcontrollers, sensors and data conversion devices, actuators, visual display devices, timers, and applications specific circuits. Software design using microprocessor cross-development systems and real-time operating system principles.

ELC 4V97 Special Projects in Electrical or Computer Engineering (1-6)
Pre-requisite(s): Consent of department chair
Advanced topics and/or special project activities in electrical or computer engineering.

ELC 5302 Engineering Analysis (3)
Cross-listed as EGR 5302, ME 5302
Pre-requisite(s): Graduate standing in Engineering
Selected topics in applied engineering mathematics. Topics include advanced linear algebra, signal theory, and optimization methods.

ELC 5311 Advanced Logic Design (3)
Pre-requisite(s): Graduate standing in Engineering
Computer-automated design of digital circuits. Functional specification; structural and behavioral modeling using hardware description languages; simulation for design verification and timing analysis; circuit synthesis for FPGA implementation; testing and fault diagnosis.

ELC 5313 Advanced Computer Architecture (3)
Pre-requisite(s): ELC 4438 or consent of instructor
Advanced topics in computer architecture, including instruction set design, instruction pipelines, super scaler and very-long instruction word processors, cache and virtual memory systems, multiprocessor systems, large data storage systems and computer networks.

ELC 5316 Real-Time Systems Design (3)
Pre-requisite(s): ELC 4438 or consent of instructor
Hardware and software characteristics of real-time concurrent and distributed reactive control systems; design methodologies; performance analysis; case studies and development projects.

ELC 5336 Advanced Engineering Electromagnetics (3)
Pre-requisite(s): ELC 3337 or consent of instructor
An in-depth study of electromagnetic fields and waves and their applications in modern wireless communication and sensor systems. Topics include Maxwell's equation for complex media, scalar and vector potentials, non-ideal transmission lines, cylindrical waveguides, general properties of guided waves, and antennas.

ELC 5337 Principles of Microwave Sensing and Measurement (3)
Fundamentals of microwave sensor design and applications. Emphasis on understanding the basic principles, fundamental electrical and magnetic properties of materials, and the sensor configurations of RF/microwave instruments used in industrial and biomedical application.

ELC 5338 High Frequency Electronics Design (3)
Design and analysis of solid-state electronic circuits at RF and microwave frequencies. Emphasis on operational characteristics and design procedures for two- and three-terminal semiconductor devices and the associated passive components and circuit fabrication techniques used for generating, amplifying, and processing signals in this frequency range.

ELC 5339 High Frequency Electronics II (3)
Pre-requisite(s): ELC 5338 or consent of instructor
The design of linear amplifiers and oscillators at microwave frequencies, including an emphasis on design procedures for optimum gain, stability, and noise performance of amplifiers and the negative resistance method for oscillators.

ELC 5340 Radar Engineering (3)
Pre-requisite(s): ELC 5336
Electromagnetics of radar, signal processing of radar, radar imaging, Doppler processing, and radar antenna arrays. Analysis and design principles, simulation, and measurement.

ELC 5351 Multidimensional Signal Analysis (3)
Cross-listed as BME 5351
Pre-requisite(s): ELC 4451
Introduction to the processing and analysis of images in higher dimensions, including images and video. Characterization of higher dimensional signals. Multidimensional Fourier analysis, FFT's, systems and convolution. Reconstruction of images from projections. Tomography, Abel transforms, Radon transforms. Synthesis and restoration of signals using projection methods. Alternating projections onto convex sets.

ELC 5353 Biomedical Signal Analysis (3)
Cross-listed as BME 5353
Pre-requisite(s): ELC 4451 or BME 4452
Applications of signal theory and digital signal processing concepts toward biomedical signals. Topics include filters, signal modeling, adaptive methods, spectral analysis and statistical signal processing methods.

ELC 5354 Random Signals and Noise (3)
Pre-requisite(s): ELC 3335 and consent of instructor
Foundational treatment of probability, random variables and stochastic processes used in the analysis of random signals and noise in many areas of engineering. Topics include the modeling and properties of probability, scalar and vector random variables, the central limit theorem, stochastic processes, stationarity, ergodicity, the Karhunen-Loeve expansion, power spectral densities, response of linear systems to random signals, and Markov chains.

ELC 5356 Statistical and Adaptive Signal Processing (3)
Pre-requisite(s): ELC 5354
Unified introduction to the theory, implementation, and applications of statistical and adaptive signal processing methods. Key topics focus on spectral estimation, signal modeling, adaptive filtering, and signal detection.

ELC 5357 Cardiovascular Engineering and Instrumentation (3)
Cross-listed as BME 5357, EGR 5357, ME 5357
See BME 5357 for course information.

ELC 5358 Introduction to Computational Intelligence (3)
Pre-requisite(s): Consent of instructor
Foundational knowledge of computational intelligence and its application to engineering problems. Discriminant analysis, artificial neural networks, perception training and inversion, fuzzy logic, fuzzy inference engines, evolutionary computation, particle swarms, intelligent agents, and swarm intelligence.

ELC 5360 Linear Systems (3)
Pre-requisite(s): ELC 4332 or equivalent
Analysis of linear systems, including system modeling, state-variable representations, discrete-time systems, linear algebra, linear dynamic equations, stability, observability, controllability, state-feedback and state-estimators, realization, and pole placement.

ELC 5362 Optimal Control (3)
Pre-requisite(s): ELC 5360 or equivalent
Optimal control problems, static optimization, optimal control of discrete-time systems, the variational approach to optimal control, linear quadratic regulator problems, the maximum principle, extensions of LQR problem, time-optimal control problems, dynamic programming.

ELC 5364 Intelligent Control (3)
Pre-requisite(s): ELC 4332 or 4335 or Graduate standing
Introduction to intelligent control and optimization using a control-engineering approach. Topics include decision-making techniques, neural network architectures for modeling and control, system identification, fuzzy systems, evolutionary algorithms, and swarm intelligence.

ELC 5370 Introduction to Information Theory (3)
Pre-requisite(s): ELC 4350 or instructor approval
Topics include: information models, entropy measures, data compression, coding theory, error correcting codes, the Kraft inequality, optimal codes, Shannon coding theorem, Burg's theorem, evolutionary informatics, Kolmogorov complexity, algorithmic information theory, and Chaitin's number.

ELC 5381 Advanced Power Grid Interface Techniques (3)
Pre-requisite(s): ELC 4332 and either ELC 4340 or ELC 4345
Introduction to distributed power generation, power conversion topologies and their control, power factor correction circuits, harmonic concepts and power quality, modeling and control of grid-connected loads and filters, interconnection standards and control issues, and control systems for rotating machines.

ELC 5390 Research Methods and Project Formulation (3)
Cross-listed as BME 5390, EGR 5390
Pre-requisite(s): Approval of student's proposed master's thesis or project advisor
Designed for students in the process of selection of thesis or project topic. Students will gain experience in literature and/or laboratory research methods and formulation of a project appropriate for their area.

ELC 5396 Special Topics in Engineering (3)
Cross-listed as BME 5396, EGR 5396, ME 5396
See EGR 5396 for course information.

ELC 5397 Special Projects in Engineering (3)
Cross-listed as BME 5397, EGR 5397, ME 5397
See EGR 5397 for course information.

ELC 5V99 Master's Thesis (1-6)
Pre-requisite(s): Approval of student's master's thesis advisor
Students completing a master's program with a thesis must complete six hours of ELC 5V99.

ELC 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

ELC 6V10 Doctoral Prospectus Research (1-6)
Pre-requisite(s): Instructor approval
Supervised research for developing a dissertation prospectus that will be the subject of the preliminary exam that will admit students to candidacy. A student may repeat this course for credit with a maximum of ten total hours. Registration for this course is sufficient for achieving full-time status.

ELC 6V99 Dissertation (1-12)
Pre-requisite(s): Consent of student's supervisory graduate committee and admission to doctoral candidacy
Required of all doctoral candidates. In no case will fewer than 12 semester hours be accepted for a dissertation. Students may not enroll for dissertation hours until they have been officially accepted into candidacy for the doctoral degree. After initial enrollment, students must register for at least one semester hour of dissertation every semester thereafter (summer semester excluded).

Emergency Medicine (MEM)

MEM 6142 Radiology (1)
Pre-requisite(s): MEM 6330
A rotation to orient the Emergency Medicine Physician Assistant Resident to the concepts of radiology in emergency medicine.

MEM 6143 Oral-Maxillary Facial Surgery (1)
Pre-requisite(s): MEM 6330
A rotation emphasizing the management of head and neck disorders. Practicum and didactics in the disorders of the head and neck.

MEM 6144 Toxicology (1)
Pre-requisite(s): MEM 6330
A rotation emphasizing toxicological presentations encountered in the emergency department.

MEM 6210 Introduction to Emergency Medicine Resuscitation, Shock, and Anesthesia (2)
Pre-requisite(s): MEM 6330
This course studies the clinical side of resuscitation techniques, shock recognition and treatment, and anesthesia used in the emergency department.

MEM 6211 Emergency Treatment of Orthopedic Injuries, Emergency Ultrasounds, and Emergency Radiology (2)
Pre-requisite(s): MEM 6330
Study of concepts of orthopedic conditions encountered in the emergency department.

MEM 6212 Toxicology and Oral Maxillary Facial Disorders (2)
Pre-requisite(s): MEM 6330
This rotation studies concepts of toxicological presentations and oral maxillary facial disorders encountered in the emergency department.

MEM 6213 Cardiovascular, Pulmonary, Hematologic, Oncologic, and Psychosocial Diseases and Disorders (2)
Pre-requisite(s): MEM 6330
The study of concepts of cardiovascular, pulmonary, hematologic, onocologic, and psychosocial diseases encountered in an emergency department environment.

MEM 6214 Gastrointestinal, Genitourinary, Obstetrics, and Gynecology Diseases (2)
Pre-requisite(s): MEM 6330
The study of concepts in gastrointestinal, genitourinary, obstetrics, and gynecology diseases encountered in an emergency department environment.

MEM 6215 Pediatric Non-Traumatic Musculoskeletal Disorders, Abuse, and Assault (2)
Pre-requisite(s): MEM 6330
The study of diseases, non-traumatic muscular skeletal disorders, assault and abuse in the pediatric emergency department patient.

MEM 6216 Emergency Wound Management, Environmental Injuries, and Trauma (2)
Pre-requisite(s): MEM 6330
The study of concepts in wound management, environmental injuries, and trauma encountered in the emergency department.

MEM 6217 Infectious Disease, Endocrinology, and Neurology (2)
Pre-requisite(s): MEM 6330
The study of concept in infectious diseases and endocrinologic, and neurologic disorders that are encountered in an emergency department.

MEM 6220 Advanced Emergency Medicine, Resuscitation, Shock, and Anesthesia (2)
Pre-requisite(s): MEM 6210
This course builds upon MEM 6210 and studies the clinical side of resuscitation techniques, shock recognition and treatment, and anesthesia used in the emergency department.

MEM 6221 Advanced Emergency Treatment of Orthopedic Injuries, Emergency Ultrasounds, and Emergency Radiology (2)
Pre-requisite(s): MEM 6211
Study of advanced concepts of orthopedic conditions encountered in the emergency department.

MEM 6222 Advanced Toxicology and Oral Maxillary Facial Disorders (2)
Pre-requisite(s): MEM 6212
This rotation studies advanced concepts of toxicological presentations and oral maxillary facial disorders encountered in the emergency department.

MEM 6223 Advanced Cardiovascular, Pulmonary, Hematologic, Oncologic, and Psychosocial Disorders (2)
Pre-requisite(s): MEM 6213
The study of advanced concepts of cardiovascular, pulmonary, hematologic, oncologic, and psychosocial diseases encountered in an emergency department environment.

MEM 6224 Advanced Gastrointestinal, Genitourinary Obstetrics, and Gynecology Diseases (2)
Pre-requisite(s): MEM 6214
The study of advanced concepts in gastrointestinal, genitourinary, obstetrics, and gynecology diseases encountered in an emergency department environment.

MEM 6225 Advanced Pediatrics Non-Traumatic Musculoskeletal Disorders, Abuse, and Assault (2)
Pre-requisite(s): MEM 6215
The advanced study of diseases, non-traumatic muscular skeletal disorders, assault, and abuse in the pediatric emergency department patient.

MEM 6226 Advanced Emergency Wound Management, Environmental Injuries, and Trauma (2)
Pre-requisite(s): MEM 6216
The study of advanced concepts in wound management, environmental injuries, and trauma encountered in the emergency department.

MEM 6227 Advanced Infectious Disease, Endocrinology, and Neurology (2)
Pre-requisite(s): MEM 6217
The study of advanced concepts in infectious diseases, endocrinologic, and neurologic disorders that are encountered in an emergency department.

MEM 6231 Emergency Department 1 (2)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6232 Emergency Department 2 (2)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6233 Emergency Department 3 (2)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6234 Emergency Department 4 (2)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6235 Emergency Department 5 (2)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6330 Orientation to Emergency Medicine (3)
A comprehensive orientation to the field of Emergency Medicine, with formal presentations/lectures, ACLS/PALS, Emergency Department administrative issues, Emergency Medical Services, ethics and professionalism, and an introduction to research in emergency medicine.

MEM 6336 Emergency Department 6 (3)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6337 Emergency Department 7 (3)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an Emergency Department setting.

MEM 6338 Emergency Department 8 (3)
Pre-requisite(s): MEM 6330
General emergency medicine rotation to apply the concepts of medical practice in an emergency department setting.

MEM 6346 Clinical Research (3)
Pre-requisite(s): MEM 6330
The MEM 6346 rotation consists of a didactic phase during the first month of training, dedicated research blocks, and individual research days scheduled throughout the 18-month course. The research course is designed to familiarize the residents with the research process and, more importantly, to facilitate the development of the skills necessary to critically analyze published scientific articles.

MEM 6439 Pediatrics Emergency Department (4)
Pre-requisite(s): MEM 6330
A rotation emphasizing the clinical side of pediatric patients in the emergency department.

MEM 6440 Pediatrics Emergency Department and Pediatric Intensive Care Unit (4)
Pre-requisite(s): MEM 6330
A rotation emphasizing the clinical side of pediatric patients in the Emergency Department and Pediatric ICU.

MEM 6445 Emergency Ultrasound (4)
Emergency ultrasound is the medical use of ultrasound technology for the bedside diagnostic evaluation of emergency medical conditions; resuscitation of the acutely ill, critically ill or injured; and guidance of high risk or difficult procedures. Typically, emergency ultrasound is a goal-directed, focused ultrasound examination that answers brief and important clinical questions in an organ system or involving multiple organ systems.

MEM 6447 Surgical Intensive Care Unit (SICU) (4)
Pre-requisite(s): MEM 6330
A rotation emphasizing the concepts and management of trauma and post-operative patients encountered in the Emergency Department.

MEM 6448 Medical Intensive Care Unit (MICU) (4)
Pre-requisite(s): MEM 6330
A rotation emphasizing life threatening diseases encountered in the emergency department and managed in the MICU.

MEM 6449 Cardiac Care Unit (CCU) (4)
Pre-requisite(s): MEM 6330
A rotation emphasizing the concepts of cardiovascular diseases encountered in the emergency department and managed in the CCU.

MEM 6450 Trauma Surgery (4)
Pre-requisite(s): MEM 6330
A rotation emphasizing the concepts of trauma management and lifesaving surgery.

Engineering (EGR)

EGR 4V97 Special Projects in Engineering (1-6)
Pre-requisite(s): Consent of department chair
Advanced topics and/or special project activities in engineering.

EGR 5001 Baylor Engineering and Research Seminar (0)
Pre-requisite(s): Admission to Engineering graduate program
A weekly forum for presentation by guest speakers, faculty and graduate students on current research and other topics of interest. Graduate students must enroll and attend two semesters or more as required by their advisory committee.

EGR 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

EGR 5302 Engineering Analysis (3)
Cross-listed as ELC 5302, ME 5302
See ELC 5302 for course information.

EGR 5357 Cardiovascular Engineering and Instrumentation (3)
Cross-listed as BME 5357, ELC 5357, ME 5357
See BME 5357 for course information.

EGR 5390 Research Methods and Project Formulation (3)
Cross-listed as BME 5390, ELC 5390
See ELC 5390 for course information.

EGR 5396 Special Topics in Engineering (3)
Cross-listed as BME 5396, ELC 5396, ME 5396
Pre-requisite(s): Approval of department chair
Study of special topics in engineering. This course may be repeated for a total of four times with different topics.

EGR 5397 Special Projects in Engineering (3)
Cross-listed as BME 5397, ELC 5397, ME 5397
Pre-requisite(s): Consent of department chair
Graduate level topics and/or special project activities in engineering.

EGR 5V98 Master's Project (1-6)
Pre-requisite(s): Approval of student's master's project advisor
Students completing a master's program with a project must complete three or six hours of this course, as determined by the student's individual plan of study.

English (ENG)

ENG 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

ENG 5301 Old English Language (3)
Pre-requisite(s): Graduate standing or permission of the instructor
Introduction to the Old English language through intensive study of Old English grammar and reading of Old English texts. Required for doctoral candidates.

ENG 5302 Old English Literature (3)
Pre-requisite(s): Graduate standing and at least one course in Old English language (ENG 5301 or equivalent) or permission of the professor
Continuation of ENG 5301. Introduction to a wide range of Old English literary texts and the textual and critical discussion surrounding them. May be repeated one time for credit provided topic is different.

ENG 5303 Studies in Linguistics (3)
Tools and methods for the analysis of language. Subject matter may include phonology, morphology, syntax, semantics, pragmatics and discourse, language in society, dialect and variation, or stylistics. Topic varies according to demand. May be repeated one time for credit provided topic is different.

ENG 5304 Bibliography and Research Methods (3)
Cross-listed as AMS 5304
Practical introduction to the nature of printing and transmission of written material; a guide to the use of the libraries for graduate-level research; approaches to purposes for graduate studies. May be repeated one time for credit provided topic is different.

ENG 5306 Literary Criticism: Seminar (3)
Cross-listed as AMS 5306
Issues in critical theory from Plato to the present with particular attention given to current practice and trends in literary analysis. May be repeated one time for credit provided topic is different.

ENG 5308 Independent Study in Literature (3)
Cross-listed as AMS 5308
Research or reading project undertaken by an individual student working under the direction of a professor. Project to concern literary topics beyond what is included in the defined seminars. Prospectus to be approved by the director of graduate studies in English. May be repeated one time for credit provided topic is different.

ENG 5309 Seminar on Curriculum and Pedagogy in English (3)
Seminar designed for M.A. and Ph.D. students who intend to teach in higher education or secondary school as a career. While most graduate courses in the program focus directly on the contents of literary knowledge in the form of authors, genres, periods, styles, and so on, this course focuses on curriculum and pedagogy issues. May be repeated one time for credit provided topic is different. Maximum six semester hours.

ENG 5310 Rhetoric and Composition: Seminar (3)
Issues in rhetoric from antiquity to the present, focusing on historical development and theoretical problems; contemporary studies in the production of texts and the teaching of writing. May be repeated one time for credit provided topic is different.

ENG 5312 Middle English Literature: Seminar (3)
Study by seminar method of an aspect of Middle English literature: Chaucer, the alliterative revival, medieval drama, and romance. May be repeated one time for credit provided topic is different.

ENG 5314 Creative Writing (3)
Workshop in creative writing and designed for thesis track and non-thesis track students actively engaged in creative writing. Course content varies according to instructor preference and expertise. May be repeated one time for credit provided topic is different. Maximum six semester hours.

ENG 5324 Sixteenth-Century English Literature: Seminar (3)
Poetry, drama, and/or prose of a single author, or of a movement, or of a topic integral to sixteenth-century English literature. May be repeated one time for credit provided topic is different.

ENG 5330 Seventeenth-Century English Literature: Seminar (3)
Selected works of Donne and other Metaphysical poets, Jonson and his followers, Milton, Bacon, Browne, Burton, Bunyan, and others to the Restoration Period. May be repeated one time for credit provided topic is different.

ENG 5340 Restoration and Eighteenth-Century English Literature: Seminar (3)
Major writers, literary background, and cultural aspects of the Restoration and eighteenth century. Major emphasis varies with each offering. May be repeated one time for credit provided topic is different.

ENG 5350 Early English Romantic Literature: Seminar (3)
One or more of the poets and essayists of the Early English Romantic period. May be repeated one time for credit provided topic is different.

ENG 5352 Later English Romantic Literature: Seminar (3)
One or more of the poets and essayists of the Later English Romantic period. May be repeated one time for credit provided topic is different.

ENG 5361 Victorian Poetry: Seminar (3)
Poetry of a single author or a movement or topic embracing several writers of nineteenth-century England. May be repeated once for credit provided topic is different.

ENG 5362 Victorian Prose: Seminar (3)
Selected works of fiction and/or non-fiction from the Victorian period. Course may emphasize a single author or a movement or topic embracing several writers of nineteenth-century England. May be repeated one time for credit provided topic is different.

ENG 5364 Browning: Seminar (3)
Several key poems with an examination of the evolution of interpretation of these poems. Major focus on The Ring and the Book: its sources, structure, autobiographical content, and interpretation. Students are advised to complete ENG 4364 before registering for ENG 5364. May be repeated one time for credit provided topic is different.

ENG 5371 Modern British Literature: Seminar (3)
Poetry, fiction, and/or drama of a single author or a movement embracing several British authors writing between 1900 and 1940. May be repeated once for credit provided topic is different.

ENG 5372 Contemporary British Literature: Seminar (3)
Poetry, fiction, and/or drama of a single author or a movement embracing several British authors writing after 1940. May be repeated once for credit provided topic is different.

ENG 5374 Studies in Literature (3)
American, British, or World literature as it crosses national boundaries or treats themes or movements that do so. Topic announced for each session. May be repeated one time for credit provided topic is different. Maximum six semester hours.

ENG 5376 Religion and Literature Seminar (3)
Pre-requisite(s): Graduate standing in the doctoral Religion and Literature concentration or consent of the instructor
Designed to clarify the plurality of ways in which the integrative study of religion and literature may be engaged. Among the theoretical approaches to be examined, these are representative: humanist, feminist, atheist, Jewish, and Christian. The course will include at least one major theological aesthetician and two or three major literary texts that are susceptible of multiple religious readings. May be repeated one time for credit provided the topic is different.

ENG 5377 English Religious Authors: Seminar (3)
Imaginative literature with religious concerns broadly defined, of a single author or complementary authors, writing in English. May be repeated once for credit provided topic is different.

ENG 5391 Early American Literature (3)
Cross-listed as AMS 5391
Poetry or prose of a single author or of a movement or topic embracing several writers of eighteenth-century America. May be repeated one time for credit provided topic is different.

ENG 5393 Nineteenth Century American Literature (3)
Cross-listed as AMS 5393, ENG 5390
Poetry or prose of a single author or of a movement or topic embracing several writers of nineteenth-century America. May be repeated one time for credit provided topic is different.

ENG 5394 Modern American Literature (3)
Cross-listed as AMS 5394, ENG 5392
Poetry, fiction, or drama of a single author or a movement embracing several writers from 1900-1940. May be repeated one time for credit provided topic is different.

ENG 5395 Contemporary American Literature (3)
Cross-listed as AMS 5389
Poetry, fiction, or drama of a single author or a movement embracing several writers from 1940 to the present. May be repeated one time for credit provided topic is different.

ENG 5396 American Studies: Seminar (3)
Cross-listed as AMS 5396
American studies, treating such subjects as literature, history, philosophy, psychology, theology, and education. The course focuses on examining texts as cultural documents. May be repeated one time for credit provided topic is different.

ENG 5V99 Thesis (1-6)
Supervised research for the master's thesis. 1-6 semester hours; maximum ten semester hours.

ENG 6374 Advanced Studies in Literature (3)
Pre-requisite(s): Twenty-one semester hours of English graduate courses
Specialized topics not ordinarily included in regularly scheduled graduate seminars, e.g., the Pre-Raphaelites, American Puritanism, Derridean influences. Topic announced for each semester or session.

ENG 6V10 Prospectus Research (1-3)
Pre-requisite(s): Completion of required course work
Supervised research for developing and writing a Dissertation Prospectus Proposal that will be subject to review and approval by the Supervisory Committee.

ENG 6V99 Dissertation (1-12)
Supervised research for the doctoral dissertation. One to twelve semester hours; maximum seventeen semester hours.

Entrepreneurship (ENT)

ENT 5322 Accelerated Ventures Leadership (3)
Successful entrepreneurs must effectively manage scarce resources in an increasingly complex and global world. This course provides students with a wide range of financial skills to manage their resources more effectively. Specific issues critical to emerging businesses such as financial forecasting, effective financial management, sources of financing, bootstrapping, and exit planning are examined.

ENT 5329 Entrepreneurial Finance (3)
Successful entrepreneurs must effectively manage scarce resources in an increasingly complex and global world. This course provides students with a wide range of financial skills to manage their resources effectively. Specific issues critical to emerging businesses such as ratio and free cash flow analysis, firm valuation, financial modeling, and sources of financing are examined.

ENT 5341 Technology Entrepreneurship (3)
Technology Entrepreneurship examines the entire technology commercialization process, from concept to market. It is intended to prepare students in business, engineering, and the sciences to understand and participate effectively in the processes required for successful introduction of new technology products in the marketplace.

ENT 5342 Corporate Entrepreneurship: Initiating and Sustaining Innovation (3)
Pre-requisite(s): This course is open to all Juniors/Seniors/Grads, all majors Exploration of the nature of innovation -- its drivers, patterns, and impacts on society and organizations of all sizes and missions
Use of tools and processes in a larger organizational context where selecting the best innovation target is critical.

ENT 5354 Business Research in Latin America (3)
Pre-requisite(s): Instructor approval
Offered only as part of the Baylor in the Caribbean study abroad program, this course involves the development and exploration of business-related research questions as they apply to Latin America. Students combine insights gained from in-country experiences with research from secondary sources for their proposed projects.

ENT 5363 Seminar in Mergers and Acquisitions (3)
Cross-listed as FIN 5363
See FIN 5363 for course information.

ENT 5V98 Special Studies in Entrepreneurship (1-6)
Pre-requisite(s): Consent of instructor
Student may register for a maximum credit of six semester hours.

ENT 6310 Seminar in Strategic Management (3)
This course involves a critical review of theory and research in the field of strategic management. The scope of the course is comprehensive, encompassing the following domains: strategic content, strategic processes, top executives, and corporate governance. Particular emphasis is placed on empirical study of strategic issues.

ENT 6320 Seminar in Entrepreneurship (3)
This course offers a systematic overview of the research literature on entrepreneurship and its applications. The course takes an interdisciplinary approach, building on economics, management, sociology, psychology, history, and other academic disciplines.

ENT 6330 Theoretical Perspectives in Strategy and Entrepreneurship (3)
This course exposes doctoral candidates to advanced theoretical perspectives, models, approaches, and critiques in the fields of business strategy and entrepreneurship. The course takes an interdisciplinary perspective, building on core insights from economics, sociology, psychology, political science, and other fields to develop an integrated framework for analyzing advanced topics in entrepreneurship, innovation, management, and organization.

ENT 6340 Seminar in Research Methods (3)
This seminar prepares doctoral candidates to conduct research in the organizational and behavioral sciences. Special attention is paid to the topics of construct development and validation and the identification of the necessary conditions for establishing causal relationships. The major focus of the seminar is on methodological issues, as opposed to analytical issues.

ENT 6350 Seminar in Organization Theory (3)
This interdisciplinary seminar introduces the major theoretical approaches and debates in organizational theory, drawing primarily on sociology and secondarily on economics and psychology, to explain how organizations form, survive and grow, interact, manage resources, and deal with internal and external issues.

ENT 6V00 Dissertation Proposal and Prospectus (1-3)
Pre-requisite(s): Departmental approval required
Research for doctoral students studying for preliminary examinations, preparing their topic proposals or writing their prospectuses in anticipation of candidacy. The course may be repeated. The course provides students full-time status.

ENT 6V98 Entrepreneurship Research Practicum (1-6)
Pre-requisite(s): Entrepreneurship PhD students only
Research course for PhD students in Entrepreneurship.This course is only for doctoral students who have not yet been admitted to candidacy. Students are required to coordinate with their PhD advisors and participate in activities such as literature reviews, paper writing, data collection, oral presentations, seminar participation, and professional activities.

ENT 6V99 Dissertation (1-9)
Pre-requisite(s): Departmental Approval required
Supervised research for the doctoral dissertation. A total of at least nine semester hours is required for the completion of the dissertation. Students register for dissertation hours during dissertation research and receive credit for them when the dissertation is approved.

Environmental Science (ENV)

ENV 4302 Team Problem Solving in Environmental Studies (3)
Students will contribute the skills of their specializations to analyze and to suggest a solution to a current environmental problem. May be repeated once with a change of content.

ENV 4304 Aquatic Chemistry (3)
Pre-requisite(s): ENV 3387 or consent of instructor
Concepts and issues in aquatic chemistry, including chemical equilibria of natural waters and anthropogenic impacts. Required field trips.

ENV 4307 Environmental Law (3)
Cross-listed as PSC 4307
Pre-requisite(s): Upper-level standing or consent of instructor
Fundamentals of environmental protection laws in the United States, including the evolution of environmental law in the areas of case law, common law, and administrative law. Topics include air and water quality, toxic and hazardous substances, endangered species, and wetlands and coastal management issues.

ENV 4308 Air Quality Regulation (3)
Reviews history and policy of United States, transboundary, and global air pollution and resulting environmental regulations.

ENV 4310 World Food Problems (3)
Cross-listed as ANT 4311
Pre-requisite(s): Upper-level standing
A seminar approach with emphasis on the various causes of malnutrition including the ecological basis for food production, the impact of economics and politics on food production and distribution, and the consequences of malnutrition.

ENV 4318 Heavy Metals & Global Public Health (3)
Pre-requisite(s): BIO 1305 or BIO 1405, BIO 1306 or BIO 1406, CHE 1301, and CHE 1302, and upper level standing
Examines the impacts of natural and anthropogenic sources of metals on human health and the relationship between natural geological factors and health in humans and animals in the context of geographic significance and public health responses.

ENV 4322 Climate Anthropology (3)
Cross-listed as ANT 4321
See ANT 4321 for course information.

ENV 4323 The Environment and Economic Analysis (3)
Cross-listed as AVS 4323, ECO 4323
Pre-requisite(s): ECO 1305 or 2306; and upper-level standing
Economic analysis in description, analysis, and policy formulation of environmental problems such as natural resource development, ecology, energy needs, noise, water, and air pollution. Economic tools used will include social welfare analysis, externalities, and benefit cost analysis.

ENV 4325 Human Health Risk Assessment (3)
Pre-requisite(s): ENV 3314 or concurrent enrollment in ENV 3314; or consent of instructor
Concepts, data sources, and methodologies used in the field of human risk assessment, including environmental hazard identification, dose-response assessment, exposure assessment, risk characterization, and risk communication. Required project utilizing professional risk assessment software.

ENV 4327 Human Catastrophe and Cultural Response (3)
Cross-listed as ANT 4327
See ANT 4327 for course information.

ENV 4330 Urban Political Processes (3)
Cross-listed as PSC 4330
See PSC 4330 for course information.

ENV 4333 Coastal Zone Management (3)
Pre-requisite(s): Upper-level standing
Strategies for managing beaches, deltas, barrier islands and coastal seas, including issues in flood and storm risk, pollution mitigation, recreational development and fisheries exploitation.

ENV 4335 Applied Environmental Impact Analysis (3)
Government regulations and increased citizen awareness relationship to the impact of plans and projects on the environment. The course includes an examination of major environmental legislation and its impact on decision making in the public sector. Legislative Acts pertinent to the development of Environmental Impact Analysis are studied.

ENV 4340 Environmental Archaeology (3)
Cross-listed as ANT 4340, ARC 4340
See ANT 4340 for course information.

ENV 4344 Fundamentals of Toxicology (3)
Cross-listed as BIO 4344
Pre-requisite(s): CHE 1301, 1302, 3331, BIO 1305,1306, and 3322; or consent of instructor
Basic concepts of toxicology, including historical perspectives, the disposition and metabolism of toxic substances, pharmacokinetics, target organ toxicity, non-organ directed toxicity, toxic agents, industrial toxicology, forensic toxicology, environmental toxicology, toxicity testing techniques, and risk assessment.

ENV 4345 Water Management (3)
Cross-listed as GEO 4345
Interdisciplinary field of water management. Scientific, technical, institutional, economic, legal, and political aspects of water management.

ENV 4351 Futuristics (3)
Cross-listed as ANT 4351
See ANT 4351 for course information.

ENV 4355 Principles of Renewable Resource Management (3)
Theory, principles, and management of renewable resources to meet human needs. Field trips to management activities will be included.

ENV 4362 Applied Anthropology (3)
Cross-listed as ANT 4362
See ANT 4362 for course information.

ENV 4365 The Environment and Energy (3)
Pre-requisite(s): ENV 1301 and upper-level standing
Fundamental concepts of energy: the nature of energy flows and storage, potential and kinetic energy, energy loss and reversible and irreversible processes. Renewable and non-renewable energy sources and the impact of energy consumption on problems of societal sustainability.

ENV 4369 Seminar in Anthropology (3)
Cross-listed as ANT 4369
See ANT 4369 for course information.

ENV 4371 Wetlands (3)
Cross-listed as GEO 4371
See GEO 4371 for course information.

ENV 4374 Global Soil Systems (3)
Cross-listed as GEO 4373
See GEO 4373 for course information.

ENV 4375 Natural Landscape Evaluation and Planning (3)
Cross-listed as GEO 4375
See GEO 4375 for course information.

ENV 4377 Advanced Studies in Wilderness, Parks, and Nature Reserves (3)
Pre-requisite(s): ENV 3306 or consent of instructor
Topics in the management of national or state parks, nature reserves or wilderness areas, such as recreational impacts, disturbance ecology, or environmental interpretation. May be conducted as an off-campus field seminar.

ENV 4380 Restoration Ecology (3)
Cross-listed as BIO 4381
Pre-requisite(s): ENV 2307 and 3306, or BIO 3303 or consent of instructor
Principles and practices for restoring natural systems that have been degraded or destroyed. Emphasis on re-establishment of soils, plants, and animals in terrestrial and aquatic environments. Legislative, political, industrial, and regulatory perspectives considered.

ENV 4386 Remote Sensing (3)
Cross-listed as AVS 4386, BIO 4386, GEO 4386, GEOG 4386
See GEO 4386 for course information.

ENV 4389 American Environmental History (3)
Cross-listed as HIS 4388
See HIS 4388 for course information.

ENV 4397 Tropical Environments: Ecology and Sustainable Management (3)
Pre-requisite(s): Consent of instructor and upper-level standing
Off-campus field course exploring tropical ecosystems, such as rainforests and coral reefs. Investigation of past impacts of human cultures, and of sustainable practices for future environmental management. Topics may include agriculture, forestry, aquatic resources, energy production, and ecotourism.

ENV 4450 Applied Forest Ecology (4)
Pre-requisite(s): ENV 1301 or BIO 1306
Ecological analysis of forest and woodland structure, energy and nutrient cycling, population dynamics and response to disturbance. Application of concepts to sustainable forest management.

ENV 4485 Introduction to Geographic Information Systems (4)
Cross-listed as AVS 4485, GEO 4485
See GEO 4485 for course information.

ENV 4487 Advanced GIS Analysis (4)
Cross-listed as AVS 4487, ENV 4388, GEO 4487
Principles and techniques for geospatial data collection, manipulation, modeling, visualization, and analysis. Emphasis is placed on current raster modeling techniques, spatial statistical analysis methods, and using GIS as a predictive tool for environmental research.

ENV 4680 Field School in Cultural Anthropology (6)
Cross-listed as ANT 4680
See ANT 4680 for course information.

ENV 4V13 Special Topics in Field and Laboratory Methodologies (1-3)
Pre-requisite(s): Upper-level standing or consent of instructor
A field experience centered on a region, ecosystem type, or environmental issue. Incorporates system-specific sampling methodologies. Requires off-campus field trips. May be repeated up to a total of three credit hours when content differs.

ENV 4V50 Problems (1-3)
Advanced interdisciplinary study of the environment. Subject and hours credit mutually agreed upon by student and directing professor(s) prior to registration. May be repeated for a maximum total credit of three semester hours.

ENV 5102 Current Advances in Environmental Science (1)
This seminar course includes applications of scientific inquiry to environmental science and development of policies that influence the quality of the environment. Graduate students attend seminars and engage the speaker on a weekly basis.

ENV 5155 Advanced In-Situ Instrumentation Techniques (1)
Cross-listed as PHY 5155
See PHY 5155 for course information.

ENV 5188 Advanced Laboratory Methods in Life Sciences (1)
Co-requisite(s): ENV 5288
Advanced Laboratory Methods in Life Sciences is a course for the advanced life sciences student. Course content explores biochemical and genetic techniques via classroom lectures and discussion as well as active demonstration/participation in the laboratory. Students learn principles and techniques used to evaluate a variety of endpoints across several disciplines.

ENV 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

ENV 5288 Concepts for Advanced Laboratory Methods in Life Sciences (2)
Co-requisite(s): ENV 5188
Concepts for Advanced Laboratory Methods in Life Sciences is a course for the advanced life sciences student. It explores laboratory methods via classroom lectures and discussion as well as active demonstration/participation in the laboratory. Students learn principles and techniques used to evaluate a variety of endpoints across several disciplines.

ENV 5300 Integrative Seminar in Environmental Studies (3)
An in-depth interdisciplinary examination of environmental practices in six areas: the ecosphere, human ecosystems, principles and practices in areas such as the ecosphere, human ecosystems, natural resources and pollution, environment and society, methodology, and emerging themes.

ENV 5301 Global Health and Environmental Aspects of Disater Risk Reduction (3)
Pre-requisite(s): Graduate standing or permission of instructor
This course studies the global health and environmental concepts of disaster response and risk reduction. Lectures and discussions explore the practical aspects of recent disasters, disease outbreaks, and environmental incidents and the methods, strategies, and tools that could be used to mitigate future disasters.

ENV 5302 Foundations of Environmental Health Science (3)
Cross-listed as HED 5302, PUBH 5302
Overview of current topics in environmental health, including environmental toxicology and disease, food security and safety, risk assessment, air and water quality, waste management, emerging contaminants and diseases, public health concepts of emergency preparedness, environmental regulation, and mitigation of environmental risks.

ENV 5303 Environmental Chemical Analysis (3)
Pre-requisite(s): ENV 3387 or CHE 3331; or consent of instructor
Analytic chemistry techniques used in environmental science including sampling, wet chemistry, chromatography, and spectroscopic methods.

ENV 5310 Agricultural Ecology (3)
Ecological basis for food production in both temperate and tropical countries with emphasis on understanding the nature of the vulnerability of agriculture to environmental disturbance and on possible mechanisms to improve the stability and sustained productivity of improve the stability and sustained productivity of agricultural systems.

ENV 5311 Advanced World Food Problems (3)
Cross-listed as ANT 5310
See ANT 5310 for course information.

ENV 5315 Research Design and Methods (3)
Pre-requisite(s): Senior or graduate standing; or consent of instructor
Research design and methods. Students produce a comprehensive research proposal in their major field(s) of study and submit for funding to appropriate agency or foundation.

ENV 5321 Energy Economics (3)
Cross-listed as ECO 5321
See ECO 5321 for course information.

ENV 5323 Research Design and Research Methods (3)
Cross-listed as PSC 5323
See PSC 5323 for course information.

ENV 5325 Advanced Methods for Human Health Risk Assessment and Analysis (3)
Pre-requisite(s): Successful completion of ENV 4325, graduate standing, or approval by the instructor
This course introduces students to advanced concepts, data sources, and methodologies used in the field of human health risk assessment and provides them with an understanding of current issues in environmental sciences. Students conduct a quantitative risk assessment, which is demonstrated in the final project that includes a risk management proposal with uncertainty/sensitivity analysis.

ENV 5330 Conservation Biology (3)
Cross-listed as BIO 5330
See BIO 5330 for course information.

ENV 5342 Ecological Risk Assessment (3)
Pre-requisite(s): Graduate standing or consent of instructor
A thorough treatment of assessment procedures for quantifying hazardous effects of chemicals on the environment. Topics will include but are not limited to components of risk assessment paradigm, ecological risk assessment for contaminated sites, the precautionary principle, and other contemporary risk assessment issues.

ENV 5350 The Environment and Third World Development (3)
This course introduces students to the field of environmental issues and Third World development with emphasis on sustainable development and ensured environmental security.

ENV 5360 Biological Invasions: Ecology and Management (3)
Cross-listed as BIO 5360
See BIO 5360 for course information.

ENV 5368 Integrated Energy Resource Systems (3)
Cross-listed as AVS 5368
A seminar approach which examines various examples of integrated energy systems combining different renewable and conventional resources.

ENV 5370 Advanced Environmental Toxicology and Chemistry (3)
Pre-requisite(s): Two semesters each of university-level chemistry and biology or consent of instructor
Advanced principles of environmental toxicology, environmental fate of pollutants, and risk assessment. The course will focus on contemporary topics and methodology.

ENV 5373 Advanced Environmental Biotechnology (3)
Pre-requisite(s): Two semesters each of university-level chemistry and biology; or consent of instructor
Special applications of biotechnology in the areas of degradation and remediation of environmental contaminants; environmental implications of genetic engineering.

ENV 5376 Advanced Urban and Regional Comprehensive Environmental Planning (3)
Seminar which examines the application of the principles and practices of comprehensive planning at the urban and regional levels emphasizing the implications of the natural environmental characteristics of an area while addressing the social, economic, and physical environmental needs of a community.

ENV 5377 Landscape Ecology (3)
Cross-listed as BIO 5377
See BIO 5377 for course information.

ENV 5379 Ecosystem Management (3)
Pre-requisite(s): Graduate standing or permission of instructor
A seminar in the application of ecological principles to the management of terrestrial, freshwater and marine communities and ecosystems. An overview for students from all environmental specialties with an emphasis on case histories.

ENV 5387 Advanced Environmental Chemistry (3)
Pre-requisite(s): Four semesters of university-level chemistry; or consent of instructor
Sources and implications of chemical pollution, cost/benefit analyses, chemical implications of alternative energy sources, waste minimization, recycling, and decontamination considerations.

ENV 5391 Measurement Methods and Data Analysis for Air Pollution Research (3)
Cross-listed as AVS 5391
Pre-requisite(s): CHE 1301 and 1302; or AVS 4320 and 4330; or consent of instructor
Measurement methods, such as spectroscopy, and statistical analysis used to characterize the chemical and physical properties of air to determine pollution levels and air quality.

ENV 5393 Atmospheric Chemistry and Physics (3)
Cross-listed as AVS 5393
Pre-requisite(s): CHE 1301 and 1302; or AVS 4320 and 4330; or consent of instructor
Chemistry and physics of the troposphere and stratosphere, including photochemistry, chemical kenetics, aerosol formation, micrometerology, atmospheric modeling, and other advanced topics.

ENV 5404 Wetland Ecology and Management (4)
Cross-listed as BIO 5404
See BIO 5404 for course information.

ENV 5405 Stream Ecology (4)
Cross-listed as BIO 5405
See BIO 5405 for course information.

ENV 5413 Advanced Ecological Data Analysis (4)
Cross-listed as BIO 5413
See BIO 5413 for course information.

ENV 5430 Mathematical Modeling of Environmental Quality Systems (4)
Pre-requisite(s): MTH 1321 and 1322 or consent of the instructor
This course introduces the process principles that govern contaminant transport and transformations in multimedia outdoor environments. The course covers application of fate and transport models to evaluate pollutant interactions with the biosphere, particularly in the context of human exposure modeling and health risk assessment.

ENV 5440 Advanced Statistics for Environmental Scientists (4)
Pre-requisite(s): MTH 1321 and 1322 or consent of instructor
This course provides students with basic principles of statistics and helps students apply statistics to analyze data and interpret results from the perspective of environmental scientists. The course first introduces basic concepts and then focuses on applications to various examples in environmental sciences.

ENV 5V52 Special Topics in Environmental Analysis (1-12)
The course may be repeated depending on the combination of semester hours up to a maximum of twelve semester hours.

ENV 5V90 Graduate Environmental Practicum (1-3)
Pre-requisite(s): Consent of instructor
A practicum supervised by an environmental professional. May be salaried or volunteer. Requires one hundred fifty to one hundred sixty hours of work per semester hour. Students are required to complete three hours of ENV 5V90 for their degree requirements.

ENV 5V98 Graduate Research (1-15)
Pre-requisite(s): Graduate standing
Required of all graduate students. For research credit associated with graduate research. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

ENV 5V99 Research for Master's Thesis (1-6)
The course is required to be repeated depending on the combination of semester hours up to a minimum of six semester hours.

ENV 6V98 Dissertation Proposal and Prospectus Research (1-12)
Pre-requisite(s): Graduate standing
For research credit, once coursework is completed, and prior to admission to candidacy for an advanced degree. May be repeated for credit up to 6 hours.

ENV 6V99 Dissertation (1-9)
Research, data analysis, writing, and oral defense of an approved doctoral dissertation on a research topic in Environmental Science. Student must have been Admitted to Candidacy before registering for dissertation hours.

Family and Consumer Sciences (FCS)

FCS 4367 Family Transitions, Stress, and Resilience (3)
Pre-requisite(s): Upper level standing or consent of the instructor
Current theory and models seeking to understand family transitions, stress, coping, adaptation, and resilience.

FCS 5365 Cancer Biology (3)
See BIO 5409 for course description.

Film Digital Media (FDM)

FDM 4313 Diffusion of Innovations (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. An introduction to old and emerging theories which explain the spread of innovative ideas and technologies among members of a society, emphasizing the role of communication processes and the special problems for diffusion in communication technology.

FDM 4314 Digital Media Technologies (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. Analysis of the technical foundations of communication media, the interrelationships among the various media technologies, and the impact of these technologies on media management, content, distribution, and consumption.

FDM 4340 Media and Society (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. Roles of the media in society and their relationship with other societal institutions. Impacts of the media upon society, responsibilities of the media, and restraints imposed upon them.

FDM 4341 Electronic Culture (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. An examination of the issues at the intersection of modern media technology, philosophy, and contemporary culture.

FDM 4342 Art and the Moving Image (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. An examination of the cinema as an art form in the context of other artistic media (such as painting, music, etc.).

FDM 4343 Film and Media Theory (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. The artistic potential of motion picture and television production, including major film theories and visual aesthetics. Dramatic narrative (fiction), documentary (non-fiction), and non-narrative subjects will be analyzed.

FDM 4344 Film Criticism (3)
Pre-requisite(s): Upper-level standing or consent of instructor
A survey of the history of film criticism and different approaches to the analysis and critical evaluation of film. The works of major critics are analyzed and their approaches use to write film criticism.

FDM 4347 Communication and Culture (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. An examination of the reciprocal functions of communication and urban culture as they continue to shape and define each other. Specific areas of inquiry vary each semester. May be repeated once with a different topic (maximum six semester hours).

FDM 4361 Audio Production (3)
Pre-requisite(s): FDM 3361 or consent of instructor
Not open to pre-Film and Digital Media students. Advanced audio techniques for media productions, technical and conceptual aspects of sound design. Emphasis on sound/image relationships in film and video, and the interface between traditional analog and digital audio technologies. Includes recording, editing, and mixing of audio sources in the creation of original sound tracks.

FDM 4362 Short Film Production (3)
Pre-requisite(s): FDM 3361
Not open to pre-Film and Digital Media majors. Advanced short narrative digital cinema production with emphasis on storytelling, theme, and mise-en-scene.

FDM 4363 Advanced Digital Production (3)
Pre-requisite(s): FDM 3361, FDM 4365, and consent of instructor
Not open to pre-Film and Digital Media majors. Develops proficiency in producing, directing, and editing of advanced digital content using single camera and multi-camera studio techniques. Covers pre-visualization, visual effects compositing, digital audio, and postproduction. Emphasis on bringing ideas from conception to realization in a professional setting.

FDM 4364 Interactive Media (3)
Pre-requisite(s): FDM 3361 or consent of instructor
Not open to Pre-Film and Digital Media students. Interactive media elements and authoring systems, emphasizing the integration of computer technology in the development of interactive media messages.

FDM 4365 Lighting and Cinematography (3)
Pre-requisite(s): FDM 3361 or consent of instructor
Not open to Pre-Film and Digital Media students. Advanced film and video production with emphasis on the techniques, equipment, and theories involved in lighting and cinematography. Emphasis on the role of the cinematographer or director of photography.

FDM 4366 Post Production (3)
Pre-requisite(s): FDM 3361 or consent of instructor
Not open to Pre-Film and Digital Media students. Advanced film and video production with emphasis on the techniques, equipment, and theories involved in editing film and video. Emphasis on the use of computer-based non-linear editing systems.

FDM 4367 Film and Video Direction (3)
Pre-requisite(s): FDM 3361 or consent of instructor
Not open to Pre-Film and Digital Media students. In-depth investigation into the history, theory, and basic concepts of film and video direction; script preparation; story-boarding; blocking actors and staging the camera; sound; and editing. Projects include directing and shooting short videos.

FDM 4369 Producing (3)
Pre-requisite(s): Upper level standing or permission of instructor
Not open to Pre-Film and Digital Media students. Current film and television industry practices, including analysis of literary material, industry structure and economics, pitching, deal-making, and distribution.

FDM 4373 Advanced Screenwriting (3)
Pre-requisite(s): FDM 3373 or FDM 3374 or consent of instructor
Not open to Pre-Film and Digital Media students. Workshop course for advanced writers of narrative fiction screenplays emphasizing discussion of student work.

FDM 4380 Topics in Media History (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. In-depth investigation of important historical eras in the development of various media, for example, cinema, television, radio, and gaming. May be repeated twice under different topic not to exceed nine credit hours.

FDM 4381 Topics in Media Management and Technology (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. Examines media management issues and the impact of technological innovations on a wide range of media industries including broadcasting, Internet, telecommunication, cable, satellite, video game, and digital cinema. May be repeated twice under different topics, not to exceed nine credit hours.

FDM 4382 Topics in Media Storytelling (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. Examines a selected topic in film, television, radio/audio, games, or other form of digital media storytelling. May be repeated twice under different topics, not to exceed nine credit hours.

FDM 4384 Topics in National Media (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. An aesthetic, cultural, and/or historical examination of a selected national mass medium, for example, Japanese Cinema, British Television, or French New Wave Cinema. Focuses on directors, films/programs, movements, and cultural contests of national media. May be repeated twice under different topics not to exceed nine credit hours.

FDM 4388 Topics in Media Production (3)
Pre-requisite(s): FDM 3361 or consent of instructor
Not open to Pre-Film and Digital Media students. Advanced media production with emphasis on one particular aspect of production. Topics covered may include cinematography, experimental film or video collaborative projects, documentary, studio drama, narrative, and other topics. May be repeated twice under different topics not to exceed nine credit hours.

FDM 4396 Topics in Media Genres (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Not open to Pre-Film and Digital Media students. An analysis of major media genres (in film, television, gaming, and other media). Methodological issues in genre criticism will also be addressed. May be repeated twice under different topics not to exceed nine credit hours.

FDM 4397 Topics in Contemporary Cinema (3)
Pre-requisite(s): Upper-level standing
Not open to Pre-Film and Digital Media students. An academic examination of current cinema. Topics covered may include contemporary world cinema, contemporary American cinema, artists/directors, philosophy, history and other topics. May be repeated once with a different topic.

FDM 4V03 Internship in Electronic and Film Media (1-6)
Pre-requisite(s): Undergraduate: fifteen hours in major; graduate: consent of graduate director
Not open to Pre-Film and Digital Media students. Designed to fit the needs and interests of the individual student. Interns may select activities in a broadcast station or network, wire service, film production hours, corporate communications department, advertising agency, or in other appropriate organizations. Internships must be approved by the division director (undergraduate) or graduate director (graduate) and are carried out under the supervision of the division director. May be repeated for a total of six semester hours provided the professional setting is different. Graduate students will be limited to three hours credit.

FDM 4V98 Electronic and Film Media Workshop (3-6)
Pre-requisite(s): Consent of instructor
Not open to Pre-Film and Digital Media students. A directed project to a detailed individual or group radio, television, or film production including preproduction, research and concept development, production, post production, and planning for distribution. May be repeated once in a different semester for a total of six semester hours.

FDM 5199 Non-Thesis Degree Completion (1)
Course designated to fulfill requirements for non-thesis master's students when all other credits have been previously completed.

FDM 5303 Internship in Film & Digital Media (3)
Pre-requisite(s): Consent of instructor
Provides graduate students the opportunity for application of film & digital media skills and knowledge carried out under the supervision of a professional employer in a media-related organization.

FDM 5335 Media Psychology (3)
Study of the psychological effects of media on the thoughts, feelings, and actions of viewers and users. We consider the negative and positive impact of various types of media. Features a special focus on media use and well-being, as well as coverage of the usage and effects of interactive media.

FDM 5336 Seminar in Film and Electronic Media (3)
Selected topics in the film or electronic media. Topics may be chosen from the following: mass communication theory, film or broadcasting history, media effects, media regulation, new communication technologies, and political communication. May be repeated once with a different topic.

FDM 5346 Seminar in Corporate Telecommunication (3)
Selected topics in corporate telecommunication. Topics may be chosen from the following: telecommunication management, training and development, diffusion of innovations, and impact analysis. May be repeated once with a different topic.

FDM 5356 Seminar in Media Aesthetics and Criticism (3)
Selected topics in media aesthetic criticism. Topics may be chosen from the following: film theory, semiotic analysis, visual literacy, and approaches to film criticism (i.e., cinema). May be repeated once with a different topic.

FDM 5366 Graduate Production Workshop (3)
Pre-requisite(s): Consent of instructor
Advanced production-oriented workshop with emphasis on enabling students to practice their craft and work towards completion of festival-worthy productions. Particular emphasis on preproduction, research and concept development, production, and post-production. May be repeated once in a different semester for a total of six semester hours.

FDM 5376 Contemporary Film Theory (3)
Major issues and concepts that have been taken up by film theorists and critics in the years following World War II, with particular concentration on cultural studies, ideological criticism, race, gender, politics, spectatorship, and new digital technologies.

FDM 5377 Storytelling in the 21st Century (3)
Exploration of current and emergent forms of storytelling in media, including analysis of the current state of motion picture and television industries, virtual and augmented reality, interactive media, transmedia, and streaming media distribution, with an emphasis on how changes in media consumption practices are changing storytelling forms.

FDM 5V35 Problems in Film and Digital Media (1-6)
Designed to give individual students opportunities for additional work in their area of concentration in film and digital media. May be repeated in a different semester for up to a total of six semester hours.

FDM 5V90 Professional Paper or Project in Film & Digital Media (1-3)
Satisfies the non-thesis option for the master of communication studies. Under the direction of a supervising professor, a student will select a problem or topic in film and digital media and will write a substantial paper or produce a substantial project for submission to the faculty. Maximum three credit hours.

FDM 5V99 Thesis (1-6)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of FDM 5V99 are required.

Finance (FIN)

FIN 5161 Corporate Finance-Planning (1)
Pre-requisite(s): Admission to MBA program
An introductory financial perspective to (1) why a publicly- traded firm exists and (2) what is the optimal approach for managing a publicly-traded firm. Comparisons are made between how privately-held firms and public sector institutions are managed.

FIN 5162 Corporate Finance-Implementation (1)
Pre-requisite(s): FIN 5161
This one-hour module builds on the principles of optimal project selection introduced in FIN 5161. Usage of the Capital Asset Pricing Model for determining project rates is demonstrated. Both internal financing decisions (dividend decisions) and external financing decisions (debt vs. equity) are introduced.

FIN 5163 Financial Control (1)
Pre-requisite(s): FIN 5162
The concluding module on strategic Corporate Financial Management, exploring optimal strategies for financing the firm's projects. The theoretical linkage between the modern option pricing model, efficient capital markets, agency theory, and the theory of the firm is developed.

FIN 5186 Practicum in Small-Cap Investing II (1)
Pre-requisite(s): Minimum grade of B- in FIN 5285
This course gives students valuable hands-on experience researching, analyzing, and managing a portfolio of small-cap stocks. The level of security research and valuation analysis mirrors that experienced working in industry. Students are required to produce stock research reports and present their recommendations to the other analysts managing the investment fund.

FIN 5203 Business Foundations - Finance (2)
Co-requisite(s): BL 5104
This course is required for MBA and MSIS students who do not have an undergraduate degree in business from an AACSB-accredited institution. It provides students with a foundation in finance which is expected of all business graduate students.

FIN 5220 Private Equity Investing (2)
Pre-requisite(s): Admission to the Executive MBA program
The central focus of the course is to gain an understanding of the financing of entrepreneurial ventures, including ways investors identify and commit the necessary resources to create and finance ventures. To accomplish these objectives the course addresses specific skills, concepts, and know-how relevant for attracting private equity financing to an entrepreneurial venture.

FIN 5260 Financial Decision Making (2)
Pre-requisite(s): Admission to the Executive MBA program
A study of how firms create value for stockholders through long-term financial decisions, principally asset acquisition/divestiture decisions and debt/equity funding decisions. Specific topics include economic profit and cash flow, the time value of money, risk and return, options, agency, efficient markets, capital budgeting decision criteria, capital structure theory, and dividend policy theory.

FIN 5263 Managing for Value Creation (2)
Pre-requisite(s): Admission to Executive MBA program
In this course we construct simulation models for use in evaluating uncertain project outcomes; utilize the method of comparables and discounted cash flow to estimate the intrinsic worth of a firm; evaluate the real option components of risky investment projects; evaluate firm performance in terms of shareholder value created; analyze the shareholder wealth consequences of corporate restructuring activities including mergers, leveraged buyouts, leveraged recapitalizations and initial public offerings; and discuss the ethical implications of corporate restructuring activities.

FIN 5285 Practicum in Small-Cap Investing I (2)
Pre-requisite(s): A select number of students will be admitted into the class through an application process
FIN 5365 or equivalent coursework/experience is expected before applying. This course gives students valuable hands-on experience researching, analyzing, and managing a portfolio of small capitalization (small-cap) stocks by managing the fund. The level of security research and valuation analysis mirrors the experience working in the industry.

FIN 5329 Entrepreneurial Finance (3)
Examines the intriguing process of financing the pursuit of opportunity and growth without regard to assets controlled currently. The major focus is on start-up or acquisition and the initial stages of growth. There is an emphasis on high-growth firms, and the central objective is to gain an understanding of how entrepreneurs obtain and use financial resources. The course also examines how value is created.

FIN 5330 Seminar in Real Estate Valuation (3)
Valuation concepts and techniques necessary to appraise real estate. Topics include theoretical valuation models, regression-based models, the cost approach, market feasibility studies, and urban-growth models. Case studies require application of statistical techniques.

FIN 5331 Seminar in International Finance (3)
A study of international financial management. Principal topics include issues in international business and finance; basic concepts, types, and issues of international financial markets; the mechanics of foreign exchange (FX) dealings and the effect of exchange rate fluctuations on corporate operations; currency derivatives and the implementation of FX risk hedging techniques; and short- and long-term financing decisions and risk management. With a focus on the enhancement of analytical skills based on the tools and theory of international finance, this course will promote critical thinking skills of the student.

FIN 5332 Seminar in Employee Benefit Planning (3)
The rationale, design, implementation, and evaluation of employee benefit plans. Emphasis on employer-sponsored plans to provide benefits for death, medical and dental expenses, disability, and retirement; insurance and self-insurance funding arrangements; the taxation of employee benefits; legal requirements; integration with public programs and individually purchased insurance; labor union influences; and contemporary problems and issues. Consideration of new types of employee benefits, as well as such traditional benefits as paid vacations, sick leave, educational assistance, and other aspects of total compensation. Case studies are used to illustrate the process of balancing employer objectives, employee needs and desires and cost considerations.

FIN 5333 Foreign Exchange Markets and International Monetary Institutions (3)
Cross-listed as ECO 5333
See ECO 5333 for course information.

FIN 5335 Seminar in Integrated Business Risk Management (3)
A study of business risk management, recognizing the relationship between risk management and the overall goals of the firm, through an integrated approach that combines the concepts and tools from both the insurance and the financial risk management disciplines. Emphasis is placed on the identification, evaluation, and management of corporate risks, defined broadly to include both operating and financial risks. Specific topics include traditional hedging strategies as well as techniques such as leveraging, post-loss financing, contingent financing, and diversification.

FIN 5360 Seminar in Corporate Finance (3)
Cross-listed as ECO 5360
Pre-requisite(s): Admission to the MBA, MACC, or MTAX program, or consent of instructor
A study of how firms create value for stockholders through long-term financial decisions, principally asset acquisition/divestiture decisions and debt/equity funding decisions. Specific topics include economic profit and cash flow, the time value of money, risk and return, options, agency costs, efficient markets, capital budgeting decision criteria, capital structure theory, and dividend policy theory.

FIN 5362 Seminar in Corporate Short-term Financial Management (3)
Cross-listed as ECO 5362
This course covers the short-term financial management functions and responsibilities typical of a Corporate Treasurer. Areas covered include cash and liquidity positioning, credit extension and collections, payables management, bank relations, short-term investing and borrowing, and management of interest rate and foreign exchange risks, all with a focus on current business practices. Lectures and readings are reinforced with individual and group projects and cases. The class will also provide partial preparation for students wishing to take the Certified Treasury Professional (CTP) exam.

FIN 5363 Seminar in Mergers and Acquisitions (3)
Cross-listed as ENT 5363
The merger and acquisition phenomenon, both domestic and international. The course focuses on the economic rationale for a merger from the perspective of the various "stakeholders," particularly from the view of shareholders. Significant attention is given to valuing a merger prospect as well as to determining how the "deal" is structured financially. Lectures are supplemented with group projects and cases.

FIN 5365 Investment Management (3)
Cross-listed as ECO 5365
Theory and practice of portfolio investment with emphasis on stocks, bonds, and portfolio management. Major topics include portfolio theory, performance evaluation, market efficiency, equity and bond management strategies, the use of derivative securities in portfolio management, and mutual funds. Current readings and cases supplement the text.

FIN 5367 Seminar in Financial Planning (3)
Personal financial planning, incorporating material from investments, insurance, retirement benefits, taxation, and estate planning into a coordinated financial planning process. Case analysis is used to demonstrate the complexities involved in solving financial planning situations. Formulation of financial plans and counseling techniques are also examined.

FIN 5368 Seminar in Financial Markets (3)
Cross-listed as ECO 5368
U.S. money and capital markets, including international money markets, financial institutions, fixed-income analysis and management, bank funds management, options, futures, options on futures, investment banking, and mergers and acquisitions. Special emphasis is given to the management of interest rate risk in financial institutions.

FIN 5370 Management of Financial Institutions (3)
Cross-listed as ECO 5370
A study of the major issues involved in managing financial institutions. Principal topics include the role of financial institutions as intermediaries between providers and users of investment funds; financial performance of such institutions; loan management, commercial credit analysis, and loan pricing; liquidity and reserve management; investment management; capital structure, liability management, and the cost of funds; and asset/liability management. The regulatory environment for financial institutions is also examined. Lectures and readings are supplemented with group projects and presentations.

FIN 5380 Healthcare Finance (3)
Cross-listed as HPA 5380
See HPA 5380 for course information.

FIN 5381 Practicum in Portfolio Management (3)
Pre-requisite(s): FIN 5365 or equivalent, and consent of instructor
This practicum gives students valuable hands-on experience in securities research, valuation of risky assets, and asset allocation by managing the Philip M. Dorr and Alumni Endowed Investment Fund. Through readings and student-prepared research reports students develop skills in evaluating economic, industry, and firm data; integrating such data into securities analysis; and communicating their research results to others.

FIN 5460 Fundamentals of Applied Business Finance (4)
An introductory course in the theory and principles of finance, which include planning and controlling functions (time value of money, pro forma budgeting, ratio analysis), balance sheet management (working capital budgeting, debt & equity financing), and cost management (cost classification allocation, break even & variance analysis), among other topics. This is an applied course that focuses less on the theoretical (textbook) concepts and more on practical tools that will be useful in the student's professional endeavors.

FIN 5V97 Special Studies in Real Estate (1-6)
This course may be taken for one to six semester hours of credit.

FIN 5V98 Special Studies in Finance (1-6)
Pre-requisite(s): Consent of instructor
This course may be taken for one to six semester hours of credit.

FIN 5V99 Thesis (1-6)
Pre-requisite(s): Consent of instructor

Finance (MFIN)

MFIN 5340 Investments (3)
Through a study of portfolio theory and asset-pricing models, students acquire the analytical skills necessary to conduct valuations of equities, fixed income securities, and alternative investments. This course applies theoretical concepts to investment analysis and portfolio management.

French (FRE)

FRE 5370 French for Graduate Students I (3)
Reading of intermediate-level French texts. No previous language experience required. Limited to graduate students or to undergraduates by petition. Does not count toward foreign language requirement for undergraduate students.

FRE 5371 French for Graduate Students II (3)
Pre-requisite(s): FRE 5370 or consent of instructor
Continuation of FRE 5370. Reading of intermediate-level French texts. No previous language experience required. Limited to graduate students or to undergraduates by petition. Does not count toward foreign language requirement for undergraduate students.

Geology (GEO)

GEO 4314 Meteorology (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Composition of the atmosphere, atmospheric processes, weather disturbances, and climate elements and controls. Emphasis is placed on climate classification and measurements of human inputs into the atmosphere.

GEO 4322 Global Biogeochemical Cycles (3)
Pre-requisite(s): CHE 1301, 1302, 1101, 1102; and BIO 1403; and GEO 1405 and 3427
The chemistry of the earth's surface. Emphasis on the dynamic chemical and biological reactions on land, in the oceans, and in the atmosphere and their influence upon the global budgets and cycling of carbon, nitrogen, oxygen, and sulfur. Includes field trips.

GEO 4325 Economic Mineral Deposits (3)
Pre-requisite(s): GEO 3427 and 3445
Non-hydrocarbon economic mineral deposits. Origin and migration of ore-bearing fluids; mineralogy and geometry of ore bodies; relations of ore deposits to magnetism and tectonics. Field trip to Central Texas mining district.

GEO 4328 Sedimentary Petrology (3)
Pre-requisite(s): GEO 3427 and 3435 or consent of instructor
Microscopic and field characteristics of sedimentary rocks. Emphasis on interpretation of depositional and diagenetic environments and relationships between geometry of rock bodies and sedimentary processes.

GEO 4335 Volcanology (3)
Pre-requisite(s): Consent of instructor
Analysis of volcanic ejecta. Mechanisms of lava and pyroclastic eruptions. Geomorphological analysis of volcanic landforms. History of volcanological studies and case studies of well-known volcanoes. Field trips.

GEO 4336 Analytical Techniques in Geochemistry (3)
Pre-requisite(s): GEO 3427
Principles and practice of X-ray fluorescence and electron probe analysis of geologic materials. Includes extensive laboratory work.

GEO 4337 Paleoecology (3)
Pre-requisite(s): GEO 3435 or consent of instructor
Relationship of fossil plants and animals to their physical and biological environment. Examination of principles of paleosynecology and paleoautecology; data gathering, analysis, and techniques of interpretation.

GEO 4339 Advanced Marine Field Studies (3)
Cross-listed as BIO 4339
Pre-requisite(s): GEO 3341 or 5333 or BIO 3341
Continuation of GEO 3341/5333. Field examination of marine environments. Individual research projects emphasize biology and geology of carbonate depositional regimes.

GEO 4340 Geomorphology (3)
Pre-requisite(s): Upper-level standing
Development and modification of land-surface forms by atmospheric, fluvial, glacial, mass-wasting, volcanic, and tectonic agents. Emphasis is placed on the spatial aspects of landscape evolution.

GEO 4341 Introduction to Hydrology (3)
Pre-requisite(s): Consent of instructor
Basic applied techniques in surface and ground water hydrology. Surface water hydrology will incorporate analysis of precipitation records, runoff processes, and calculation of flood hazard. Ground water hydrology will emphasize hydrogeology techniques, including simple models of ground water movement.

GEO 4345 Water Management (3)
Cross-listed as ENV 4345
See ENV 4345 for course information.

GEO 4346 Hydrogeology (3)
Pre-requisite(s): GEO 3342 and 3445
Hydrogeology (ground water hydrology) for geologists and engineers. Topics to be covered include evaporation and precipitation, soil moisture, principles of ground water flow, regional ground water flow, geology of ground water occurrence, flow to wells, ground water chemistry, and ground water development and management.

GEO 4348 Geoarchaeology (3)
Cross-listed as ANT 4348
Pre-requisite(s): Upper-level standing or consent of instructor
Concepts and methods of the geosciences applied to solving archaeological problems. Emphasis on stratigraphy, soils, climate, dating techniques, site formation, and site preservation related to both New World and Old World archaeology.

GEO 4371 Wetlands (3)
Cross-listed as ENV 4371
Pre-requisite(s): Upper-level standing or consent of instructor
Theory and application of the wetland concepts: classification, hydrology, biochemistry, soils, vegetation, construction, regulation, and delineation. Field lab.

GEO 4373 Global Soil Systems (3)
Cross-listed as ENV 4374
Fundamentals of soil genesis, classification, geomorphology, ecosystems, and environmental interpretation. Includes the role of soil biogeochemical cycles in past, current, and future global change issues. Field lab.

GEO 4386 Remote Sensing (3)
Cross-listed as AVS 4386, BIO 4386, ENV 4386
Pre-requisite(s): Consent of instructor
Physical mechanisms of surface and atmospheric materials absorption, transmittance, reflection, and emittence of light measured by various remote sensing platforms. Survey various applications related to earth science, ecology, meteorology, and environmental science.

GEO 4389 Quaternary Geology (3)
Pre-requisite(s): GEOG 1404, GEO 1405, 1406 or (1106 and 1306) or (1106 and 1307), or 1408; or consent of instructor; and upper-level standing
An examination through morphologic, stratigraphic, and biogeochemical proxy data of the nature of earth environments, focusing on the three most important components: Quaternary stratigraphies, Quaternary chronologies, and Quaternary environmental proxies and their interpretation.

GEO 4431 Evolutionary History of Plants (4)
Pre-requisite(s): GEO 1406 or (1106 and 1306) or (1106 and 1307)
The evolutionary history of plants as studied through the fossil record, including preservation, plant morphology and anatomy, and techniques used to reconstruct paleoenvironment and paleoecology. Weekly labs, with one weekend field trip.

GEO 4453 Advanced Three-Dimensional Seismic Interpretation (4)
Pre-requisite(s): GEO 4458 or consent of instructor
Techniques used to extract geological information from three-dimensional seismic reflection data. Laboratory emphasizing interpretation of real data sets, integration of other geologic and geophysical data, and construction of subsurface maps and sections.

GEO 4455 Introduction to Seismology (4)
Pre-requisite(s): PHY 1420, MTH 2321, and upper-level standing or consent of instructor
Theory of wave propagation in the Earth, earthquake mechanics, Earth structure, interpretation of seismograms, faults, seismotectonics, earthquake locations, magnitudes, and focal mechanisms.

GEO 4457 Geophysical Exploration I (4)
Pre-requisite(s): GEO 3342 and 3445 and consent of instructor
Exploration geophysics, using gravity, magnetics, heat flow, telluric currents, resistivity, and other methods of remote sensing of hidden geological phenomena exclusive of seismic exploration. Laboratory work will emphasize geological interpretation of geophysical data.

GEO 4458 Geophysical Exploration II (4)
Pre-requisite(s): GEO 3342 and 3445; and consent of instructor
Exploration geophysics, using latest seismic techniques and well-log analyses, with emphasis on petroleum exploration.

GEO 4485 Introduction to Geographic Information Systems (4)
Cross-listed as AVS 4485, ENV 4485, GEO 4385
The course covers the use of GIS to acquire primary geographic data, solve geographic problems, automate geographic analysis, and render explanations for geographic patterns and trends. Students will use the latest GIS software and data layers in a lab section.

GEO 4487 Advanced GIS Analysis (4)
Cross-listed as AVS 4487, ENV 4487, GEO 4387
See ENV 4487 for course information.

GEO 5050 Geology Technical Sessions (0)
A forum for: (a) outside speakers, (b) presentation of student research, (c) discussion of current geologic and geophysical literature, and (d) guidance in thesis preparation. May be repeated as required by the department. M.S. and M.A. students must attend at least four semesters. Ph.D. candidates must attend while in residence.

GEO 5110 History of Geology (1)
Pre-requisite(s): Consent of the department
Evolution of geological thought. Required, or its equivalent, of all M.S., M.A., and Ph.D. candidates.

GEO 5222 Grant Writing for Physical and Biological Sciences (2)
This 2-credit course for graduate students demystifies the process of grant writing and provides a systematic approach to preparing proposals for Federal grantmaking agencies and foundations. Eligible students are mentored through the preparation and submission of Graduate Research Fellowship Applications.

GEO 5252 Seismic Stratigraphy (2)
Interpretation of seismic data for the purpose of inferring stratigraphic changes and depositional environments.

GEO 5308 Advanced Studies in Earth Science (3)
Pre-requisite(s): Consent of instructor Special topics in earth science
May be repeated once with change of content.

GEO 5314 Advanced Topics in Paleoclimatology (3)
Special topics in paleoclimatology, including discussions of climate change events in earth history and methods for reconstructing ancient climates including paleoclimate proxies and general circulation models. May be repeated once with change of topic.

GEO 5315 Clastic/Carbonate Depositional Systems (3)
Pre-requisite(s): GEO 4328 and 3342
Criteria for the recognition of clastic and carbonate depositional environments.

GEO 5318 Advanced Studies in Geophysics (3)
Pre-requisite(s): Consent of instructor
Special topics in geophysics. May be repeated with change of content.

GEO 5320 Geochemistry (3)
Pre-requisite(s): GEO 3342, 3445 and CHE 1302
Advanced standing in geology. Application of isotope geochemistry, thermodynamics, and phase equilibrium studies to the solution of geological problems.

GEO 5321 Isotope Geochemistry (3)
Pre-requisite(s): Consent of instructor
Theory and application of stable and radioactive isotopes in geology with particular emphasis on the use of stable isotopes in solving environmental and hydrogeologic problems.

GEO 5322 Organic Geochemistry (3)
Pre-requisite(s): CHE 1301 and 1101, 1302 and 1102
Investigate the chemical composition of organic matter in soils, sediments, and petroleum source rocks. Interpretation of biomarkers and molecular proxies. The course includes an intensive review of the requisite organic chemistry concepts and nomenclature.

GEO 5324 Geomicrobiology II (3)
Pre-requisite(s): Consent of Instructor
Advanced study of microbial physiology as it relates to evolution of the earth system. Study of interactions between microbes and minerals using tools of organic and inorganic geochemistry. Applications to the study of earth's climate system.

GEO 5325 Advanced Studies in Geochemistry-Petrology (3)
Pre-requisite(s): Consent of instructor
Special topics in geochemistry-petrology. May be repeated with change of content.

GEO 5328 Geodynamics (3)
This course covers the various forces and types of deformation that act on the interior of the Earth and other planets, with applications to tectonic faulting and mantle flow. Topics include continuum mechanics, stress and strain, elasticity, mantle rheology, and heat transfer.

GEO 5329 Igneous Petrology (3)
Pre-requisite(s): GEO 3427 and graduate standing
Intensive examination of igneous rocks. Format and subject material will vary from year to year, but will include descriptive and genetic aspects of igneous rocks and their relationships to tectonic settings. Laboratory and field trips.

GEO 5330 Volcanology II (3)
This course studies volcanic eruptions, focusing on the behavior of compositionally diverse magmas in the subsurface. Students use physics and chemistry to understand processes of magmatic ascent during an eruption and then connect eruption processes to the volcanic products and landforms that result. Weekly lab exercises include microscopy, hand samples, and field methods. There is one four-day mandatory field trip.

GEO 5331 Field Geology for Earth Scientists I (3)
Pre-requisite(s): Consent of instructor
Field experience in the American West. Designed with exercises to acquaint graduate earth science majors with the fundamentals of field geology. Offered in the field during summer sessions for three hours of credit.

GEO 5332 Field Geology for Earth Scientists II (3)
Pre-requisite(s): Consent of instructor
Continuation of GEO 5331. Offered in the field during summer sessions for three hours of credit.

GEO 5333 Modern/Ancient Depositional Environments I (3)
Pre-requisite(s): Consent of instructor
Field study of depositional systems and facies. Course participants will examine modern depositional environments varying from fluvial, deltaic, beach, and near shore systems to modern barrier and fringing reefs along the Gulf and Atlantic coasts and in the Caribbean. These depositional environments will be used to interpret ancient sedimentary facies examined in the field during the last portion of the course. Offered in the field during summer session for three hours of credit.

GEO 5334 Modern/Ancient Depositional Environments II (3)
Pre-requisite(s): Consent of instructor
Continuation of GEO 5333. Offered in the field during the summer session for three hours of credit.

GEO 5335 Principles of Micropaleontology (3)
Pre-requisite(s): GEO 3435
Taxonomy, morphology, evolution, paleoecology, and stratigraphic occurrence of important microfossils. Independent field and laboratory problems may be required.

GEO 5336 Paleobiology (3)
Paleobiology encompasses the study of biological processes and concepts in deep time at various spatial and temporal scales. Concepts covered in the course aim to examine empirical and modeled data on evolutionary and ecological processes, as well as explore the interplay between biological systems and environmental conditions.

GEO 5337 Advanced Studies in Remote Sensing Geomorphology (3)
Pre-requisite(s): Consent of instructor
Special topics in remote sensing and geomorphology. May be repeated with change of content.

GEO 5338 Advanced Studies in Paleontology (3)
Pre-requisite(s): Consent of instructor
Special topics in paleontology. May be repeated with change of content.

GEO 5339 Sandstone Petrology (3)
Pre-requisite(s): GEO 4328 and graduate standing
Petrography of clastic sedimentary rocks. Includes mineralogical study, provenance analysis, and diagenetic interpretation. Field trips.

GEO 5340 Paleopedology (3)
Pre-requisite(s): Undergraduate mineralogy, stratigraphy, and general chemistry; or consent of instructor
Field, microscopic, and geochemical analysis of fossil soils (paleosols) and comparison with modern analog soils; interpretation of changes in paleoweathering processes, paleoclimate, and paleoatmospheric chemistry over 4.6 billion years of earth history based on paleosols.

GEO 5341 Cordilleran Tectonics (3)
Pre-requisite(s): GEO 3445 and consent of instructor
Geologic history of the North American Cordillera from Precambrian to present, based on analysis of stratigraphic, structural, paleomagnetic, and paleobiogeographic constraints.

GEO 5342 Micromorphology of Soils and Paleosols (3)
Pre-requisite(s): Undergraduate mineralogy, optical mineralogy, or consent of instructor
The description, interpretation, and measurement of components, features, and fabrics in soils and paleosols, at the microscopic level.

GEO 5343 Advanced Field Sequence Stratigraphy (3)
Concepts of facies analysis and spatial prediction are presented within a sequence stratigraphic context. The course is conducted as a three-week field excursion to various locations within the southwestern USA. The course emphasizes both outcrop and subsurface problem solving, and is supplemented by extensive literature review.

GEO 5344 Field Structural Geology I (3)
Instruction in advanced and specialized methods of structural analysis applied to a variety of problems in structural geology. Both local and regional structural relationships will be studied. Location of field study areas will be determined by instructor.

GEO 5345 Advanced Sequence Stratigraphic Concepts (3)
Pre-requisite(s): GEO 3342 or equivalent transfer credit
Instruction in the controls on sediment accumulation and distribution through time, and strategies for local and regional cyclostratigraphic correlation and associated stratal classification and interpretation.

GEO 5347 Advanced Hydrogeology (3)
Pre-requisite(s): GEO 4346 or consent of instructor
Analytical techniques and concepts necessary for hydrogeologic research and problem solving. Areas of emphasis will include field methods, well hydraulics, and computer models of ground water systems. Occasional field trips will be required as part of the laboratory.

GEO 5348 Applied Ground Water Modeling (3)
Pre-requisite(s): GEO 5347
Lectures on the theory of analytical and numerical models applied to hydrogeological research. Laboratory exercises will involve solving hydrogeological problems, using the models discussed in lecture.

GEO 5349 Urban Geology (3)
Interrelationships between geological processes and urban development. Case histories and applied field projects will be examined in surrounding urban areas.

GEO 5350 Geostatistics (3)
Advanced topics in spatial statistics. Knowledge of basic statistics is expected (e.g., calculation of mean, variance, and covariance). Fundamentals of variograms. Methodologies for best linear unbiased estimates with and without drift of the mean value. Major elements and applications of Kriging and coKriging algorithms.

GEO 5368 Advanced Studies in Sedimentary Geology (3)
Pre-requisite(s): Consent of instructor
Special topics in sedimentary geology. May be repeated once with change of content.

GEO 5369 Advanced Studies in Petroleum Geology (3)
Pre-requisite(s): Consent of instructor
Special topics in petroleum geology. May be repeated with change of content.

GEO 5377 Advanced Studies in Structural Geology-Tectonics (3)
Pre-requisite(s): Consent of instructor
Special topics in structural geology-tectonics. May be repeated with change of content.

GEO 5378 Advanced Studies in Hydrogeology (3)
Pre-requisite(s): Consent of instructor
Special topics in hydrogeology. May be repeated with change of content.

GEO 5385 Climate Change and Society II (3)
Pre-requisite(s): GEO 4340
Examines humans as a geologic force and how human activity has altered climate, ecosystems, glaciers, sea level, rivers, and deserts. Examines climate and planetary models to understand changes in Earth systems in the past, present, and future.

GEO 5387 Monsoon Climatology and Paleoclimatology I (3)
Pre-requisite(s): GEO 4340
Insights into the oceanic, atmospheric, and terrestrial controls of global monsoon circulation, and variations in the past 20,000 years and into the future.

GEO 5388 Advanced Studies in Hydrology-Engineering Geology (3)
Pre-requisite(s): Consent of instructor
Special topics in hydrology-engineering geology. May be repeated with change of content.

GEO 5389 Earth System Science (3)
Pre-requisite(s): Geology, geography, biology, archaeology, or environmental studies graduate students only; or consent of instructor
The emphasis of this course is placed on climate changes and the associated environmental variations of different timescales and their forcing mechanisms (including human impacts). Defining the current climatic dynamics and predicting the future trends, based on the changing patterns of different timescales, are the concluding parts of this course.

GEO 5398 Advanced Studies in Environmental-Urban Geology (3)
Pre-requisite(s): Consent of instructor
Special topics in environmental-urban geology. May be repeated once with change of content.

GEO 5457 Gravity, Magnetic, and Electrical Exploration (4)
Theory and applications of gravitational, magnetic, and electrical techniques to subsurface exploration.

GEO 5458 Seismic Exploration (4)
Seismic refraction and reflection techniques and their application to determining Earth structure.

GEO 5459 Seismic Data Analysis (4)
Pre-requisite(s): GEO 4455 (Introduction to Seismology) or consent of instructor
Topics chosen from earthquake location, focal mechanism computation, surface wave dispersion measurement, 1D inversion techniques, regional tomographic inversion, receiver functions, ray theory in spherical geometry, seismic attenuation, seismic anisotropy, seismic focusing, reflected phases, stacking, and interpretations of seismic results in light of other geophysical constraints.

GEO 5465 Petroleum Geology (4)
Pre-requisite(s): GEO 3442 and 3445 Origin, migration, and accumulation of petroleum
Exploration and production methods for hydrocarbon recovery.

GEO 5656 Application of Geophysics to Environmental Engineering Problems (6)
Pre-requisite(s): Graduate standing
A field course in which seismic, gravity, magnetic, electrical, electromagnetic, well logging and ground penetrating radar techniques are used to solve problems associated with waste disposal, groundwater, and engineering characterizations.

GEO 5V90 Special Problems in Geology (1-5)
Pre-requisite(s): Staff approval required
Individual course in which students solve a geologic problem and submit a written report. Staff approval required.

GEO 5V98 Graduate Research (1-9)
Supervised directed research for students who have not yet advanced to candidacy for an advanced degree. A student may repeat this course for credit, for a maximum of 9 total hours.

GEO 5V99 Thesis (1-6)
Pre-requisite(s): Staff consent required
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of GEO 5V99 are required.

GEO 6V00 Dissertation Proposal Research (1-3)
Supervised research for designing dissertation project and for developing and writing a Dissertation Proposal that will be subject to review and approval by the Dissertation Committee. All coursework must be completed prior to registering for this course. A student may repeat this course for a total of 3 hours. Registration for this course is sufficient for achieving full-time status.

GEO 6V99 Dissertation (1-12)
Pre-requisite(s): Staff consent required
Required of all doctoral candidates. In no case will less than twelve semester hours be accepted for a dissertation. Students may not enroll for dissertation hours until they have been officially accepted into candidacy for the Ph.D. degree. After initial enrollment, students must enroll for at least one semester hour of dissertation every semester (summer semester excluded).

German (GER)

GER 5370 German for Graduate Students I (3)
Reading of intermediate-level German texts. No previous language experience required. Limited to graduate students or to undergraduates by petition. Does not count toward foreign language requirement for undergraduate students.

GER 5371 German for Graduate Students II (3)
Pre-requisite(s): GER 5370 or consent of instructor
Continuation of GER 5370. Reading of intermediate-level German texts. No previous language experience required. Limited to graduate students or to undergraduates by petition. Does not count toward foreign language requirement for undergraduate students.

Gerontology (GRT)

GRT 4393 Sociology of Aging (3)
Cross-listed as SOC 4393, SWO 4393
See SWO 4393 for course information.

GRT 4395 Aging and Mental Health (3)
Cross-listed as SOC 4395, SWO 4395
See SWO 4395 for course information.

GRT 5351 Nutrition and Aging (3)
Cross-listed as NUTR 5351
See NUTR 5351 for course information.

Global Engagement (GBL)

GBL 5103 English for Academic Purposes: Graduate Writing (1)
The study of the meaning of words, sentences, and discourse and elements of conversation including context, usage, and appropriateness.

GBL 5201 Teaching in English for International Teaching Assistants (2)
Teaching in English for International Teaching Assistants focuses on the classroom presentation and pronunciation skills necessary for ITAs to be successful in an American university classroom. Priority is given to international graduate students who are seeking teaching assistant positions and who have speaking scores lower than 25 on the TOEFL or 7.5 on the IELTS.

Greek (GRK)

GRK 4301 Readings from Greek Literature (3)
Pre-requisite(s): GKC 2310 and 2320 or consent of instructor
Readings from Greek authors including either Classical authors or portions of the New Testament, and related background texts. With content changed, this course may be repeated up to a total of nine semester hours.

GRK 4305 Plato: Selected Writings (3)
Pre-requisite(s): GRK 2310 and 2320 or consent of instructor
Selected readings in Greek from the writings of Plato. With content changed, this course may be repeated up to a total of six semester hours.

GRK 4306 Aristotle: Selected Writings (3)
Pre-requisite(s): GRK 2310 and 2320 or consent of instructor
Selected readings in Greek from the writings of Aristotle. With content changed, this course may be repeated up to a total of six semester hours.

GRK 4307 Readings in Attic Oratory (3)
Pre-requisite(s): GRK 2310 and 2320 or consent of instructor
Selections from representative Greek orators, such as Antiphon, Andocides, Lysias, Isocrates and Isaeus.

GRK 4308 Greek Prose Composition (3)
Pre-requisite(s): GRK 2310 and 2320 or consent of instructor
Translation of English text into classical Greek.

GRK 4309 The Gods of the Greeks (3)
Pre-requisite(s): GRK 2310 and 2320 or consent of instructor; and upper-level standing
Selected readings in Greek from writings (e.g., Hesiod's Theogony and the Homeric Hymns) dealing with the gods of the Greeks.

GRK 4310 Stoics/Epicureans Reading the Ancient Sources (3)
Pre-requisite(s): GRK 2310 and 2320 or consent of instructor
Selected readings in Greek dealing with the Stoic and Epicurean philosophers and their respective philosophical systems.

GRK 5301 Greek Poetry (3)
Representative works of ancient Greek poetry. May be taken five times, provided topics change.

GRK 5302 Greek Prose (3)
Representative works of ancient Greek prose. May be taken five times, provided topics change.

GRK 5317 Seminar in New Testament Greek (3)
Cross-listed as REL 5317
See REL 5317 for course information.

GRK 5321 Greek Grammar for Reading Knowledge (3)
Intensive study of Greek inflection and syntax. Helps fulfill graduate language proficiency requirement.

GRK 5322 Greek Prose for Reading Knowledge (3)
Pre-requisite(s): GRK 5321
Readings from Greek prose authors; review of syntax and inflection. Helps fulfill graduate language proficiency requirement.

Health Care Administration (HCA)

HCA 5101 Graduate Management Study Development 1 (1)
This is the first in a series of three (1) credit Graduate Management Study (GMS) writing courses for students on the Executive Clinical Leadership track. The goal of this specific course is completion of the GMS proposal.

HCA 5102 Graduate Management Study Development 2 (1)
This is the second in a series of three (1) credit Graduate Management Study (GMS) writing courses for students on the Executive Clinical Leadership track. The goal of this specific course is completion of the GMS.

HCA 5103 Graduate Management Study Development 3 (1)
This is the third in a series of three (1) credit Graduate Management Study (GMS) writing courses for students on the Executive Clinical Leadership track. The goal of this specific course is to use the GMS as a basis from which to submit an article to a peer reviewed journal.

HCA 5105 Ethics in Health Care (1)
This course begins with discussion of the major critical principles in bioethics and models for ethical decision-making and is followed by topical readings and discussion in the five core competencies is ethics recommended by the National Summit on the Future of Education and Practice in Health Management and Policy.

HCA 5106 Fundamentals in Graduate Studies (1)
This course teaches skills and design concepts necessary for employing the abilities and functions of Microsoft Excel programs and processing, understanding and manipulating the basic ability of SPSS to analyze and manipulate data points, using library and electronic resources for analyzing journal articles and basic research tools, and improving upon effective written communication tactics while focusing on proper APA formatting. Students learn through practical exercises with real data allowing them to create, manipulate, and use spreadsheets; work the interface between Excel and SPSS; and work with hands-on research tools and basic writing exercises to improve the basic skills required in graduate studies.

HCA 5201 Residency Rotation (2)
During this required residency and under the guidance of a qualified preceptor, degree candidates are provided opportunities to study and analyze the functional elements of a hospital. Their managerial skills are developed through varied experiences, the performance of administrative tasks, and direct participation in the problem-solving process. They also perform special studies in functional areas and conduct one graduate management project.

HCA 5211 Quantitative Analysis III: Decision Making with Statistics and Research (2)
Pre-requisite(s): HCA 5310 In this applied course, students apply the concepts from HCA 5310 and HCA 5312 in a real world environment Decision-making, selection, computation, and interpretation of analytical procedures and methods are emphasized. Given a management problem, students use appropriate secondary data and posit research questions, develop logical hypotheses, and provide analysis and conclusions based on data and theory.

HCA 5213 Health Insurance and Managed Care in the U.S. (2)
Pre-requisite(s): All MHA Core Courses
Covers the foundation concerning insurance benefit plans for private insurers, TRICARE, Medicare, and Medicaid. Also covers the history of health insurance in the US, the Affordable Care Act, insurance coverages, insurance demand, adverse selection, underwriting, risk adjustments, moral hazard and pricing, utilization management, selective contracting and the insurance industry, employer-sponsored health, and smallgroup and high-risk pools.

HCA 5218 Finance II: Financial Apps (2)
This capstone course instructs healthcare leaders about their roles and responsibilities in operating and managing clinics and facilities within the financial environment of the healthcare system. The course provides opportunities to learn the business case analysis approach and further develop other decision-making tools and skills, building on sound financial, marketing, and strategic management practices learned in other courses.

HCA 5301 U. S. Health Care Systems (3)
Conceptual dimensions for health services organizations/systems at the macro and micro level are considered. Various aspects of health delivery systems are examined including clinics and hospitals, as well as managed care systems and other third party payers. Provides a conceptual framework for identifying, analyzing, evaluating and managing factors that influence the design, structure and effective operation of hospitals and other health care organizations. Material for this course considers a historical perspective and is drawn from a variety of disciplines, including economics, sociology, and the behavioral and biological sciences.

HCA 5306 Current Issues in Healthcare Quality (3)
Pre-requisite(s): All MHA Core Courses
Covers the historical evolution, current concepts, and future trends associated with monitoring and evaluation of health quality. Explores the major components of quality improvement to include patient care assessment, risk management, patient safety/environment of care, medical management, outcomes management, and process improvement.

HCA 5307 Residency Rotation 2 (3)
Pre-requisite(s): HCA 5201 During this required residency and under the guidance of a qualified preceptor, degree candidates are provided opportunities to study and analyze the functional elements of a hospital Their managerial skills are developed through varied experiences, the performance of administrative tasks, and direct participation in the problem-solving process. Students also perform special studies in functional areas and conduct a graduate management project.

HCA 5308 Lean Six Sigma (3)
Given the widely used lean six sigma tools in today's business environment, this course provides an understanding of lean processes and introduces students to the DMAIC cycle of process improvement. Classes are often hands-on and participative. Students will earn a green belt certificate of training for this course. They can earn a full green belt certification following successful completion of a project outside the course.

HCA 5309 Health Economics (3)
Pre-requisite(s): MECO 5331
This course is a study of the dynamics of our healthcare delivery system from an economics-based perspective. Students learn to apply economic principles to make effective decisions as healthcare practitioners in areas related to medical practice, education, research, and public healthcare policy.

HCA 5310 Quantitative Analysis I: Statistics & Research Methods (3)
This overview course introduces the student to the use of data science and quantitative analysis in a management environment. Topics include probability, measurement theory, causal inference, experimental design, and critical evaluation of research. While primarily a statistics course, focus is on critical thinking skills in order to derive appropriate inferences from data.

HCA 5312 Issues in International Health (3)
Health policies and delivery mechanisms within representative countries. Cross-cultural analytical techniques are reviewed. International health organizations, programs, and other cooperative efforts are discussed. International issues concerning environmental health, health status, and health care activities are studied.

HCA 5317 Health Management Information Systems (3)
Studies focus on information technology and systems, including historical development, for conceptual understanding of the evolution from reporting accounting data to newer broad-based information support applications in the delivery of health care. Emphasis is placed on the fundamental principles of collecting and analyzing data for the production of information that supports management, operations, planning and decision making. Discussion of case studies, including health care examples, leads to an understanding of appropriate and cost-effective applications of technology. Analytical study of a health care system and the design of a current medical information support system synthesize the content of the course.

HCA 5322 Organizational Behavior and Theory (3)
The focus of this course is the application of resources, behaviors, and theory in the organizational setting. Emphasis is placed on the skills and competencies necessary for effective health services management as well as the functions performed by, and roles required of, middle and senior level managers. The course progresses from individual, group, and organizational dynamics.

HCA 5329 Leadership in Complex Organizations (3)
This course is designed to explore a broad range of leadership issues. Students will have the opportunity to examine their own leadership qualities and develop ways to improve them. Readings will cover both theoretical bases for leadership and practical strategies for effective leadership. The format for the class will be group discussion. Each class the instructor or one of the students will present an article/book chapter on leadership and the class will discuss its relevance and importance.

HCA 5330 Health Care Contracting and Negotiations (3)
The common law of contracts will be analyzed in the areas of formation, performance and discharge, breach and remedies, the statute of frauds, covenants, and third party rights. The bases of government contracting will be laid and followed by study of contract types, formation, administration, termination, remedies, and ethical problem areas. The study of negotiations will include the process and applicable techniques, strategies, and tactics.

HCA 5334 Current Problems in Bioethics and Health Law (3)
The fundamentals of ethical decision making followed by study of current critical areas, such as abortion, the right to die; organ harvesting and transplanting; genetic screening, counseling, and engineering; other human subject research; and allocation of scarce resources or "the right to health care.

HCA 5336 Health Care Law and Policy (3)
In this course, students learn how policies and laws result in decisions that affect healthcare providers and patients, and gain insight into the process of health law/policy and how to influence that process. They apply Longest's policy process model using real-world examples, and assess and critically examine US health policymaking, legislative efforts, and the role of policy/lawmakers in providing healthcare to the greater population.

HCA 5340 Selected Topics in Financial Management (3)
Managing the external interface with markets (stock and bond valuation and issuing, endowment management, cash management and dividend policy) and advanced tools for managing financial resources (modeling and simulation, process costing, activity-based costing, transfer pricing and joint product costing).

HCA 5342 Health Applications in Networking (Elec) (3)
Provides a conceptual framework for identifying, creating, applying resources and advances in networking, telecommunications, and telemedicine to specific diseases, problems in health care, and public health. Resources on the Internet will be used to develop HTML documents. Databases will be explored to develop in-depth reports on individual diseases, resources, public health and infrastructure deficiencies, and health related issues of concern to military operational planners and health care executives.

HCA 5344 Advanced Research Methods (3)
Pre-requisite(s): HCA 5310 and 5311
Advanced Research Methods combines skills learned in research methods, statistics, and organization behavior into a blended class that integrates the three previous courses with large databases and statistical software. Students are expected to design research methodologies based on sound theoretical modeling techniques resulting in testable hypotheses reviewed through appropriate analytical assessments. Mathematical/Statistical proofs, operationalization & transformation of data, power and error analysis, and advanced techniques in MANOVA, regression and research design are emphasized.

HCA 5353 Finance II: Financial Management of Healthcare Organizations (3)
Pre-requisite(s): HCA 5350
Planning and controlling functions (time value of money, pro formas and budgets, ratio analysis), balance sheet management (working capital budgeting, debt and equity financing), and cost management (cost classification allocation and apportioning methods, standard budgeting, break-even and variance analysis).

HCA 5355 Law and Ethics of War and Terrorism (3)
With an emphasis on medical service, this course explores the ethical and legal aspects of military service through current literature, discussion, and film. It includes a study of that area of the law called just war theory and distinguishes terrorism from conventional war.

HCA 5356 Organizational Ethics (3)
This course will review major ethical theories, principles, decision-making methods, and the relationship between ethics and leadership. Clinical ethics topics will be considered from an organizational perspective, and topics with a more definitive business focus will be addressed. Case studies will be developed, analyzed, and discussed

HCA 5357 MEDCOM Analytics (3)
This class introduces healthcare leaders to current critical topics and techniques in US Army Medical Command (MEDCOM) Analytics. Though focused on MEDCOM analytics, the material will have substantial applicability to other students in the military health system. The course enhances critical thinking and develops student abilities to conduct data analysis, using M2 as the primary platform.

HCA 5358 Quantitative Methods II: Modern Data Science (3)
Pre-requisite(s): HCA 5310
This course is a study of how to match appropriate data science approaches, methods, and techniques to analyze the increasing volume and variety of healthcare data to extract actionable insights for making improvements to our healthcare delivery systems.

HCA 5359 Seminar in Human Resources Management (3)
Study of human resource management with emphasis on issues confronting health care administrators. Examination of emerging practices affecting procurement, compensation, retention, evaluation, training, and development of the human resources needed to provide health care and labor management relations. Emphasis on case studies, current trends and practical applications.

HCA 5389 Population Health & Homeland Security (3)
Introduces students to epidemiology as a diagnostic discipline of population health. Material discussed will prepare students to communicate concepts of risk and understand epidemiological information. Common tools will be introduced to evaluate health problems and policies at a population level. In addition, the course will examine medical readiness and explore the boundaries of the twenty-first-century national security mission. This will be accomplished by examining the threats, actors, and organizational structures and resources required to defend the American homeland.

HCA 5390 Consulting Practicum in Health Care Administration (3)
A work group project course where students personally observe, analyze, synthesize, evaluate, and report on various real-world healthcare problems in local health services facilities. Students are expected to integrate acquired knowledge, skills, and analytical tools previously obtained in the didactic year regarding the management of health services. The course focuses on significant problems and evolving trends in the local community and their implications for efficient and effective healthcare delivery.

HCA 5450 Finance I: Financial and Managerial Accounting in Healthcare Organizations (4)
Basic principles and applications of healthcare finance, including function and organization of the financial resource department, purpose and methods of financial accounting, and particular characteristics of financial management in the healthcare industry (personnel and employment incentives, third-party payers and insurers, price or rate setting, cost shifting, taxation and healthcare incentives, and alternative organizations).

HCA 5961 Administrative Residency (9)
Pre-requisite(s): All Didactic Phase Courses
During this required residency and under the guidance of a qualified preceptor, degree candidates are provided opportunities to study and analyze the functional elements of a hospital and/or healthcare organization. Their managerial skills are developed through varied experiences, the performance of administrative tasks, and direct participation in the problem-solving process. Students also perform special studies in functional areas and conduct graduate management projects. Approval of the proposal and the completed research is secured from the program's Residency Committee.

HCA 5V92 Special Studies in Health Care Administration (1-3)
Advanced work jointly planned by the professor and student in any of the various disciplines of health care administration represented by members of the graduate program faculty. The course provides students with a structured study in the selected topic area and permits advanced application of prior course work. May be repeated with a different topic for up to twelve hours credit.

Health Education (HED)

HED 5377 Principles and Philosophy in Health, Human Performance and Recreation (3)
Bases of principles, the evolution of principles and philosophies, and the interpretation and application of principles to program development and conduct.

HED 5V74 Professional Literature Seminar in Health, Human Performance and Recreation (1-6)
Cross-listed as HP 5V74, RLS 5V74
See HP 5V74 for course information.

Health Services Research (HSR)

HSR 6220 Legal and Ethical Issues in Health Services Research (2)
Pre-requisite(s): Enrollment in PhD program in Health Services Research or consent of instructor
Legal and ethical principles related to conducting health services research and their implications. Health services research stages: design, funding and proposals, execution of health and health care delivery-related projects (including recruitment of study subjects, data acquisition) under Institutional Review Board approval and legal compliance. Production of meaningful results and their dissemination to stakeholders in the health care arena.

HSR 6310 Epidemiology and Evidence-Based Medicine in Health Services Research (3)
Pre-requisite(s): Enrollment in PhD Program in Health Services Research or consent of instructor
Epidemiologic principles and techniques relevant to the design and analysis of health services research epidemiologic studies. Epidemiologic concepts, methods and related basic biostatistical approaches required to conduct robust health services research.

HSR 6315 Health Economics & Policy: Demand (3)
A foundational course in health economics and health policy. Topics covered span consumer behavior, sources and markets for health insurance, health behaviors, environmental and population health, and some elements of international development.

HSR 6320 Health Economics & Policy: Supply (3)
A foundational course in health economics and health policy. Topics covered span provider markets, provider incentives, provider regulation, and market consolidation across a variety of key industries (e.g., physicians, hospitals, post-acute care providers, and pharmaceutical firms).

HSR 6330 Economic Evaluation: Decision Analysis in Health Services Research (3)
Pre-requisite(s): Enrollment in PhD program in Health Services Research or consent of instructor
Application of economic evaluation methods when conducting health services research (HSR), including cost-effectiveness analysis (CEA), cost-benefit analysis (CBA), and cost-utility analysis (CUA). Economic evaluation, emphasizing identification of health care costs and outcomes measures, data sources, understanding of utility theory, quality of life measures, Bayes' Theorem, ROC curves, and development of Markov and simulation models in HSR.

HSR 6340 Experimental and Quasi-Experimental Design in Health Services Research (3)
Pre-requisite(s): HSR 6330 or consent of instructor
Experimental and quasi-experimental designs in health services research; randomization of treatments/interventions; explicit and implicit treatment. Internal validity and external validity. Application to real-world research with appropriate critique of articles.

HSR 6V00 Dissertation Proposal and Prospectus (1-3)
Pre-requisite(s): Permission of Director of Health Services Research PhD program
Research for doctoral students preparing their topic proposal or writing their prospectus in anticipation of candidacy.

HSR 6V90 Research Practicum in Health Services Research (1-6)
Pre-requisite(s): Health Services Research PhD students only, and permission of instructor
Research course for PhD students in Health Services Research. Must be taken twice as part of degree requirements. Only for doctoral students who have not yet been admitted to candidacy. Initiation and completion of an applied research project addressing a specific issue of relevance to a healthcare organization or an issue identified by the student's faculty research advisor.

HSR 6V98 Special Studies in Health Services Research (1-3)
Pre-requisite(s): Permission of Director of Health Services Research PhD program
Specialized study for PhD students in Health Services Research. May be taken more than once provided the content differs substantially from that of any prior offering of the course that the student has taken.

HSR 6V99 Dissertation (1-12)
Pre-requisite(s): Permission of Director of Health Services Research PhD program
Supervised research for the doctoral dissertation.

Healthcare Policy and Adm (HPA)

HPA 5001 Executive Leadership in Healthcare Administration I (0)
Presentation and discussion of leadership issues in healthcare administration.

HPA 5002 Executive Leadership in Healthcare Administration II (0)
Presentation and discussion of leadership issues in healthcare administration.

HPA 5003 Executive Leadership in Healthcare Administration III (0)
Presentation and discussion of leadership issues in healthcare administration.

HPA 5105 Marketing for Healthcare Professionals (1)
Co-requisite(s): MKT 5210
Healthcare organizations face marketing challenges more complex than those faced by businesses in other industries. Patients are often physically and emotionally vulnerable, and frequently must make important decisions with incomplete information. Providers' performance outcomes depend on patient engagement, yet patients often grapple with conflicting goals. Third party pay structures distort pricing. Government is actively involved.

HPA 5120 Principles and Methods of Healthcare Delivery System Research (1)
Pre-requisite(s): HPA 5310
This course will prepare students for selection by a leading healthcare organization for a paid six-seven month internship. Students will be provided guidance to help them successfully apply MBA core concepts in the dynamic healthcare industry environment. Students will also be afforded the opportunity to participate in an American College of Healthcare Executives (ACHE) competition with other university students and attend the annual ACHE educational conference in Chicago.

HPA 5121 Current Issues in Healthcare Administration (1)
Pre-requisite(s): HPA 5V90
Current Issues in Healthcare Administration is designed to expose students to major US healthcare initiatives through a series of seminars led by leading healthcare executives. The Healthcare Administrative Residency will be a focus of discussion with students using site-specific information to evaluate health system strategies.

HPA 5125 Contemporary Issues in Healthcare (1)
This course is designed to expose students to major contemporary US healthcare issues, initiatives, and reforms through a series of seminars.

HPA 5126 Social Issues in Healthcare Administration (1)
Pre-requisite(s): HPA 5310
Concepts and processes of social issues most directly applicable to the work of a healthcare executive. Speakers, field experiences, projects, readings and in-class discussions expose students to a variety of social and public health issues including end-of-life care, abuse, chaplaincy, long-term care, and disaster planning.

HPA 5130 Legal Issues in Healthcare (1)
A study of the legal and regulatory environment related to healthcare law, including an introduction to the legal system, tort law, and liability of healthcare institutions. Covers relevant topics such as fraud, antitrust, consent, federal reimbursement programs, medical records, and confidentiality with an analysis of relevant case law.

HPA 5150 Aligning IT Healthcare Enterprises (1)
This course examines the evolution and past and current roles of technology (IT) in healthcare organizations, current trends in healthcare, and best practices to insure firms' ability to maximize the value achieved from IT investments.

HPA 5180 Healthcare Finance Lab (1)
Co-requisite(s): HPA 5380
This course serves as the lab for HPA 5380 Healthcare Finance and offers additional practical application.

HPA 5220 Healthcare Law: Application and Strategy (2)
This course is a study of the application of healthcare related laws to managerial decisions and the relationship between legal and business strategy. It is designed to provide students with sufficient understanding to identify and manage legal and ethical issues in the healthcare industry.

HPA 5230 Healthcare Operations (2)
A survey of medical operations and systems, designed for MBA executive students expanding their career and knowledge of operational management in healthcare organizations. Students will gain a basic understanding of the various healthcare models in the United States and their organizational financing, executive management, corporate oversight, and governance.

HPA 5250 Analysis of Healthcare Economic Conditions (2)
Students will examine the health care delivery system and its implications for medical practice, education, research, and policy. Economic perspectives will be applied to public policy in health and medical care.

HPA 5280 Healthcare Financial Management (2)
This course extends financial management principles such as time value analysis, risk & return, debt & equity financing, cost of capital, and capital budgeting to a healthcare context. Healthcare-specific topics will be the central themes of the course. The course will utilize a combination of learning techniques such as lectures and discussions.

HPA 5295 Healthcare Policy and Future Directions (2)
The capstone course for the Executive MBA Healthcare Administration Specialization. Its objective is to amalgamate concepts students were taught throughout the program by exposing them to economic concepts as they apply to national healthcare policy issues.

HPA 5310 Healthcare Administration (3)
Pre-requisite(s): Admission to MBA program
A survey of the United States healthcare system, designed for MBA students pursuing careers in healthcare administration. Students will gain a basic understanding of the various healthcare models in the United States, their organization financing, executive management, and oversight. Students will also be challenged by healthcare executives in a series of leadership seminars -- one or more of which will take place in the context of visits to major health institutions in the United States.

HPA 5320 Marketing Strategy for Healthcare Professionals (3)
Healthcare organizations face marketing challenges more complex than those faced by businesses in most other industries. This course explores ways that marketing frameworks can help healthcare leaders improve quality and access to care while reducing costs. Broad introduction to marketing concepts and decision making in the context of healthcare as well as other industries.

HPA 5330 Healthcare Law and Ethics (3)
Pre-requisite(s): Admission to MBA program
A study of the legal and regulatory environment related to healthcare law, including an introduction to the legal system, tort law, and liability of healthcare institutions for administrators or executives. Covers additional reimbursement programs, medical records, and confidentiality relevant topics such as fraud, antitrust, consent, federal reimbursement programs, medical records, and confidentiality with an analysis of relevant case law. It will also help students prepare to enter their internship with the ethical and legal knowledge necessary to perform safely in an active healthcare organization.

HPA 5350 Health Economics (3)
Cross-listed as ECO 5350
See ECO 5350 for course information.

HPA 5367 Managerial Epidemiology (3)
Cross-listed as STA 5367
This course presents the basic principles of epidemiology with particular emphasis on applications in healthcare management. Topics include specific tools of epidemiology used for purposes of planning, monitoring, and evaluating population health. These include identification and of disease, measures of incidence and prevalence, study designs, confidence intervals, p-values, statistical interaction, causal inference, and survival analysis. Methods for managing the health of populations using an understanding of the factors that influence population health are discussed. Strategies that health care organizations and systems can use to control these factors are also considered.

HPA 5380 Healthcare Finance (3)
Cross-listed as FIN 5380
Pre-requisite(s): FIN 5161
This course extends financial principles to healthcare markets, including accounting statements for healthcare institutions as sources of information, and analysis of third party payment systems as sources of funds. Decision making tools through spreadsheet analysis is emphasized.

HPA 5395 U.S. Healthcare Directions (3)
Pre-requisite(s): HPA 5V90
U.S. Healthcare Directions is the capstone course for the MBA Healthcare Administration Specialization. Its focus is to appraise and evaluate concepts students were taught in both the didactic and residency elements of the program and interpret them in support of the great issues of healthcare policy. Special focus is given to explaining, justifying, and summarizing principles of efficient policy intervention and relating them to national healthcare policy.

HPA 5V90 Healthcare Administrative Internship (1-9)
Pre-requisite(s): Admission to MBA program; HPA 5120 and 5310
Students will be afforded the opportunity for selection by a leading United States healthcare organization for a paid six-seven month internship. Under the guidance of a practicing healthcare executive preceptor, students will apply knowledge gained in their MBA core studies and begin work on a major paper which will contribute to the body of knowledge for health systems.

Hebrew (HEB)

HEB 5309 Selected Documents from the Hebrew Scriptures (3)
Cross-listed as REL 5309
Pre-requisite(s): HEB 3301; or equivalent
Exegesis of selected portions of the Hebrew scriptures with careful attention given to grammar, syntax, history, and theology. The course may be taken up to three times when content differs.

History (HIS)

HIS 4305 Modern China (3)
Cross-listed as AST 4305
Pre-requisite(s): Nine semester hours of history or consent of instructor
A history of China from 1700 to the present that considers cultural, economic, literary, political, social, and religious developments. Emphasis will be given to the late imperial state, the Chinese heritage, decline, conflict with the West, revolution, and modernization.

HIS 4312 Modern Middle East History (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Political, religious, intellectual and social transformations in the Middle East during the nineteenth and twentieth centuries.

HIS 4313 War and Peace in the Middle East (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The interaction of policy, military force, and society in the waging of war and the quest for peace and security in the Middle East.

HIS 4316 The African Diaspora (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The history of peoples of African descent in the Diaspora worldwide.

HIS 4325 The Vikings (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Focuses on Viking life, culture, trade, and migrations from AD 790 to 1100. Includes methods and applications of interdisciplinary research, particularly emphasizing the potential of archaeology to make contributions to historical studies.

HIS 4326 Early Medieval Europe, c. 300-1000 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
Emergence of medieval civilization through the blending of Roman, Christian, and Germanic institutions, customs, and beliefs.

HIS 4327 High Middle Ages, c. 1000-1450 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
A study of the flowering of medieval civilization, with emphasis on the medieval church and the origins of the modern state.

HIS 4328 Medieval Britain (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
Medieval British history, emphasizing the development of parliament and the common law; the medieval church in the British Isles; the social impact of warfare; the demographic impact of famine and plague in England and Britain.

HIS 4329 The Renaissance and Reformation (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The political, economic, intellectual, artistic, and religious upheavals in Europe from the thirteenth through the sixteenth centuries and the resulting social, political, religious, and cultural changes.

HIS 4330 Medieval Mediterranean World (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
The Medieval Mediterranean as a global region, highlighting the various connections and cultural hybridities that linked peoples of Europe, Africa, and "Asia" (now called the Middle East).

HIS 4331 European Expansion, 1400-1800 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The development and maintenance of permanent contacts by Europeans with other peoples and cultures around the world between the late Middle Ages and the turn of the 19th century.

HIS 4332 Early Modern Europe (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
A history of Europe from the age of absolutism to the enlightenment. Emphasis will be upon the major political, economic, social, cultural, scientific, and intellectual developments of the seventeenth and eighteenth centuries.

HIS 4333 French Revolution and Napoleon (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Background and history of the French Revolution; relatively brief consideration of the effects of the Revolution and Napoleon upon Europe.

HIS 4336 Europe since World War I (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Problems of peace making and international organization; rise of Fascism and Communism; background and history of World War II.

HIS 4337 Europe from 1815 to 1914 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Political, social, and economic development of the European nations from the Congress of Vienna to the outbreak of the First World War; the rise of liberalism and growth of nationalism; imperialism and the development of international rivalry.

HIS 4338 Cultural and Intellectual History of Europe through the Seventeenth Century (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
History of ideas and their social and economic background from Classical Greece through the Baroque period. Course includes Greek and Roman philosophy, Early Christianity and Scholasticism, the Renaissance, the Reformation, the Scientific Revolution, and the idea of a mechanistic universe. Considerable emphasis on literature; some attention to art and music.

HIS 4339 Cultural and Intellectual History of Modern Europe (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
History of ideas and their social and economic background from the Enlightenment to the present. Course includes study of Enlightenment philosophy (Reason, Nature, God, and Man), Romanticism, Democratic theory and Marxism, Idealism, Darwinism, Fascism, and Existentialism. Considerable emphasis on literature; some attention to art and music.

HIS 4340 Special Topics in History (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Study in a specialized area of history not covered by regular course offerings. May be repeated once for credit provided topic is different.

HIS 4341 Tudor-Stuart Britain (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
The history of Britain under the Tudor and Stuart dynasties.

HIS 4343 France since 1815 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Major topics in French history from Waterloo to the present day, including the Bourbon Restoration, the revolutions of 1830 and 1848, the Second Empire, republicanism, colonialism, the world wars, and Gaullism.

HIS 4345 Britain in the Nineteenth Century (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
The political, social, and economic history of Britain from the end of the Napoleonic War to the beginning of the First World War.

HIS 4346 Britain in the Twentieth Century (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
The political, social, and economic history of Britain from the beginning of the First World War to the end of the first Blair government.

HIS 4350 The History of Gender in Latin America (3)
Cross-listed as LAS 4351
Pre-requisite(s): Nine semester hours of history or consent of instructor; and upper-level standing
The history of the construction of gender and gender relations from pre-Columbian societies to contemporary Latin America. Special emphasis will be given to the creation of archetypes and the contrast between legal codes and realities across time, race, class and regional divides.

HIS 4354 Religion and War in U.S. History (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The dynamic relationship between religion and war throughout American history. Coverage stresses, but extends beyond, the Christian faith and traditions.

HIS 4357 Inter-American Relations (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
A history of the evolution of Inter-American relations from colonization to the contemporary development of regional economic blocs. Topics will include relations among the American colonies, efforts at unification after independence, the expanding role of the United States in hemispheric relations and the Latin-American reaction, and the evolution of regionalism in the hemisphere.

HIS 4362 American Colonial History (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The settlement, growth, and development of Anglo-American colonies in North America.

HIS 4363 American Revolution and Constitution (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The creation of an American nation out of thirteen colonies. Topics include the social, economic, political, and ideological roots of the colonists' resistance to imperial power, the decisions for revolution and independence, the fighting of the Revolutionary War, the rise and fall of the Confederation, and the drafting and ratification of the Constitution.

HIS 4365 The Early Republic, 1789-1860 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
An overview of the challenges related to creating the new nation of the United States including political, diplomatic, social, economic, and cultural issues and controversies.

HIS 4366 American Legal History to 1877 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
A survey of legal and constitutional documents, ideas, cases, and debates, in American history from the colonial era to 1877.

HIS 4368 Civil War and Reconstruction (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Causes, military operations, and aftermath of the American Civil War.

HIS 4369 Religion in America, 1877-Present (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Religion in America from the end of Reconstruction to the present. Special attention devoted to religion's intersection with culture and politics and to the growth of religious pluralism in America.

HIS 4371 United States, 1877-1920 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Major economic, social, and political developments in the United States within the prescribed chronological limits, with secondary emphasis on the rise of the United States as a world power and its involvement in World War I. Primary emphasis given to industrialization, the farmer revolt, the Progressive Movement, and the ramifications of these events in politics and society.

HIS 4374 United States since 1920 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Continuation of HIS 4371 with emphasis on the post-Progressive decade, the Great Depression, the New Deal, and domestic developments since the New Deal. Of secondary emphasis is the coming of World War II and the consequent rise and development of the Cold War.

HIS 4375 The American Civil Rights Movement (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The origins, major events, and legacy of the struggle to gain full equality for African Americans in the century following the American Civil War. Emphasis on the philosophies and strategies employed to realize full citizenship rights for blacks, individual and institutional leadership, the participation of women, the role of religion, and the impact of this social justice movement on the South, the United States, and the world. (Graduate students may not receive credit for both HIS 4375 and HIS 5375.)

HIS 4377 History of the American Woman, 1600-1865 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Women's history in America from the colonial period to the end of the Civil War, emphasizing the changing roles of women and their contribution to and participation in American society.

HIS 4378 History of the American Woman Since 1865 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
A social, political, and economic survey of women in the United States from the end of the Civil War to the present, emphasizing the women's movement and its influence on American society.

HIS 4379 The Cold War (3)
Cross-listed as SEES 4379
Pre-requisite(s): Nine semester hours of history or consent of instructor
History of global conflict between the United States and the Soviet Union from 1941 to 1991 including cultural, social, economic, political, and religious aspects.

HIS 4380 The American West (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The frontier in American history from early colonial times to the end of the nineteenth century, with emphasis on the significance of the frontier in American history and historiography.

HIS 4383 History of the South (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Southern culture with three topics in the ante-bellum period and three topics in the post-bellum period.

HIS 4385 The United States in the 1960s (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The political, economic, social, cultural, and diplomatic development of the United States in the 1960s.

HIS 4386 The City in American History (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Emergence, expansion, and impact of urban growth in America from colonial times to the present. Emphasis given to the mechanics of city building, the social, economic, political, and cultural dimensions of urban development and the changing image of the city in the minds of the American people.

HIS 4388 American Environmental History (3)
Cross-listed as ENV 4389
Pre-requisite(s): Nine semester hours of history or consent of instructor
Investigation of the physical, social, cultural, and economic relationships between humans and their environment in America from pre-contact to the present.

HIS 4390 U.S. Foreign Relations to 1919 (3)
Pre-requisite(s): Nine semester hours or consent of instructor
The foundations of U.S. diplomacy with particular emphasis on transnational influences, e.g. democracy, gender, trade, slavery, race, and imperialism.

HIS 4392 U.S. Foreign Relations since 1919 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
The emergence of the United States as a global power, with emphasis on ideology, economics, race, religion, and militarism.

HIS 4395 History of American Thought, 1630-1859 (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Enduring beliefs about and attitudes toward the world and themselves held by Americans. Emphasis on patterns of beliefs as bases for assurance and commitment. From Puritans through transcendentalists.

HIS 4396 History of American Thought, 1859 to Present (3)
Pre-requisite(s): Nine semester hours of history or consent of instructor
Beliefs Americans have relied on to define and comprehend the world and themselves. Emphasis on what Americans needed and were able to believe in their search for assurance from the naturalism of the Gilded Age to the personal experiential quest of the present.

HIS 5320 Seminar in European History (3)
May be taken five times provided topics change.

HIS 5348 Independent Study in European History (3)
Pre-requisite(s): Graduate standing and consent of instructor
A tutorial course for M.A. and Ph.D. students in history. The course is designed for intensive study of a period or topic in European history. The student and professor in the student's field of interest will jointly develop a student program. Students may take up to fifteen hours provided topics change.

HIS 5350 Seminar in Latin American History (3)
Emphasizes critical reading skills using topics and literature related to Latin American history. May be taken up to two times for credit toward the master's degree provided different topics are examined.

HIS 5360 Seminar in United States History (3)
Cross-listed as AMS 5360
May be taken five times provided topics change.

HIS 5365 Seminar in Public History (3)
Cross-listed as AMS 5365
Field of public history, with emphasis on practical applications of historical methodology and the work of historians outside academia.

HIS 5367 Seminar in Oral History (3)
Cross-listed as AMS 5367
Literature and methods of recent United States oral history, with emphasis on the philosophy behind the oral history movement and the personal involvement of the student in the gathering of oral memoirs.

HIS 5369 The Historian's Craft (3)
Introduction to the history profession focusing on the philosophy of history, the methodology of history, and the craft of writing and teaching history.

HIS 5370 Advanced Graduate Research and Writing (3)
Cross-listed as AMS 5370
Seminar for first-year students focusing on historical research skills, independent learning, critical thinking, and effective paper presentations.

HIS 5371 Religion in the American South (3)
Cross-listed as AMS 5371
Religion in the American South from the colonial period to the present, with emphasis on readings and primary research.

HIS 5388 Independent Study in American History (3)
Pre-requisite(s): Graduate standing and consent of instructor
A tutorial course for M.A. and Ph.D. students in history. The course is designed for intensive study of a period or topic in American history. The student and professor in the student's field of interest will jointly develop a study program. Students may take as many as five times, provided topics change.

HIS 5390 Archival Research in History (3)
This course prepares advanced graduate students to work as professional historians in the archives, including the mechanics of the archives (applications, finding resources, paleography), grant writing, introduction to digital research, and production of a thesis or dissertation prospectus or chapter based on archival work.

HIS 5391 History Pedagogy (3)
Prepares graduate students to teach world and U.S. history survey courses at the college level, to deal with students effectively, and to enhance their understanding of their calling as teachers of history.

HIS 5393 Seminar in Global History (3)
Pre-requisite(s): Graduate Standing
Global history is defined as the history of the non-western world, including Latin America. The seminar will focus on a Global topic–i.e. Latin America, the Muslim world, Asia, Africa, or any other specific non-western area. The course will consist of readings and research within one of the Global fields of history. May be taken five times provided topics change.

HIS 5V99 Thesis (1-6)
hrs.

HIS 6V85 Preliminary Readings (1-6)
Pre-requisite(s): Completion of course work for the Ph.D
Independent readings for Ph.D. preliminary qualifying examinations. Preliminary exams allow a student to move to candidacy. A student may repeat this course up to four times.

HIS 6V99 Dissertation (1-12)
Pre-requisite(s): HIS 6V85 and completion of course work for Ph.D
Supervised research for doctoral dissertation.

Human Performance (HP)

HP 5110 Clinical Education (1)
Pre-requisite(s): A "C" or better in HP 5302
Students gain hands-on experience in athletic training through the completion of clinical education hours. Students are exposed to a variety of healthcare settings and patient populations. Additionally, students' entry-level clinical skills are assessed in accordance with accreditation standards.

HP 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

HP 5201 Administrative Topics in Athletic Training (2)
Pre-requisite(s): A "C" or better in HP 5304
Students obtain a foundational understanding of local, state, federal, and institutional/organizational laws and regulations pertaining to the delivery of healthcare services. Students apply business principles to the management of financial resources, strategic planning, physical facilities, and sources of risk related to athletic training.

HP 5301 Introduction to Patient Care (3)
Pre-requisite(s): Acceptance into the Master's of Athletic Training program
Introduction to the profession of athletic training. Students learn important concepts of patient care related to cultural competence, ethical practice, risk management, and documentation. Additionally, students learn how lifestyle choices can affect patient outcomes.

HP 5302 Evaluation and Diagnosis in Athletic Training I (3)
Pre-requisite(s): Admission into the Master of Athletic Training program
Foundational understanding of the evaluative procedures related to the face and distal extremities. Perform a complete physical exam of a patient to formulate a clinical diagnosis and treatment plan that is relevant to specific areas of the human body.

HP 5303 Therapeutic Interventions I (3)
Pre-requisite(s): HP 5301 with a grade of C or higher
Theoretical foundation for the application of therapeutic modalities and therapeutic exercise to establish best practices in patient care. Concepts related to practice patterns, quality assurance, and cost effective healthcare.

HP 5304 Concepts in Injury Management (3)
Pre-requisite(s): A "C" or better in HP 5402
Students obtain a foundational understanding of the evaluative procedures related to select general medical conditions and acute conditions, including triaging those that are life-threatening or otherwise emergent. Students are taught to use a variety of techniques to manage acute conditions appropriately.

HP 5305 Advanced Patient Care (3)
Pre-requisite(s): A "C" or better in HP 5307
Students obtain a foundational understanding of a variety of contemporary therapy techniques used for patient care. Students develop and implement intervention strategies for improving or maintaining a patient's health and quality of life.

HP 5306 Research Project in Athletic Training (3)
Pre-requisite(s): Athletic Training Program Director approval
Research project to fulfill the degree requirements of the Master of Athletic Training program. Course must be taken twice for a total of six hours.

HP 5307 Interdisciplinary Approach to Healthcare (3)
Pre-requisite(s): A "C" or better in HP 5402 and HP 5403
This course provides students with the theoretical foundation for the application of public health and mental health principles used to establish best practices in patient care. Students also learn concepts related to working within an interdisciplinary healthcare team to evaluate, treat, and support patients with a variety of healthcare concerns.

HP 5308 Professional Preparation and Current Topics in AT (3)
Pre-requisite(s): A "C" or better in HP 5201
In this course students are prepared for the BOC exam through a comprehensive review of the athletic training domains. Students are also prepared for a transition to practice by learning issues related to professional development and state/federal healthcare regulations.

HP 5320 Nutritional Biochemistry (3)
Advanced study of the biochemistry of nutrition related to macronutrient and micronutrient synthesis and metabolism. Biochemical structures and pathways involved in conducting nutrition research will be studied.

HP 5322 Exercise, Nutrition, and Endocrinology (3)
The study of the relationship between exercise, nutrition and the endocrine system and how this relationship affects exercise performance and good health. The influence of hormonal functions on fluid regulation, immunology, substrate utilization, stress responses, biological rhythms and physical performance will be studied.

HP 5324 Muscle Physiology and Metabolism (3)
Advanced study of the microstructure, function, and metabolism of human muscle with attention to molecular, histochemical, and biochemical assessment methodology used to assess the effects of exercise, training, and/or nutritional interventions on muscle physiology and biochemistry.

HP 5326 Macronutrients, Micronutrients, Exercise and Health (3)
Advanced study of the roles of carbohydrate, fat, protein, vitamins, and minerals on exercise, performance, and health. The course focuses on how dietary manipulation of macronutrients and micronutrients affects resting and exercise metabolism, disease prevention, and/or disease management.

HP 5328 Physiology of Exercise I: Neuromuscular Aspects (3)
Neuromuscular physiology, its relationship to exercise, muscle physiology, energy production, and nerve transmission.

HP 5330 Physiology of Exercise II - Cardiovascular Aspects (3)
Cardiovascular physiology, its relationship to exercise, cardiovascular structure and function, stress testing, cardiopulmonary system, and cardiovascular disease.

HP 5331 Laboratory Skills in Exercise Physiology (3)
Laboratory experience with tests and measures commonly employed in human performance research laboratories. The selected lab tests are designed not only to reinforce the basic principles learned in the lecture courses but also to teach the basic principles and skills of measurement and evaluation in the field of exercise physiology. Practical experiences include cardiovascular tests, ECG, blood analysis techniques, body composition, electromyography, and respiratory tests.

HP 5332 Prevention and Rehabilitation of Leisure-Related Sport Injuries (3)
Nutritional and physiological principles in the prevention of and the rehabilitation of leisure-sport injuries, including cardiac rehabilitation.

HP 5333 Exercise Testing and Prescription (3)
Pre-requisite(s): Six semester hours of graduate exercise physiology
Exercise testing and prescription that emphasizes the necessary preparation for certification by the American College of Sports Medicine.

HP 5334 Pedagogy & Physical Education (3)
In this course students develop an understanding of the tools of inquiry of physical education/coaching; the ability to design, deliver and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national standards appropriate to physical education/coaching; the ability to assess student learning in physical education/coaching; and the ability to apply this knowledge, skills, and attitudes to real life situations and experiences.

HP 5335 Sport Pedagogy (3)
This course examines the development and application of the research conducted in physical education and coaching settings.

HP 5340 Biochemistry in Exercise Science (3)
An advanced overview of the role of exercise and training on metabolic pathways, energy production/regulation, signaling, muscle excitation-contraction, metabolism and adaptation focusing on how various biochemical markers can be assessed at rest, during, and following exercise using various biochemical assays and techniques.

HP 5348 Psychology of Physical Activity (3)
The study of the theoretical foundations and research base for physical activity behavior change and exercise adherence. Innovative methods for affecting attitudes, knowledge, and behavior regarding exercise initiation and adherence in individuals and groups will be discussed.

HP 5352 Principles of Exercise and Sport Nutrition (3)
The advanced study of the interrelationships between nutrition and health. Particular attention will be given to the role nutrition plays as a means to enhance health and performance in sport.

HP 5353 Obesity and Weight Management (3)
Advanced study of obesity including the medical, emotional and psychological conditions that involve weight problems. Effective and age-appropriate weight management techniques will be investigated in terms of the life cycle stage. Current theories, methods, and techniques related to weight loss, weight management, and conducting obesity research will be studied.

HP 5354 Methods of Strength and Conditioning (3)
Physiological responses and adaptations associated with strength training are covered in conjunction with laboratory demonstrations and specific practical experiences. Mechanical and force/torque/work/power relationships are emphasized in laboratory demonstrations including isokinetic dynamometry, free weights, resistance machines and fundamental Olympic lifts.

HP 5355 Power Speed Agility Quickness Training (3)
The purpose of this course is to address physiological responses and adaptations associated with power, plyometrics, speed and agility which are covered in conjunction with laboratory demonstrations and specific practical experiences based on available scientific research. Practical mastery as well as theoretical understanding is required.

HP 5356 Periodized Program Models of Strength Training and Conditioning (3)
Pre-requisite(s): HP 5354
The purpose of this course is to study current scientific principles and procedures relating to periodized strength training and conditioning. Emphasis will be placed on many aspects of periodized training which include but are not limited to the background/history, concepts, variations, and application of periodization models.

HP 5357 Exercise Programming for Individuals with Chronic Diseases and Disabilities (3)
A study of the pathophysiology of common heart diseases and other ambulatory sensitive conditions with the concentration in design, implementation and administration of a multidimensional therapeutic exercise prescription approach.

HP 5358 Environmental Physiology (3)
The study of physiological regulation during exercise in stressful environments. The ability of the body to maintain optimal health and fitness during work or exercise in the following conditions will be investigated: heat, high altitude, humidity, air pollution, cold, wind-chill, variations in day length, air ions and hyperbaric conditions.

HP 5363 Manual Therapies in Orthopedic Rehabilitation (3)
A course for athletic trainers on advanced manual techniques in sports medicine: proprioceptive neuromuscular facilitation, joint mobilization, therapeutic massage, myofascial manipulation, muscle energy techniques, and strain/counterstrain techniques are included.

HP 5368 Motor Skill Learning and Performance (3)
Pre-requisite(s): Graduate standing
The study of the processes and variables that influence skill acquisition and the mechanisms which are involved in performing coordinated movements. Topics will include principles of human movement behavior, motor learning, motor programs and system dynamics.

HP 5370 Sport Psychology (3)
Study and application of psychological principles which influence behavior, enhance skill acquisition, and maximize sport performance of athletes, coaches, and others involved in sport.

HP 5377 Issues and Trends in Human Performance and Sport Management (3)
Investigation of current issues and trends in the fields of Human Performance and Sport Management and how these issues and trends may impact the future.

HP 5379 Research Methods in Health, Human Performance, and Recreation (3)
Developmental theory, investigation and gathering of data, statistical analysis and evaluation, and research reporting as these relate to research in health, human performance, and recreation.

HP 5384 Biomechanics of Human Movement (3)
Pre-requisite(s): HP 4384
Review of current research on the biomechanics of human movement. Practical experience in the methods of biomechanical research.

HP 5401 Evaluation and Diagnosis in Athletic Training II (4)
Pre-requisite(s): HP 5302 with a grade of C or higher
Foundational understanding of the evaluative procedures related to the pelvis, shoulder, knee and elbow. Students develop an understanding of specific areas of general medicine. Students learn to perform a complete physical exam of a patient to formulate a clinical diagnosis and treatment plan that is relevant to specific areas of the human body.

HP 5402 Evaluation and Diagnosis in Athletic Training III (4)
Pre-requisite(s): HP 5401 with a grade of C or better
Foundational understanding of the evaluative procedures related to the head and spine. Instruction on the procedures used to evaluate, treat, and manage brain injuries. General medical conditions related to the respiratory, cardiovascular, and neurological systems are also reviewed.

HP 5403 Therapeutic Interventions II (4)
Pre-requisite(s): HP 5303 with a grade of C or higher
Students obtain a foundational understanding of the application of therapeutic modalities and therapeutic exercise related to the practice of athletic training. Students learn to use a variety of techniques to create an effective treatment plan for diverse patient populations.

HP 5V65 Research Seminar (1-6)
Provides an opportunity for students and doctoral program faculty to discuss current research in kinesiology, exercise nutrition, and health promotion as well as various professional issues (e.g., grant writing, research funding, employment opportunities, teaching techniques, tenure process, presentation methods, etc.) The seminar also provides an opportunity for students to make research proposals and/or presentations.

HP 5V70 Special Topics in Health, Human Performance, and Recreation (1-6)
Cross-listed as HED 5V70, RLS 5V70
Opportunities for intensive, in-depth study of areas of health, human performance, or recreation of special professional interest and need to the student. Supervision and support will be given by selected resource persons.

HP 5V74 Professional Literature Seminar in Health, Human Performance and Recreation (1-6)
Cross-listed as HED 5V74, RLS 5V74
Supervised readings in health, human performance, and recreation. May be repeated once.

HP 5V75 Seminar in HHPR (1-3)
hrs.

HP 5V90 Internship (1-6)
Cross-listed as HED 5V90, RLS 5V90
Full-time experience in an agency, corporation, or hospital for on the job training in a professional field. Minimum requirement -- 400 clock hours; and consent of advisor.

HP 5V94 Practicum in HHPR (1-3)
Cross-listed as HED 5V94, RLS 5V94
Part-time experience in an agency, corporation, or hospital for exposure to various professional areas of employment. May be taken twice. May not be taken if HHPR 5690 is taken. Minimum requirement - 200 clock hours and consent of adviser.

HP 5V99 Thesis (1-6)
Cross-listed as RLS 5V99
Credit received when thesis approved. A total of six hours will be required.

HP 6000 Doctoral Research Seminar (0)
Provides an opportunity for doctoral students to present and discuss current research in Kinesiology, Exercise Nutrition, and Health Promotion and to help enhance their research development.

HP 6300 Research Methods in Exercise and Nutrition Sciences (3)
Pre-requisite(s): Doctoral graduate student standing or consent of instructor
This course provides a comprehensive overview of existing and emerging research methods and techniques involved in conducting doctoral research in Kinesiology, Exercise Nutrition, and Health Promotion.

HP 6397 Christianity, Ethics and Research with Human Participants (3)
An examination of ethical issues of conduct surrounding research involving human participants in Kinesiology, Exercise Nutrition, and Health Promotion. Ethical principles will be examined from secular constructs and Christian perspectives.

HP 6V70 Directed Research in Kinesiology, Exercise Nutrition and Health Promotion (1-6)
Pre-requisite(s): Doctoral graduate student standing or consent of instructor
This course provides students with an opportunity to participate in individualized research within the department, university, and/or various collaborative clinical research centers conducting research on specific areas within Kinesiology, Exercise Nutrition and/or Health Promotion. A total of 15 hours of directed research is required for the program.

HP 6V99 Dissertation (1-9)
Supervised research for the completion of the doctoral dissertation and doctoral degree.

Information Security (ISEC)

ISEC 5305 Seminar in Information Security Foundations (3)
Pre-requisite(s): Graduate standing
Covers fundamental concepts in information security through providing students with a common body of knowledge in key information security knowledge domains. Coverage of these knowledge domains prepares entry-level professionals in both technical and non-technical disciplines with the key skills and concepts needed to contribute to the information security posture of their organization.

ISEC 5310 Cyber Security Human Factors: Ethics, Integrity, Practices, Policies, and Procedures (3)
Pre-requisite(s): Graduate standing
This course explores the areas of ethics and integrity to assure that the practices, policies, and procedures are in place in an organization to secure the firm's information.

ISEC 5320 Cyber Security Technology Factors (3)
Pre-requisite(s): ISEC 5305 or equivalent
This course provides a roadmap of the paths available to organizations for deploying various security devices and tools. The course goes beyond the narrow technical view and offers a full context for the deployment of security technologies. Six key areas of network security will be covered, with each section covering a tool that will play a part in a company's overall information assurance program.

ISEC 5330 Cybersecurity Policy and Planning (3)
Pre-requisite(s): Graduate standing
This course examines how the information security function is best managed from an organizational perspective. The class will cover a variety of topics to help students understand some of the best practices for how the security function should operate within the context of the overall organization.

ISEC 5340 Cyber Warfare, Threats, Vulnerabilities and Countermeasures (3)
Pre-requisite(s): Graduate standing
This course presents material relevant to understanding the various types of information security risks faced by organizations. Students are also exposed to concepts for developing a corporate security plan designed to mitigate these various information security risks and cyber-attacks.

ISEC 5405 Cyber Security Fundamentals (4)
Introduces students to the foundational aspects of cybersecurity, and how these aspects relate to the organizational and business environment. Students will be able to describe the major “domains” of cyber security and how these domains can be applied to the organization or workplace.

ISEC 5430 Enterprise Cyber Security Planning and Policy: A Strategic Approach (4)
This course examines how the enterprise cyber security function can be managed from a strategic perspective to ensure effective risk mitigation in an environment where the nature of cyber risks is continually evolving. The course focuses on the importance of treating cyber security as a strategic organizational function and provides students with tools, best practices, and security frameworks to help safeguard organizational information assets.

International Business (INB)

INB 5333 Global Business Development (3)
A study of the international dimensions of American enterprise and the background of the international environment. Includes international trade concepts, cultural dynamics, business customs, multinational markets, development markets, and influence of political, legal, and geographic factors on international marketing.

International Business (MINB)

MINB 5450 International Business (4)
Pre-requisite(s): All MHA Core Courses
The objective of this course is to familiarize students with the environment in which international companies operate. Students will be introduced to the special problems and complexities of operating in the global marketplace, addressing issues in the fields of accounting, economics, finance, law, marketing, organizational behavior, politics, production, and strategy.

Journalism (JOU)

JOU 4305 Gender, Race & Media (3)
Pre-requisite(s): Upper-level standing or consent of the instructor
Theory, critical analysis techniques and personal experiences with race, gender and class. Examination of the link between media representations, institutional practices and how closely these images reflect more objective measures of reality.

JOU 4315 Strategic Communications Research (3)
Pre-requisite(s): JOU 3367 or 3320
Continued research and development of advertising materials, including strategic planning, budgeting and media allocation, testing and evaluation.

JOU 4320 Advertising Management (3)
Pre-requisite(s): JOU 4315
Structures and procedures for effectively managing advertising production and functions within media and agency environments.

JOU 4325 Advanced Editing (3)
Pre-requisite(s): C- or higher in JOU 2303 and JOU 3325 for journalism undergraduates
Continued development of editing skills through exploration of advanced techniques in newspaper layout and design. Individual project required. Use of Macintosh computer to design information graphics and news pages.

JOU 4330 News Media and American Society (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Philosophical examination and evaluation of the interaction between society and news media in the United States.

JOU 4340 Writing and Editing for On-Line Media (3)
Pre-requisite(s): C- or higher in JOU 2303 and JOU 3325
Technical skills, writing and editing for web-based mass communication. Students will learn the coding language, some image manipulation and writing hypertext information for web-based mass media and public relations and apply this learning in a project.

JOU 4350 Mass Media and Popular Culture (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Examination and evaluation of the roles of the mass media in promoting popular culture, including how media practitioners are portrayed.

JOU 4359 History of Photography (3)
Pre-requisite(s): Upper-level standing
Photography since its appearance in 1839: people, ideas, and technologies that shaped the history of photography; the cultural and artistic environments in which photographs have been taken; and the major genres of photography, including portraiture, documentary, art-photography and photojournalism.

JOU 4360 Documentary Explorations (3)
Pre-requisite(s): Upper-level standing
The theory and, selectively, the practice of written, photographed and filmed documentary, oral history, and participant-observer anthropology. Students will undertake projects involving fieldwork.

JOU 4368 Advanced Public Relations (3)
Pre-requisite(s): C- or higher in JOU 2303 and JOU 3325; and upper-level standing
Researching, planning, implementation and evaluation of public relations campaigns and programs. Includes a public relations internship.

JOU 4371 Public Relations Media Programming (3)
Pre-requisite(s): JOU 3367 and 4368
Planning and production of programming for public relations events, meetings and campaigns. Students compose presentations that mix media to achieve stated public relations objectives.

JOU 4380 Law and Ethics of Journalism (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Rights and privileges of the news media and their social and legal responsibilities under the principles of common law and the constitution. Includes an overview of the American judicial system and the role of the journalist in reporting civil and criminal matters.

JOU 4385 Data Analytics & Visualization (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Common tools used for data analysis and visualization, best practices in data visualization design, social media data mining, and social media network analysis, applied to public relations and advertising.

JOU 4390 Advertising and Public Relations Leadership (3)
Pre-requisite(s): JOU 4371 or JOU 4315
Develop leadership capabilities in self-awareness, group dynamics, interpersonal relations, organizational dynamics, strategic decision-making and the foundations of leadership.

JOU 4398 Public Affairs Reporting (3)
Pre-requisite(s): C- or higher in JOU 2303 or JOU 3372
Problems in reporting local, state, and national governmental affairs, including obligations and responsibilities of the reporter and of the media. Actual practice under field conditions.

JOU 4669 Documentary Summer Field School (6)
Pre-requisite(s): Upper-level standing
Course centers on documentary fieldwork during a residency of up to three weeks. Methodologies may include oral history, participant observation, documentary photography and documentary radio.

JOU 4V80 Radford Seminar (1-6)
Pre-requisite(s): Upper-level standing
Advanced writing specialization in specific journalistic disciplines. May be repeated up to a total of six semester hours provided topic is different.

JOU 4V95 Special Studies (1-3)
Pre-requisite(s): C- or higher in JOU 2303 or JOU 3372 and upper-level standing
Individual study with faculty guidance of some vital area in the field of communication. May be repeated once with change in content.

JOU 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

JOU 5310 Research Methods in Mass Communication (3)
Cross-listed as AMS 5310
Pre-requisite(s): Graduate standing
Intensive study of and practice in research methods used in the study of mass communication, including content analysis, survey research, experimental designs, historical and qualitative methods. Classic and current research in mass communication will be reviewed.

JOU 5320 Theory of Mass Communication (3)
Cross-listed as AMS 5320
Pre-requisite(s): Consent of director of graduate studies
To study the origins of, evidence for, and applications of various mass communication theories; to study the logic, problems and techniques of theory building; to study the societal implications of mass media research; to extend theoretical assumptions.

JOU 5350 Seminar in Mass Communication (3)
Cross-listed as AMS 5350
Pre-requisite(s): JOU 5310 or AMS 5310
Research seminar in selected areas of mass communication. May be repeated when topic changes.

JOU 5365 Social Media for Strategic Communication and Journalism (3)
This course explores the influence of social media in public relations, marketing, advertising, organizations, and society. Through theory, practice, and case studies, students identify a strategic process for integrating social media into marketing, advertising, public relations, and other business operations.

JOU 5385 Data Analytics & Visualization (3)
Understanding how to analyze and interpret data and then prepare graphic visualizations is a critical skill in public relations and advertising today. This course covers the fundamentals such as common tools used for data analysis and visualization, best practices in data visualization design, social media data mining, and social media network analysis.

JOU 5388 Master's Project (3)
Pre-requisite(s): Journalism graduate faculty approval
Research, writing, and defense of a publication-quality journalistic series.

JOU 5389 Practicum in Journalism (3)
Practica will be satisfied at publication, public relations, television, radio, other program-approved sites, depending upon the specialization pursued by the student. If the student has at least a half-time position at a media outlet for at least one semester during the program of study, the position may count as the practicum with previous approval of the graduate director.

JOU 5395 Crisis & Issues Management (3)
Students become familiar with a variety of types of public relations crises and communication theories and practices appropriate to understanding crisis communication tactics. Upon completion of the course, they will understand and be able to develop the various components of an overall crisis communication plan.

JOU 5V01 International Journalism Internship (1-12)
One semester spent within the student's international area specialization and devoted to university work at a non-American institution, to employment with a U. S. or non-U.S. news organization, to independent study, or to a combination of all three; to an association with Christian mission posts, with public relations and advertising agencies, or with a wide range of foreign-based American firms. Subject to approval of the director of graduate studies.

JOU 5V90 Independent Study in Mass Communication (1-3)
Cross-listed as AMS 5V90
A conference course for graduate journalism students in which students work under the tutelage of a graduate faculty member. Major research project and extensive required readings chosen from an area of the student's major interest. Written report submitted for publication required. The course is designed for intensive study of a topic jointly agreed upon by the professor and graduate student and subject to the approval of the director of graduate studies.

JOU 5V99 Master's Thesis (1-6)
Pre-requisite(s): Journalism graduate faculty approval
Writing and defense of faculty-approved Master of Arts in Journalism thesis.

Latin (LAT)

LAT 4309 Virgil (3)
Pre-requisite(s): LAT 2310 and 2320
Translation from Latin into English of selections from the works of Virgil, especially the Eclogues, Georgics, and/or Aeneid.

LAT 4310 Augustus: Reading the Ancient Sources (3)
Pre-requisite(s): LAT 2310 and 2320; or consent of instructor
Readings in Latin on the life and times of the Roman emperor Augustus.

LAT 4V01 Readings from Latin Literature (1-3)
Pre-requisite(s): Consent of instructor
Latin authors to be read are selected to meet the needs of the student. With content changed, this course may be repeated up to a total of nine semester hours.

LAT 5301 Latin Poetry (3)
Representative works of Latin poetry. May be taken five times, provided topics change.

LAT 5302 Latin Prose (3)
Representative works of Latin prose. May be taken five times, provided topics change.

LAT 5303 Latin Paleography (3)
Introduction to manuscript studies and Latin scripts from Roman through Humanistic times.

LAT 5321 Latin Grammar for Reading Knowledge (3)
Intensive study of Latin inflection and syntax. Helps fulfill graduate language proficiency requirement.

LAT 5322 Latin Prose and Poetry for Reading Knowledge (3)
Readings from Latin prose and poetic authors; review of syntax and inflection. Helps fulfill graduate language proficiency requirement.

Management (MGT)

MGT 5131 Operations Strategy: Concepts and Fundamentals (1)
This module introduces a framework for defining a company's operating system and evaluating its operations strategy, and provides an overview of key diagnostic and analytical tools for identifying, framing, and solving strategic operating issues.

MGT 5132 Operations Strategy: Structuring the Operating System (1)
This module covers key tools for resolving the challenges of operational networks, setting capacity levels and allocating capacity within the network, and establishing a strategy for operational improvement, and examines the key issues that a firm faces in establishing its operations strategy.

MGT 5133 Operations Strategy: Managing Operational Focus (1)
This module provides frameworks for decisions on how firms should approach the execution of fundamental changes in their operating systems and addresses how various processes and systems are designed and managed in a way that builds superior and rapidly improving performance. Particular attention is placed on ways to balance the competing objectives of operational focus and growth.

MGT 5136 Global Human Capital Leadership (1)
Pre-requisite(s): Admission to the Executive MBA program
Participants learn to manage people and lead organizations to gain competitive advantage through human capital. Objectives include understanding, analyzing, and implementing human resource management practices through collaboration across functional areas, and apply human resource principles to improve global organizational performance.

MGT 5184 Negotiations: Power and Influence (1)
Pre-requisite(s): Admission to Executive MBA program
This course focuses on the structure of the negotiation and brings in the impact of power, influence, and politics in organizations. Students will participate in class discussions, simulations, and role play, as well as being exposed to the latest research in the area of negotiation.

MGT 5186 Strategic Planning (1)
Pre-requisite(s): Admission to MBA program
Discovery of how businesses and corporations develop their strategic plan using a framework for how companies approach customers, competitors, and employees. Throughout this course, students will seek to identify issues and problems facing companies in the development of their plans in domestic and international arenas. In addition, the various components of a strategic plan will be studied by using examples of companies that succeeded or failed.

MGT 5187 Strategy Implementation (1)
Pre-requisite(s): MGT 5186
Insight into putting the strategic plan into action. Students will build upon the ideas discussed in MGT 5186 and will assess the effectiveness of the strategy implementation in companies recognized in domestic and international markets. In contrast, companies that have not implemented their strategies will also be assessed.

MGT 5188 Strategic Control (1)
Pre-requisite(s): MGT 5187
Development of an understanding pertaining to companies competence in maintaining high performance, and their adaptation to the dynamics of their industries.

MGT 5191 Leading Organizational Change for High Performance (1)
Pre-requisite(s): Admission to Executive MBA program
This course is intended to help managers and leaders better understand and diagnose behavior in organizations. They can apply this information in an ethical manner to influence positive organizational change.

MGT 5284 Negotiations: Maximizing Multi-Party Outcomes (2)
Pre-requisite(s): Admission to Executive MBA program
Enhances individual effectiveness in the workplace and marketplace through the development of negotiating skills and advanced understanding of negotiation when there are more than two parties. Emphasis is on practical application of theory through a variety of skill-building exercises. Topics include distributive and integrative bargaining tactics, leverage, framing, and cognitive biases, within a multi-party setting, and team negotiations.

MGT 5307 In Residence: Global Strategy: Building & Sustaining Competitive Advantage (3)
Co-requisite(s): MGT 5406
During this in-residence experience students engage with global organizations and leaders to expand their depth of knowledge related to all aspects of strategic management. Culture, leadership, operations, strategy, societal impact, and their intersections are explored as students build their critical-thinking skills and consider the challenges faced by executives of global enterprises.

MGT 5310 Management of Organizational Behavior (3)
Management of Organizational Behavior enhances students' knowledge regarding behavioral science concepts relevant to the study of organizational and managerial behavior. The design of the course is active learning through developing skills as a manager, role play, and an extensive hands-on organizational analysis project with local organizations. Topics examined include, but are not limited to, leadership, motivation, teams, talent development, individual differences, global issues, ethics, and organizational change. The framework used is one of organizational development as students are prepared to manage human capital effectively.

MGT 5311 Leading with Integrity (3)
Pre-requisite(s): Admissions to Executive MBA Program
This course is intended to help managers and leaders better understand the theories of leadership by utilizing leadership development tools, models of ethical decision making, and organizationally-relevant applied projects.

MGT 5320 Manufacturing and Service Operations (3)
Examines various tools, techniques, and concepts that are linked with successful operations practices in today's firms. Manufacturing resource planning, just-in-time concepts, and synchronous manufacturing philosophies for the firm are emphasized. In addition, the critical role of quality assurance for firms in both manufacturing and service industries is evaluated. Experiential and computer-based simulation exercises are employed to sharpen students' abilities to identify and solve problems. Sharpens students' abilities to identify and solve problems.

MGT 5325 Leadership in the Global Marketplace (3)
Examination of cultural differences, their impact on business practices, and how to successfully adapt global business practices to different cultures. Study of strategic global expansion and the key role of leadership in effective globalization. This course engages students with a trip to study business in a host country and engage in a business challenge.

MGT 5330 Management Decision Models (3)
Application of analytical models and computer simulation to managerial problems in various functional areas. Topics examined include mathematical programming, network analysis, decision theory, waiting line validation, and implementation of computer simulation models.

MGT 5331 Project Management (3)
Cross-listed as MIS 5331
This course covers issues important in effective project management. It considers project planning, budgeting, evaluation, and auditing. It also examines methods for monitoring projects, analyzing risk, and allocating resources. [This course also prepares students for the Certified Associate in Project Management and Project Management Professional certification exams.]

MGT 5332 Advanced Project Management: The Systematic Implementation of Complex Organizational Project (3)
Cross-listed as MIS 5332
Pre-requisite(s): MGT/MIS 4330 or MGT/MIS 5331 or 3 years of project management experience
Complex project management requires high-performance project managers capable of dealing with the chaos of today's organizational environment. This seminar focuses on the advanced project-management skills, systems thinking, and process modelling needed to implement complex organizational programs and manage projects for business process improvement.

MGT 5336 Seminar in Human Resource Management (3)
Cross-listed as SOC 6350
Subjects discussed are: changing equal employment opportunity laws and case rulings, recruitment, selection methods, total compensation systems, performance evaluation, and organizational justice. Emphasis throughout is on practical application of the theory for organizational effectiveness.

MGT 5337 Management of Employee Relations (3)
Analysis of union-management relations in both private and public sectors. Subjects include negotiation techniques and strategies, discipline and discharge, discrimination, sexual harassment, labor contract interpretation, EAP programs, safety, management rights, seniority systems, working conditions, and others. Role playing, negotiations simulation, and analysis of arbitration cases are used. Research paper required.

MGT 5340 Negotiation and Conflict Resolution (3)
Enhances individual effectiveness in the workplace and marketplace through the development of negotiating skills and advanced understanding of negotiation and persuasion. Emphasis is on practical application of theory through a variety of skill-building exercises. Topics include distributive and integrative bargaining tactics, team and multiparty negotiations, leverage, framing, and cognitive biases.

MGT 5350 Organizational Design and Development (3)
Fundamentals of designing/redesigning an organization. Major issues include: designing individual jobs and subunits, handling interdependencies among jobs and subunits through coordination and control techniques, dealing with resistance to change, and promoting flexibility. Creating/maintaining a high level of organizational effectiveness is the overarching theme. Students interested in general management, management consulting, and positions in organization development departments would benefit in particular from the course.

MGT 5355 Management Consulting (3)
This course is designed for individuals interested in business and management consulting. It uses live consulting projects with local businesses that require the application of skills taught in a master's program. It also emphasizes soft skills utilized in management consulting such as teamwork, customer relationship management, and change management. Other topics include resolving critical conflicts and utilizing strategic frameworks.

MGT 5385 Strategic Management and Business Policy (3)
A case problem and discussion seminar focused on developing and sustaining a competitive advantage in dynamic environments. The course examines how firms analyze external forces such as local and global trends, technological change, and competition as well as their own firm's position to compete effectively and create value for stakeholders. Both individual and group projects are emphasized.

MGT 5402 Negotiation (4)
This class enhances critical thinking skills, particularly in the context of group interactions and negotiation. It focuses on understanding the theory and practice of negotiation in a variety of settings. Students learn to develop skills experientially and analogically and to understand negotiation in useful analytical frameworks.

MGT 5406 Global Strategy: Building and Sustaining Competitive Advantage (4)
Co-requisite(s): MGT 5307
Global Strategy: Building and Sustaining Competitive Advantage provides the opportunity to extend the work completed in previous courses for the purpose of analyzing the problems and issues encountered by executives of the global enterprise.

MGT 5410 Managing For Higher Performance (4)
This course teaches students to connect organizational behavior theory with current management practice to implement improved management skills in current and future careers.

MGT 5420 Operations Management (4)
This course develops skills in describing and understanding operating processes and measuring and analyzing those processes, and the ability to develop and evaluate plans for positively changing those operating processes within the context of the entire organization and in harmony with the firm's strategic mission.

MGT 5445 Global Supply Chain Strategy (4)
Course provides students with key concepts and strategies for coordination of suppliers, factories, warehouses, distribution centers, and retail outlets to produce and distribute items to the right customers, at the right time, and at the right price to minimize costs while satisfying a certain target service level. Strategic management decisions include the linkages among demand planning, global sourcing, and distribution channel management.

MGT 5485 Strategic Management and Business Policy (4)
This course provides students with an opportunity to understand strategic management in organizations in a variety of industries by studying competition, resources, capabilities, innovation, alliances, mergers, acquisitions, and company structures.

MGT 5630 Integrative Executive Decision Making (6)
Pre-requisite(s): Acceptance into the executive MBA program
Integration of operational analysis with other functional areas. Computer models simulate the effects of various strategies on manufacturing plants, information flow environments, and distribution systems. The first half of the course focuses on individual skill development for use in the second half analyzing and solving core problems within the student's company.

MGT 5V98 Special Studies in Management (1-6)
This course may be taken for one to six semester hours of credit.

MGT 5V99 Thesis (1-6)
Pre-requisite(s): Consent of instructor

MGT 6310 Doctoral Seminar in Organizational Behavior (3)
Pre-requisite(s): Doctoral student standing
This course takes a holistic view to understand how the behaviors, attitudes, and emotions of individuals affect and are affected by the organizational context. Psychological theories of human behavior are reviewed in order to examine the mechanisms driving human behavior within organizational contexts at the individual, group, and organizational levels.

Management (MMGT)

MMGT 5162 Seminar in International Management (1)
Pre-requisite(s): MINB 5350
This seminar analyzes strategies and strategic responses of individual firms operating internationally. The evolution of global industries, global competition, and global strategies is emphasized throughout. Special emphasis is placed on the cultural differences between countries and their implications for international management efforts.

MMGT 5325 Strategy (3)
Pre-requisite(s): All MHA Core Courses
This capstone course is oriented toward the successful application of strategic management concepts and principles in the field of management and health administration. The course integrates knowledge content from across the curriculum, including economics, finance, quantitative analysis, marketing, leadership, and health systems. Primary topic areas of strategic management are formulation, implementation, and evaluation.

MMGT 5460 Operations Management and Research (4)
Pre-requisite(s): HCA 5410
This course provides an introduction to the concepts and analytic methods that are useful in understanding the management of a firm's operations. It provides basic definitions of operations management terms, and tools and techniques for analyzing operations and making operational decisions. The course emphasizes application of concepts, techniques and methodologies from the field of operations management to organizations in service industries.

Management Info Systems (MIS)

MIS 5111 MSIS Career and Professional Development (1)
Pre-requisite(s): Admission to MSIS Program
This course consists of a variety of career exploration and development experiences designed to help students identify their career interest and prioritize and focus their job search efforts, as well as develop their leadership, communication, and personal marketability skills.

MIS 5145 Excel Modeling Fundamentals (1)
Pre-requisite(s): Admission to graduate business program
This course provides students with essential spreadsheet (Excel) modeling skills in preparation for coursework in graduate business programs. Special attention is given to navigating the Excel environment, formatting and basic functions, data analysis, charts, and modeling best practices

MIS 5151 Technical Foundations of Information Systems (1)
Part one of this course provides an overview to examine the role of information technology (IT) in business organizations, its impacts, and potential for enhancing a firm's competitive positioning. Part two exposes students to the four underlying technical elements of IT infrastructure: hardware, software, databases, and networks. This technology overview provides students with basic literacy in technology concepts to enable effective communication with technical specialists in the business environment.

MIS 5152 The Innovative Tech Leader (1)
Pre-requisite(s): Admission to MBA Program
Course examines the role of information technology (IT) in creating competitive advantage, enhancing value, and driving innovation in organizations with a focus on examining the cross-functional leadership skills required to successfully plan, develop, deploy, and lead IT projects in enterprise environments. Students build skills in assessing risk, dealing with ambiguity, and understanding the strategic role IT plays in organizations.

MIS 5153 Managing the IT Resource (1)
Pre-requisite(s): MIS 5152
Part one of this course examines principles and practices related to effective systems development practices from the standpoint of a non-technical manager. We begin the section with a discussion of the systems development life cycle (SDLC) and augment this with a discussion of emerging systems development trends and practices as well as an examination of traditional systems development methodologies. Part two of the course examines various IT risk management and security issues.

MIS 5301 Seminar in Object-Oriented Business Programming (3)
Students will survey object-oriented concepts currently used in the development of business applications. Emphasis will be placed on programming logic, data structures, and program analysis.

MIS 5310 Business Telecommunication and Networking (3)
The use of telecommunications to network and integrate various information technology platforms. Beginning with the media and hardware used in digital communications, the course moves through the ISO model to the presentation and application layers. Hands-on projects are utilized throughout the course to illustrate how various network operating systems are implemented and to provide training on the more popular platforms.

MIS 5315 NET Systems Development (3)
Pre-requisite(s): MIS 5301
Presents current technological solutions to business information needs. The course focuses on tools available to IS professionals to develop business applications that can run on networks and client/server systems. Emphasis will be placed on "NET" development of client/server systems.

MIS 5316 Development of Object-Oriented Business Systems (3)
The objective of the course is to present a total client-server approach to development. The thin-client portion of the course is directed towards browser hosted data collection and presentation using JavaScript. The course presents fundamental JavaScript control syntax, function definition and HTML form processing. The server-side concentrates on PHP for server processing with languages like PERL and C added to the course as time allows.

MIS 5317 Seminar in Java Development (3)
Pre-requisite(s): MIS 5301
Seminar in client-side application development using the Java programming language. Topics include object-oriented design, essential language syntax, and developing user, file, and Internet interfaces for business systems to support e-commerce initiatives.

MIS 5319 Development of Mobile Applications (3)
Study of applications development in a cross-platform mobile computing environment.

MIS 5322 Advanced Python for Analytics (3)
Preprequisite(s): MIS 5301 or equivalent. Study of advanced topics in the Python programming language. Focus is on data analytics and data science. Main topics include data visualization, array processing, data mining, machine learning, natural language processing, and web application development. Projects cover game development using PyGame and web app development using Django.

MIS 5325 Information Systems for Management (3)
Emphasizes the importance of information and information technology in managing firms today. The case-oriented course includes topics such as information technology types and trends, the assessment and management of information systems projects, and the relationship of technology to organizational strategy, structure, controls, and effectiveness.

MIS 5330 Global Dimensions of Information Systems (3)
As business becomes more global in nature, information systems and technology will become increasingly important to the successful management of business enterprises. This course will examine the international business environment and how information systems and technology can be utilized in that environment. Specific topics to be covered include international standards, problems with transnational flows of data and information, international standards, telecommunications and global connectivity, strategic planning to gain global competitive advantage, and human resources related to global information systems.

MIS 5331 Project Management (3)
Cross-listed as MGT 5331
See MGT 5331 for course information.

MIS 5332 Advanced Project Management: The Systematic Implementation of Complex Organizational Project (3)
Cross-listed as MGT 5332
See MGT 5332 for course information.

MIS 5335 Information Systems Analysis and Design (3)
To acquaint students with the concepts, problems, and possible solutions for all stages of the systems development life cycle. Emphasis on object-oriented analysis and design techniques. Topics include modeling with UML, the role of the IS professional in the development of successful systems, and project management.

MIS 5340 Database Management Systems (3)
Pre-requisite(s): Graduate level standing
The use of database techniques to represent and manipulate data in the development of information systems. Includes rationale and objectives of the database approach; conceptual data modeling; logical database design; mapping logical design to the relational data model; physical design and implementation of databases; manipulating information in databases; database administration; and connecting applications to databases, including web-enabled applications.

MIS 5341 Advanced Database Management (3)
Pre-requisite(s): MIS 5340 or consent of instructor
This course will cover advanced topics in database design and implementation, including the storage, access, and management of business information to facilitate decision-making. Topics may include advanced SQL commands, application data access using PL/SQL and/or ASP, advanced topics in database systems such as XML and data warehouses, and database administration topics. A technical presentation may be required.

MIS 5342 Business Intelligence (3)
Business Intelligence (BI) is the discovery of patterns and relationships hidden in large volumes of data. This hands-on course is designed to provide practical analytic skills that may be applied in almost any workplace. The course explores the analytical techniques for making intelligent business decisions in data-rich organizations. A key component of the course is the use of BI software tools with techniques such as correlation analysis, data visualization, linear regression, classification, and clustering to address common problems in marketing, customer relationship management, risk management, finance, and operations.

MIS 5343 Seminar in Data Visualization (3)
Covers basic theories of cognition and data visualization, including how data types influence the decision to use a particular representation, when to use various chart types, how to structure data visualizations, and visualization evaluation. Emphasis on ethical use of visualizations.

MIS 5345 Decision Making Using Excel (3)
This computer applications course provides students with advanced data analysis and modeling skills necessary for manipulating, sharing, and presenting data to support business decision making. Major topics include basic statistical concepts in Excel, complex queries, importing external data, data cleansing, pivot tables, macros, text manipulation, multiple applications linking, simulation modeling, decision making under uncertainty, and special topics.

MIS 5346 Data Warehousing (3)
Pre-requisite(s): MIS 5340 or consent of instructor
This course focuses on data warehouses as a component of business intelligence. The course will cover techniques for designing, implementing, and analyzing data in data warehouses using a hands-on approach. The course also discusses managerial and ethical issues in implementing data warehouses.

MIS 5347 Text Analytics (3)
Pre-requisite(s): QBA 5131 or consent of instructor
Text Analytics analyzes unstructured responses such as those from open-ended surveys, blogs, and online communities, to identify underlying themes and sentiment that are not immediately apparent. This analysis discipline has current application in market research, intelligence and security, healthcare and life science, recruiting, and legal compliance. The course gives particular attention to developing a process for using text analytics technology to yield valid and reliable results.

MIS 5355 Management of Information Systems (3)
Pre-requisite(s): Admission to MS/IS program
Future information systems leaders and managers focus on understanding the issues involved in deploying information systems in organizations, the evaluation and adoption of emerging information and communication technologies (ICTs), the strategic role of the IS function, and the relationship of IS with the overall enterprise. Course coverage includes in-depth analysis of current issues in the field of information systems.

MIS 5375 Business Process Planning (3)
This course explores the history of Business Process Reengineering/ Redesign, the use of BPR in today's business environment, and how BPR can enable changes inherent in moving to Enterprise Resource Planning, E-Commerce and Customer Relationship Management. The course involves students in the analysis of real business processes from case studies and local businesses. CASE tools are used to develop both "as is" and "to be" business scenarios for understanding the change process.

MIS 5390 Ethics in Data Analytics (3)
Pre-requisite(s): QBA 5330, STA 5300, or equivalent
Ethical decision-making in data analytics and contemporary issues. Topics include ethics theory, American Statistical Association Ethical Guidelines for Statistical Practice, ethics issues in statistical analyses and presentation of data, ethical consideration in the information age, and data ethics in contemporary issues.

MIS 5450 Management of Information Systems (4)
This course deepens student's understanding and appreciation of the strategic role that information technology plays in organizations and provides key concepts for effectively planning, building, deploying, and managing information resources in enterprise environments. The course is relevant for students seeking career opportunities in IT management or consulting and individuals aspiring to a career in general (non-IT) management.

MIS 5V95 Internship in Information Systems (1-6)
Pre-requisite(s): Consent of instructor
Provides students with a carefully directed real-world learning experience. A project developed jointly by the sponsoring company and faculty provides experience in various IS functions and business activities.

MIS 5V98 Special Studies in Information Systems (1-6)
Pre-requisite(s): Consent of instructor
Offered on demand for one to six semester hours of credit.

MIS 5V99 Thesis (1-5)
Pre-requisite(s): Consent of instructor
Research, data analysis, writing, and oral defense of an approved master's thesis. At least five hours of MIS 5V99 are required.

MIS 6310 Foundations in Information Systems Research (3)
A seminar covering key classical information systems readings and theoretical perspectives designed to help students critically think and constructively criticize research papers in the field.

MIS 6320 Quantitative Methods in Information Systems Research (3)
This course is designed to provide doctoral level students with an introduction to the major methodological issues and techniques associated with quantitative research. Emphasis is given to the techniques that are most commonly used in information systems research.

MIS 6325 Quantitative Methods: Survey Research Using PLS Analysis (3)
This course focuses on the understanding and use of Partial Least Squares (PLS) methodology in IS research contexts. PLS is used by students to simulate path analysis procedures using data gathered by the professor. Requirements of the course include learning the fundamental statistical foundations underlying structural equations modeling and soft modeling and survey methods. This course provides direction for the successful completion of an independent research project using PLS that will be submitted to an IS conference and/or journal.

MIS 6330 Theoretical Perspectives in Information Systems Research (3)
A seminar designed to provide doctoral students across different disciplines a broad introduction to key management, organizational, and behavioral research issues, and challenges in topics of information technology (IT). The course is designed for both information systems (IS) and non-IS Ph.D. students.

MIS 6340 Qualitative Methods in Information Systems Research (3)
A seminar designed to provide doctoral level students with an introduction to the major methodological issues and techniques associated with qualitative research. Emphasis is given to case research strategies, both positivist and interpretive, but the course will also discuss action research.

MIS 6345 Qualitative Methods: Collecting and Analyzing Case Study Data (3)
The course covers the conceptual foundations of the qualitative research process that includes gaining access to a field site, conducting interviews, writing field notes, coding and analyzing data using a qualitative analysis software tool, and writing research results. Additionally, students will have the opportunity to code and analyze real-world data using a qualitative data analysis tool.

MIS 6350 Conducting Effective Literature reviews: A Doctoral Seminar for pre-Dissertation Students (3)
A course to help doctoral students learn to write theory-building literature reviews. Doctoral students taking this class will read and discuss a variety of review papers published primarily in MIS quarterly, but also in several other journals from management literature.

MIS 6370 Contemporary Issues in Information Systems Research (3)
This course aims to help doctoral students gain exposure to the latest in IS research. The emphasis will be given on the research published in the highest quality IS journals over the past year as well as research appearing in the top conferences in the past year.

MIS 6372 Seminar in Group Communication and Decision-making (3)
This course is designed to provide the participant with a basis for developing a rich understanding concerning the nature of information systems in support of group communication and decision-making within the organization. The primary focus involves the interaction of these systems with the behavioral systems within the firm.

MIS 6374 Organization Theory and its Application in Information Systems Research (3)
A seminar designed to acquaint students with the theories used to examine phenomena related to the introduction, adoption, use, and exploitation of information systems in organizations. The bulk of the material covered will be at the organizational level of analysis.

MIS 6380 Ethics in Contemporary Topics in Information Systems (3)
This doctoral seminar examines ethical issues and dilemmas in contemporary and emerging topics within information systems. The course takes an interdisciplinary approach to eight areas related to information systems.

MIS 6398 Research Apprenticeship I (3)
Pre-requisite(s): Completion of first year of Ph.D. program
Students are assigned to a research mentor to facilitate understanding of the research process with the goal of producing a manuscript suitable for submission to a conference proceedings or journal article.

MIS 6399 Research Apprenticeship II (3)
Pre-requisite(s): MIS 6398; completion of second year of Ph.D. program
Students are assigned to a research mentor to facilitate understanding of the research process with the goal of producing a manuscript suitable for submission to a conference proceedings or journal article.

MIS 6V00 Dissertation Proposal (1-9)
Pre-requisite(s): Completion of all required coursework for PhD in MIS
Research for doctoral students who have completed their required coursework but are not yet registered for MIS 6V99. The course may be repeated.

MIS 6V98 Special Studies in Information Systems (1-6)
Specialized study for PhD students in Information Systems. Special studies are offered on demand and may count for one to six semester credit hours. They may be taken more than once provided the title and content substantially differ from prior special studies courses.

MIS 6V99 Dissertation (1-12)
Pre-requisite(s): Completion of coursework and comprehensive exam
Supervised research for the doctoral dissertation.

Marketing (MKT)

MKT 4360 Customer Analytics (3)
Pre-requisite(s): MKT 3330 or QBA 3305; only open to BBA students; BBA students must be admitted to the Business School in order to take this course
This course will enable students to: apply basic skills in data manipulation and visualization using various software packages, analyze customer data with the help of different statistical tools and techniques and use the findings from data analyses to make managerially relevant marketing decisions anchored in Customer Analytics.

MKT 5111 Seminar in Marketing Administration-Planning (1)
Pre-requisite(s): Admission to MBA program
Taught from the perspective of a mid-to upper-level marketing manager. Students will develop an understanding of marketing strategy and its role in today's complex business environment. Topics include an overview of the marketing planning process with an emphasis on target market selection and marketing plan development and the strategic aspects of marketing management.

MKT 5112 Seminar in Marketing Administration-Implementing (1)
Pre-requisite(s): MKT 5111
Presentation of the strategies and tactics involved in a marketing program from the perspective of a mid-to upper-level marketing manager. The course content assumes a basic understanding of marketing principles while using lectures, readings, and case analyses. Product, pricing, promotion and distribution issues will be discussed with an emphasis on the interrelationships between marketing decisions. Marketing ethics and social responsibility and their importance in marketing decision-making will also be discussed.

MKT 5113 Seminar in Marketing Administration-Adapting (1)
Pre-requisite(s): MKT 5112
This seminar will be taught from the perspective of a mid-to upper-level marketing manager using lectures, readings, and case analyses presenting a variety of topics involving the adaptation of current marketing practices in differing situations. Topics will include interfunctional relationships, international marketing, total quality management, and the assessment of marketing expenditures.

MKT 5210 Decision Based Marketing (2)
Co-requisite(s): HPA 5105
This course will confront the challenge of designing and implementing a successful combination of marketing variables to make informed decisions about the firm's strategy in its target markets. The course also addresses the importance of companies being market-driven and customer-focused as well as presenting current marketing management practices. As decision makers, the students will learn to implement analytic perspectives, decision models, and marketing concepts to assist with decisions involving communications strategies, product offering, pricing, and distribution channels.

MKT 5310 Seminar in Marketing Strategy (3)
Pre-requisite(s): MKT 3305
Role of marketing decision making in achieving corporate objectives; planning and implementing the marketing program; product research and development, distribution problems, promotional strategies, and pricing analysis. Attention will be given to the new marketing application of quantitative methods and the behavioral sciences.

MKT 5315 Seminar in Comparative Marketing (3)
Pre-requisite(s): MKT 3305
Marketing structures, functions, and institutions in different national environments. Emphasis is placed on the manner in which different economic systems condition and shape the nature of marketing.

MKT 5325 Seminar in Marketing Research (3)
Pre-requisite(s): MKT 3305
First-hand experience with real-life marketing research problems, including such areas as research design, sampling, experimental design, parametric and nonparametric data analysis techniques, and computer statistical programs.

MKT 5330 Marketing Communications (3)
Pre-requisite(s): BUS 5602 or equivalent
Statistical techniques and their applicability to business decision making. Topical coverage includes multiple regression, analysis of variance, factor analysis, discriminant analysis, cluster analysis, and multidimensional scaling.

MKT 5335 Business to Business Marketing (3)
Pre-requisite(s): BUS 5602 or equivalent
Marketing by firms to organizations rather than to households. Negotiation strategies are emphasized along with management of relationships, purchasing, distribution channels, and distribution logistics.

MKT 5340 Product Strategy (3)
Pre-requisite(s): BUS 5902 or equivalent
New product development, management of existing products, product elimination decisions, and pricing at all stages of the life of a product. Emphasis is placed on decision making as it applies to product and pricing strategy and tactics.

MKT 5341 Theory and Practice in Customer Relationship (3)
The understanding of systems, dependencies, variability, and interrelationships--including the ability to manage systems--is an essential element in customer relationship management (CRM). Therefore, the organization and the supply chain as interrelated systems is the starting point for this course. From that foundation, students will move into assessing measurements, the tools for analyzing an organization's current business processes and flows, and the means for integrating these into customer management initiatives. The "nuts-and-bolts" issues in the course address new customer data collection, using CRM for customer acquisition and retention, call management, segmenting the customer base, and creating a customer-driven web site. Behavioral changes as well as the impact of organizational policies on the ability to provide a satisfying customer experience will be examined.

MKT 5345 Seminar in Consumer Behavior (3)
Pre-requisite(s): MKT 5310
The role of consumer behavior in marketing strategy is emphasized. The course builds on foundations from a variety of disciplines including psychology, sociology, cultural anthropology, economics, and semiotics.

MKT 5398 Directed Studies in Marketing (3)
Special topics in marketing of interest for individual students. May be repeated twice with change of topic.

MKT 5410 Strategic Marketing Planning (4)
This MBA marketing strategy course provides participants the opportunity to develop a better understanding of marketing strategy and its role in today's complex business environment. The course covers the decisions in a well-integrated marketing program, demonstrates the importance of marketing strategy and the interrelationships between the marketing unit and other functional units, covers the essential elements of marketing analysis, and emphasizes the major components of a marketing plan.

MKT 5440 Strategic Brand Management (4)
This MBA marketing course provides participants the opportunity to develop a better understanding of branding strategy and its role in today's complex business environment. The course covers the leading theories, models, and other tools to make better branding decisions, and how to plan and evaluate branding strategies. It also provides a forum for students to apply these principles.

MKT 5460 Marketing Analytics (4)
Students learn how to use data analytics to guide business decisions that will build value for customers and corporations. The course explores the leading theories, models, and techniques underlying marketing analytics.

MKT 5480 Crisis Communication Management (4)
Students define and identify types of crisis within an organization, key stakeholders, and risks associated. By studying best practices, theory, and case studies in crisis prevention, students develop a crisis communication management plan using the frameworks learned throughout the semester.

MKT 5V95 Internship in Marketing (1-6)
Pre-requisite(s): Consent of instructor
Practical marketing work under supervision in an approved commercial or industrial firm. This course may be taken for three to six semester hours of credit. Consent of major adviser required.

MKT 5V99 Thesis (1-6)
Pre-requisite(s): Consent of instructor

Marketing (MMKT)

MMKT 5171 Seminar in International Marketing (1)
Pre-requisite(s): HCA 5315 and MINB 5350
Explores environmental/cultural approach to international marketing and important global marketing trends, including growth/expansion of the world's big emerging markets, rapid growth of middle income market segments, and steady creation of regional market groups. Case studies are used to develop global and strategic thinking in terms of the marketing 4Ps.

MMKT 5370 Advanced Marketing Practicum (3)
Pre-requisite(s): HCA 5315
This distance learning course provides students an additional opportunity to apply more advanced marketing principles and concepts through the use of marketing case studies and a computer-assisted marketing simulation game. Emphasis will be placed on both analytical and quantitative approaches to marketing decision-making during the student's residency year.

MMKT 5371 Marketing Management (3)
Concepts and theories pertaining to marketing management. A comprehensive approach to translating the strategic plan of the organization into a functional marketing plan that can be implemented in an effective manner in order to increase the market share of the target public. Emphasis will be placed on both analytical and quantitative approaches to marketing.

Masters Program Nutrition (MPN)

MPN 5106 Scientific Writing (1)
Co-requisite(s): MPN 5210
This course introduces the evidence-based practice (EBP) analysis process and provides a structured format for students to begin interpreting and applying current research. Students will critically evaluate peer-reviewed journal articles, determine their appropriateness to the topic being addressed, and demonstrate the ability to write clear, concise, and coherent passages for future research project classes.

MPN 5110 Leadership I (1)
MPN 5110 Leadership I educates students on an overview of theoretical frameworks and concepts for the practice of leadership in organizations. Students have the opportunity to examine and discuss these theories and concepts and reflect on how they relate to the Army profession in a variety of environments. The theories and concepts in this course expand upon and complement leadership doctrine in ADP 6-22.

MPN 5120 Leadership II (1)
Pre-requisite(s): MPN 5110
MPN 5120 Leadership II builds on the foundation from Leadership I. It continues to educate students on an overview of theoretical frameworks and concepts for the practice of leadership in organizations. Students have the opportunity to examine and discuss these theories and concepts and reflect on how they relate to the Army profession in a variety of environments.

MPN 5121 Research Project 1 (1)
Co-requisite(s): MPN 5220
Pre-requisite(s): MPN 5106 and MPN 5210
The course continues the evidence-based practice analysis process initiated in Scientific Writing (MPN5106). Students expand their detailed literature review outline into a complete narrative literature review document. Students identify one research topic theme to develop a research abstract and poster presentation that demonstrates their ability to articulate the evidence synthesized in a variety of forums.

MPN 5130 Leadership III (1)
Pre-requisite(s): MPN 5110 and 5120
MPN 5130 Leadership III builds on the concepts introduced in Leadership I and II. It continues to educate students on an overview of theoretical frameworks and concepts for the practice of leadership in organizations with further application. A series of executive skills sessions exposes the students to key skills and tools for success as a Company grade leader and Dietitian.

MPN 5210 Research Methods I (2)
This course is the first in a series of two courses that, in conjunction with Scientific Writing, provide the foundational knowledge and skills required for successful completion and defense of student research projects. Research Methods I introduces students to basic and advanced concepts related to research design and statistics.

MPN 5216 Exercise Physiology (2)
Co-requisite(s): MPN 5231
Pre-requisite(s): MPN 5309 and 5314
Course uses lecture, discussion, and practical exercises to develop an in depth, applied knowledge of factors affecting physical human performance. A range of topics is addressed, including muscle physiology, cardiovascular kinetics in physical activity, exercise energy metabolism, training adaptations, exercise/training recommendations, physiological testing theory and validity, and physiology in extreme environments.

MPN 5217 Medical Nutrition Therapy II (2)
Pre-requisite(s): MPN 5407 and MPN 5314
This clinical nutrition course prepares future registered dietitian nutritionists by providing foundational knowledge of chronic disease states common among the American population. Each disease-specific block of instruction addresses related anatomy & physiology, pharmacology (prescribed medications, OTC considerations, drug nutrient interactions), MNT recommendations, comorbidities, and lifecycle considerations.

MPN 5220 Research Methods II (2)
Co-requisite(s): MPN 5121
Pre-requisite(s): MPN 5106 and 5210
This course builds on the foundation of basic and advanced concepts related to research design and statistics attained in MPN 5210 Research Methods I. Students continue to gain an understanding of and interpret basic and advanced statistical analysis techniques. Students learn to perform these operations on SPSS statistical software.

MPN 5225 Public Health II with Lab (2)
Pre-requisite(s): Medical Nutrition Therapy I II, Public Health I
Public Health II expands on foundational concepts introduced in Public Health I, but now framing in a global perspective. Students are exposed to current and emerging issues in global and public health nutrition. They learn to recognize how health indicators, health disparities, and resource availability/accessibility influence the nutrition status of regions worldwide, with an emphasis on lower-middle income countries.

MPN 5231 Research Project II with Lab (2)
Pre-requisite(s): MPN 5106, 5210, 5220, 5121, 5316
This course continues the research process following Scientific Writing (MPN 5106) and Research Project I (MPN 5121). In small teams, students conduct a mock research study. The course is founded on experiential learning experiences that include developing a research plan and data collection code book, collecting data using a variety of nutrition-relevant tools, and cleaning and analyzing the dataset.

MPN 5235 Organizational Stewardship with Lab (2)
Pre-requisite(s): MPN 5522
Organizational stewardship creates accountable and committed workplaces by imposing personal responsibility, accountability, and ownership on employees and leaders. This course encourages putting organizational goals over self-interest and ensuring that the organization thrives for subsequent leaders and generations. The course explores fiscal and human resources and governance for department success within a resource-constrained organization.

MPN 5240 Experiential Practice I Lab (2)
Pre-requisite(s): Comprehensive Oral and Written Examination for MPN
This course provides experiential learning to enrich competencies with a staff experience. There are several core leadership and management competencies that all MPN 5240 Experiential Practice I Lab students will complete during this course. However, students have the option to choose additional competencies that will be mutually agreed upon by faculty, preceptors, and students.

MPN 5241 Research Project III with Lab (2)
Pre-requisite(s): MPN 5106, MPN 5210, MPN 5220, MPN 5121, and MPN 5231
This course continues the research process following Scientific Writing (MPN 5106) and Research Project I (MPN 5107) while reflecting on the research experiences gained during MPN 5231. Students create a research plan to investigate an assigned research topic, and understand the research protocol's importance in completing sound scientific research while protecting human subjects/study participants.

MPN 5245 Military Nutrition Operations with Lab (2)
Pre-requisite(s): Approximately one month prior to attending Joint Field Nutrition Operations Course, all students have will complete the Emergency Preparedness Response Course (EPRC) – Basic Awareness Course through JKO and Chemical Biological Radiological Nuclear Energy (CBRNE) prerequisite online courses
The course incorporates current concepts and doctrine along with experiential practice in the management of a nutrition care section within an Army deployable hospital system. This section is responsible for providing hospital nutrition care services including meal preparation and service for patients and staff, providing patient education, and advising the commander on health and nutrition related issues.

MPN 5251 Research Project IV with Lab (2)
Pre-requisite(s): MPN 5106, 5121, 5210, 5220, 5231, and 5241
Students conduct their research studies, complete a variety of research activities, and demonstrate ability to integrate evidence-informed research principles, critical thinking, and communication skills.

MPN 5303 Research Methods II (3)
Pre-requisite(s): MPN 5401
This course includes a combination of lecture and practical exercises that emphasize the steps and principles of research. Students will participate in all steps of research, working individually as well as in small groups. Steps include the protocol approval process, volunteer recruitment, data collection, data analysis/interpretation, and preparation of written and oral presentations of research findings.

MPN 5305 Protocol Development (3)
Co-requisite(s): MPN 5401
Students will explore topics for protocol development. Hypotheses will be generated and supported by literature reviews.

MPN 5307 Nutrition in Stability Operations (3)
This course is designed to provide students with in-depth knowledge of nutrition issues confronted in complex emergencies and within the developing world. Emphasis will be placed on macronutrient and micronutrient malnutrition, assessment of nutritional needs, nutritional surveillance and food distribution programs.

MPN 5309 Advanced Energy Metabolism (3)
Co-requisite(s):
Introduction to various energy disorders, energy metabolism, and bioenergetics; requires application of evidence-based practice in a variety of energy-related disease states and disorders; requires critical assessment of the validity and logic behind weight loss claims and advertisements; explores best practices for adult and pediatric weight management; and includes aspects of gene expression, nutrigenomics, and nutrigenetics.

MPN 5311 Leadership and Management Development (3)
This course is designed to explore a broad range of leadership topics and issues, and to help students develop their executive skills for future roles as managers in clinic and food service operations. Students will have the opportunity to examine their own leadership qualities and develop ways to improve them. Readings will cover both theoretical bases for leadership and practical strategies for effective leadership in the diagnosis, prediction, and analysis of human behavior in organizations.

MPN 5314 Nutrition Care Process with Lab (3)
Co-requisite(s): MPN 5407
This nutrition course prepares future registered dietitians nutritionists by providing foundational knowledge about the Nutrition Care Process (NCP).

MPN 5315 Public Health I with Lab (3)
Co-requisite(s): MPN 5217
Pre-requisite(s): MPN 5407 and MPN 5314
Course uses lecture, discussion, online resources, and practical exercises to introduce and explore measures to promote, improve, or conserve the military community. Students take an in-depth and practical approach to food policy, behavioral design, and food availability. Topics include programs, initiatives, regulations and policies, and occupational specialties unique to the military, both in garrison and in deployed settings.

MPN 5336 Performance Nutrition with Lab (3)
Pre-requisite(s): MPN 5309, MPN 5314, MPN 5231, and MPN 5216 Exercise Physiology
Course uses lecture, discussion, and practical experiences to develop an in-depth, applied knowledge of factors affecting physical and cognitive human performance. Proactive, active, and reactive components of a comprehensive performance nutrition concept are presented.

MPN 5337 Advanced Medical Nutrition Therapy II with Lab (3)
Pre-requisite(s): MPN 5407, 5314, 5217, and 5527
This clinical nutrition course provides advanced knowledge of nutrition support therapy and evidence-based practice for various critical care populations. Anatomy & physiology, pharmacology (prescribed medications, OTC considerations, and drug nutrient interactions), MNT recommendations, comorbidities, and lifecycle consideration are reviewed for advanced disease states.

MPN 5346 Human Performance Optimization with Lab (3)
Pre-requisite(s): MPN 5336
The Human Performance Optimization (HPO) course educates an interprofessional care team of military allied health students (Occupational Therapist [65A], Physical Therapist [65B], and Registered Dietitian [65C]) who collaboratively develop and deliver holistic individual and unit services in a resource-constrained military environment outside of standard clinical care environments.

MPN 5361 Research Project V with Lab (3)
Pre-requisite(s): MPN 5106, 5210, 5220, 5121, 5231, 5241, 5251 and pass oral board examination
This course is the final step in the research process. Students finish data analysis, develop results tables / figures, complete their written manuscripts, and defend their studies to their research committees. This course is founded on experiential learning experiences that include data analysis, creation of tables and figures to display relevant findings, and properly interpreting the results through written and oral communication.

MPN 5401 Research Methods I (4)
This course is designed to introduce students to the basic and advanced concepts, techniques, and technologies used in the scientific inquiry of applied clinical research.

MPN 5404 Advanced Nutrition and Critical Care (4)
This course provides an in-depth review of the study and application of nutrition principles related to the critically ill patient with an emphasis on trauma and burn. Course includes lab.

MPN 5407 Medical Nutrition Therapy I with Lab (4)
Co-requisite(s): MPN 5314
This clinical nutrition course prepares future registered dietitian nutritionists by providing foundational knowledge of nutrition requirements and considerations for various populations.

MPN 5409 Advanced Anatomy & Physiology (4)
In this course, students will explore anatomy, physiology and pathophysiology of the gastrointestinal, urinary, respiratory, cardiovascular, endocrine and reproductive systems.

MPN 5410 Force Health Protection (4)
Course explores measures to promote, improve, or conserve Soldiers' mental and physical well-being. Students will take a more in-depth and practical approach to evaluating operational Army unit capabilities and physical demands as well as interdisciplinary teamwork to achieve optimal health outcomes.

MPN 5411 Effective Scientific Writing (4)
This course introduces the evidence-based medicine analysis process and provides a structured format for interpretation and application of current research. The course develops and/or builds on skills to find relevant peer-reviewed journal articles for a specific topic; critically evaluate peer reviewed journal articles and determine their appropriateness to the topic being addressed; and write a clear, concise, and coherent literature review.

MPN 5450 Experiential Practice II Lab (4)
Pre-requisite(s): MPN 5240
This course provides experiential learning to enrich competencies with a staff experience. There are several core leadership and management competencies that all students will complete during this course. However, students have the option to choose additional competencies that will be mutually agreed upon by faculty, preceptors, and students.

MPN 5503 Nutrition and Performance (5)
This course provides students with an in-depth knowledge of how nutrition variables can impact both physical and cognitive performance. Topics include exercise physiology, exercise screening, fuel mobilization (carbohydrate, fat, and protein), micronutrients (vitamins and minerals), hydration, body composition, supplements, and energy balance. Course includes lab.

MPN 5504 Advanced Energy Metabolism (5)
Co-requisite(s): MPN 5505
Introduction to various topics in energy disorders, energy metabolism, and biochemistry; apply evidence-based practice in a variety of energy-related disease states and disorders; critically-assess the validity and logic behind weight loss claims and advertisements; explore human weight management; familiarization with gene expression, nutrigenomics, and molecular diagnostics.

MPN 5505 Medical Nutrition Therapy (5)
The course uses lecture, discussions, case studies, and simulations to emphasize the implementation of the nutrition care process (NCP) and the provision of medical nutrition therapy (MNT) to patients with various disease states. The course emphasizes the technical skills needed for nutrition documentation, counseling, and education that includes multiple opportunities to practice interview and counseling.

MPN 5522 Food Service and Management (5)
Pre-requisite(s): Computrition Orientation
This course focuses on food safety and regulations as well as human resource management, institutional menu development, budgeting, finance, and food service equipment, layout and design. This course explores a broad range of leadership and food service topics and issues, and helps students develop their executive skills for future roles as military officers, leaders, and managers.

MPN 5527 Advanced Medical Nutrition Therapy (MNT) I with Lab (5)
Pre-requisite(s): MPN 5407, MPN 5314, and MPN 5217
This clinical nutrition course prepares future registered dietitian nutritionists by providing advanced knowledge of nutrition support therapy and evidence-based practice for various critical care populations. Each disease-specific block of instruction addresses related anatomy & physiology, pharmacology (prescribed medications, OTC considerations, and drug nutrient interactions), MNT recommendations, comorbidities, and lifecycle considerations.

MPN 5V98 Master's Research Project (1-9)
Student will participate in a group research project (data collection, analysis, and presentation).

MPN 5V99 Master's Thesis (1-9)
Student will complete an individual research protocol (data collection, analysis, and presentation).

Mathematics (MTH)

MTH 4314 Abstract Algebra (3)
Pre-requisite(s): A grade of C or above in MTH 2311 and MTH 3312; or consent of instructor
Fundamentals of group, ring, and field theory. Topics include permutation groups, group and ring homomorphisms, direct products of groups and rings, quotient objects, integral domains, field of quotients, polynomial rings, unique factorization domains, extension fields, and finite fields.

MTH 4322 Numerical Analysis (3)
Cross-listed as CSI 4322
Pre-requisite(s): A grade of C or above in MTH 2321
Numerical evaluation of derivatives and integrals, solution of algebraic and differential equations, and approximation theory.

MTH 4326 Advanced Calculus I (3)
Pre-requisite(s): A grade of C or above in MTH 2321 and MTH 3323 or consent of instructor
The real and complex number systems, basic topology, numerical sequences and series, continuity, differentiation, integration, sequences and series of functions.

MTH 4327 Advanced Calculus II (3)
Pre-requisite(s): A grade of C or above in MTH 4326
Line and surface integrals, Green, Gauss, Stokes theorems with applications, Fourier series and integrals, functions defined by integrals, introduction to complex functions.

MTH 4328 Numerical Linear Algebra (3)
Cross-listed as CSI 4328
Pre-requisite(s): A grade of C or above in MTH 2311
Numerical methods for solution of linear equations, eigenvalue problems, and least squares problems, including sparse matrix techniques with applications to partial equations.

MTH 4329 Theory of Functions of a Complex Variable (3)
Pre-requisite(s): A grade of C or above in MTH 2321
Number systems: the complex plane; fractions, powers, and roots; analytic functions; elementary functions; complex integration; power series; mapping by elementary functions; calculus of residues.

MTH 5100 Teaching Mathematics (1)
This course equips graduate students in mathematics with pedagogical strategies and techniques for teaching mathematics effectively in various settings. Topics covered include instructional design, assessment methods, communication skills, and addressing the needs of diverse learners.

MTH 5310 Advanced Abstract Algebra I (3)
Pre-requisite(s): MTH 4314 and consent of the instructor
Finite groups, Sylow theorems, nilpotent and solvable groups, principal ideal domains, unique factorization domains, and sub rings to algebraic number fields.

MTH 5311 Advanced Abstract Algebra II (3)
Pre-requisite(s): MTH 5310
Field theory, Galois theory, modules, finitely generated modules, principal ideal domains, homological methods, and Wedderburn-Artin theorems.

MTH 5316 Linear Algebra and Matrix Theory (3)
Pre-requisite(s): MTH 3312
Matrix calculus, eigenvalues and eigenvectors, canonical forms, orthogonal and unitary transformations, and quadratic forms. Applications of these concepts. A course project is required and will be specified by the professor at the beginning of the course.

MTH 5323 Theory of Functions of Real Variables I (3)
Pre-requisite(s): MTH 4327
Borel sets, measure and measurable sets, measurable functions, and the Lebesque integral.

MTH 5324 Theory of Functions of Real Variables II (3)
Pre-requisite(s): MTH 5323
Function spaces, abstract measure, and differentiation.

MTH 5325 Theory of Differential Equations (3)
Pre-requisite(s): MTH 3325 and 5323
Initial value problems for ordinary differential equations: existence, uniqueness, continuous dependence, stability analysis, oscillation theory, general linear systems, phase plane analysis, limit cycles and periodic solutions. Topics of current interest in dynamical systems.

MTH 5326 Theory of Partial Differential Equations (3)
Pre-requisite(s): MTH 5324 and 5325
Linear and quasilinear first order equations; shocks, characteristics, the Cauchy problem, elliptic, hyperbolic, and parabolic equations, maximum principles, Dirichlet problem, operators, Sobolev spaces, distributions.

MTH 5330 Topology (3)
Pre-requisite(s): Graduate standing
Topological spaces, continuous functions, metric spaces, connectedness, compactness, separation axioms, Tychenoff theorem, fundamental group, covering spaces, metrization theorems.

MTH 5331 Algebraic Topology I (3)
Pre-requisite(s): MTH 5330
Homology theory, simplicial complexes, topological invariance, relative homology, Eilenberg-Steenrod axioms, singular homology, CW complexes.

MTH 5332 Algebraic Topology II (3)
Pre-requisite(s): MTH 5331
Cohomology theory, homology with coefficients, homological algebra, kunneth theorem, duality in manifolds.

MTH 5340 Differential Geometry (3)
Pre-requisite(s): MTH 4327, 5316, and 5330
Differentiable manifolds, submanifolds, vector fields, tensor fields, integration on manifolds, Riemannian geometry.

MTH 5344 Probability Theory (3)
Pre-requisite(s): MTH 5323
Topics include the law of large numbers, central limit theorems, random walks, martingales, Markov chains, ergodic Theorems, and Brownian motion.

MTH 5345 Functional Analysis (3)
Pre-requisite(s): MTH 5324
Banach spaces, Hilbert spaces, linear operators, and spectral theory.

MTH 5350 Complex Analysis (3)
Comoplex numbers, complex functions, analytic functions, linear fractional transformations, complex integration, Cauchy's formula, residues, harmonic functions, series and product expansions, gamma function, Riemann mapping theorem, Dirichlet problem, analytic continuation.

MTH 5351 Applications of Complex Analysis (3)
Pre-requisite(s): MTH 5350
Poisson summation, Mellin transformation, zeta function of Riemann, special functions, zeta functions associated with ezjen value problems, heat kernel, asymptotic expansion of the heat kernel, metamorphic structure of zeta functions, theta functions, elliptic functions.

MTH 5360 Applied Mathematics I (3)
Pre-requisite(s): Graduate standing
Dynamical systems (discrete and continuous), linear and nonlinear systems theory, transform methods, control theory and optimization, calculus of variations, stability theory.

MTH 5361 Applied Mathematics II (3)
Pre-requisite(s): Graduate standing
Eigenvalue theory, projections for linear equations, iteration and multilevel methods, fast Fourier Transforms, approximations of differential equations, grid adaptation and numerical stability, weak solutions and Sobolev space, wavelets.

MTH 5375 Linear Programming (3)
Pre-requisite(s): MTH 2311 and FORTRAN, or consent of instructor
Introduction to the theory and applications of linear programming, including the simplex algorithm, duality, sensitivity programming, including the simplex algorithm, duality, sensitivity analysis, parametric linear programming, integer programming, with applications to transportation and allocation problems and game theory. A course project is required and will be specified by the professor at the beginning of the course.

MTH 5376 Nonlinear Programming (3)
Theory and algorithms for the optimization of unconstrained problems including gradient and Quasi-Newton methods; and constrained problems to include feasible direction methods, Lagrange multipliers, and Kuhn-Tucker conditions. Students must have a knowledge of linear algebra, third-semester calculus, and FORTRAN.

MTH 5380 Statistical Methods for Research (3)
Pre-requisite(s): For graduate students from various disciplines
Introduction to the more common statistical concepts and methods. Emphasis is placed on proper applications of statistical tools. Topics include: interval estimation, tests of hypotheses, linear regression and correlation, categorical data analysis, design of experiments and analysis of variance, and the use of computer packages.

MTH 5390 Special Problems in Mathematics (3)
Project course for the project option in the M.S. degree.

MTH 5V91 Special Topics in Algebra for Graduates (1-3)
May be repeated for credit up to 18 hours.

MTH 5V92 Special Topics in Analysis for Graduates (1-3)
May be repeated for credit up to 18 hours.

MTH 5V93 Special Topics in Mathematics for Education Students (1-3)
Pre-requisite(s): Consent of departmental chair and the course instructor
May be repeated for credit for a maximum of nine semester hours if under different topics.

MTH 5V95 Special Topics in Topology-Geometry (1-3)
May be repeated for credit for a maximum of 9 semester hours.

MTH 5V96 Special Topics in Graph Theory (1-3)
Introduction to graph theory; Euler tours, matching, connectivity, planar graphs, coloring, and random graphs. Additional topics may vary by semester.

MTH 6310 Commutative Rings and Modules (3)
Pre-requisite(s): MTH 5311
Noetherian rings, quotient rings, primary decomposition, integral dependence and valuations, Dedekind domains, and discrete valuation rings, completions, dimension theory.

MTH 6311 Non-Commutative Rings and Modules (3)
Pre-requisite(s): MTH 6310
Semi-simple rings and modules, radicals, chain conditions, decomposition of modules, Goldie's theorem, density and Morita theory.

MTH 6312 Abelian Group Theory (3)
Pre-requisite(s): MTH 5311
An introduction to the fundamental theory of torsion, torsion-free, and mixed abelian groups.

MTH 6315 Homological Algebra (3)
Pre-requisite(s): MTH 5311 or consent of instructor
Categories, chain complexes, homology and cohomology, and derived functors. Detailed examination of Ext, Tor, adjoint functors, and direct and inverse limits for categories of modules. Kunneth formula and universal coefficient theorems. Cohomology of groups.

MTH 6322 Approximation Theory (3)
Pre-requisite(s): MTH 4322 and 4328
Approximation of real functions including polynomial and rational interpolation, orthogonal polynomials, Chebysher approximation, the fast Fourier transform, splines, wavelets, and tensor product interpolation.

MTH 6325 Numerical Solutions of Partial Differential Equations (3)
Pre-requisite(s): MTH 4322 and 4328
Finite difference and finite element methods for elliptic, parabolic, and hyperbolic problems in partial differential equations.

MTH 6340 Compact Lie Groups (3)
Pre-requisite(s): MTH 5310 and 5340
Compact Lie groups, Lie algebras, representation theory, orthogonality relations, Peter Weyl theorem, structure theory, roots, Weyl character formula.

MTH 6341 Lie Algebras (3)
Pre-requisite(s): MTH 5310 and 5316
Lie algebras, semisimple Lie algebras, root systems, conjugecy theorems, classification theorem, representation theory, Chevalley algebras.

MTH 6342 Semisimple Lie Groups (3)
Pre-requisite(s): MTH 6340 and 6341
Structure theory for noncompact groups, induced representations, tempered representations, Langland's classification of irreducible admissible representations.

MTH 6350 Set and Model Theory (3)
Pre-requisite(s): MTH 5311
Propositional and predicate calculus, Loewenheim-Skolem theorems, properties of ultraproducts, model completeness, Goedel's completeness/incompleteness proofs, infinitary language, axioms of set theory, ordinal and cardinals arithmetic, models of set theory and large cardinals.

MTH 6362 Fourier Analysis on Euclidean Spaces (3)
Introduction to Fourier Analysis; singular integrals, pseudodifferential operators, Lp estimates, and applications to partial differential equations. Additional topics may vary by semester.

MTH 6363 Analytic Number Theory (3)
Unique factorization, quadratic reciprocity, arithmetical functions, Dirichlet series, distribution of prime numbers. Additional topics may vary by semester.

MTH 6364 Algebraic Number Theory (3)
Class field theory, cyclotomic fields, p-adic L functions, and elliptic curves. Additional topics may vary by semester.

MTH 6365 Topics in Combinatorics (3)
Graphs, Ramsey theory, extremal set theory, generating functions, and partitions. Additional topics may vary by semester.

MTH 6366 Topic in Noncommutative Analysis (3)
Introduction to Positive definite matrices, Matrices of the trace class and the Schatten-p classes, Lp spaces associated with von Neumann algebras, Markov semigroup of operators, Noncommutative Hardy/BMO spaces, Free Fourier Multipliers, Shannon entropy, and Fisher information. Additional topics may vary by semester.

MTH 6367 Topics in Complex Analysis: Elliptic and Automorphic Functions (3)
Topics which may vary by semester include periodic meromorphic functions, elliptic Weierstrass functions, elliptic Jacobi functions, modular functions, Picard's theorems, modular group, automorphic functions, and applications to completely integrable systems

MTH 6368 Topics in Spectral Theory I (3)
Maximal and minimal operators, Weyl-Titchmarsh theory, spectral functions for second-order ODE operators, eigenfunction expansions. Topics may vary by semester.

MTH 6369 Topics in Operator Theory II: Compact Operators (3)
Compact operators, canonical decomposition of compact operators, singular values, I^p-based Schatten-von Neumann trace ideals, (regularized) Fredholm determinants, applications to the spectral theory of differential operators. Topics may vary by semester.

MTH 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

MTH 6V13 Advanced Topics in Algebra (1-3)
Pre-requisite(s): Consent of instructor
May be repeated for credit up to 18 hours.

MTH 6V23 Advanced Topics in Analysis (1-3)
Pre-requisite(s): Consent of instructor
May be repeated for credit up to 18 hours.

MTH 6V24 Advanced Topics in Applied Mathematics (1-3)
Pre-requisite(s): Consent of instructor
May be repeated for credit up to 18 hours.

MTH 6V28 Advanced Topics in Numerical Analysis (1-3)
Pre-requisite(s): Consent of instructor
May be repeated for credit up to 18 hours.

MTH 6V30 Advanced Topics in Topology (1-3)
Pre-requisite(s): Consent of instructor
Topology is the study of abstract mathematical spaces with the ultimate goal of finding invariants that are preserved under continuous transformation. This course is intended for doctoral candidates with a strong interest in topology. May be repeated for credit.

MTH 6V43 Advanced Topics in Representation Theory (1-3)
Pre-requisite(s): Consent of instructor
May be repeated for credit up to 18 hours.

MTH 6V99 Dissertation (1-12)
Supervised research for the doctoral dissertation.

Mechanical Engineering (ME)

ME 4330 Introduction to Robotics (3)
Cross-listed as ELC 4330
See ELC 4330 for course information.

ME 4346 Introduction to Aeronautics (3)
Pre-requisite(s): A grade of C or better in ME 2321 and a grade of C or better or concurrent enrollment in ME 2345
Introduces the applied science of atmospheric flight. The course teaches about airplanes and how they fly from a design and application perspective. Included are topics in fluid dynamics, airfoil and wing theory, aircraft performance, stability, and aircraft design.

ME 4347 Analysis and Design of Propulsion Systems (3)
Pre-requisite(s): A grade of C or better in ME 3321 and ME 2345
Introduction to compressible flow, including flows with simple area change, heat addition, friction, and shock waves. Analysis, parametric design, and performance of ramjets, turbojets, turbofans, and turboprops. Introduction to the operating principles of major engine components. Introduction to rockets.

ME 4377 Solar Energy (3)
Cross-listed as ELC 4377
See ELC 4377 for course information.

ME 4382 Selection of Materials and Manufacturing Processes in Design (3)
Pre-requisite(s): A grade of C or better in ME 3320, ME 3322, and ME 3323
Systematic approach for selection of materials and manufacturing process in design that balances performance requirements with cost of materials and manufacturing. Material properties, manufacturing processes and types of materials. Advanced computer software and case studies are used to illustrate application of principles.

ME 4396 Special Topics in Mechanical Engineering (3)
Pre-requisite(s): Consent of Department Chair
Study of advanced topics in mechanical engineering. This course may be repeated once under a different topic.

ME 4V97 Special Projects in Mechanical Engineering (1-6)
Pre-requisite(s): Consent of department chair
Advanced topics and/or special project activities in Mechanical Engineering.

ME 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

ME 5302 Engineering Analysis (3)
Cross-listed as EGR 5302, ELC 5302
See ELC 5302 for course information.

ME 5322 Computer-Aided Engineering and Design (3)
Design and analysis of engineering components and systems using interactive computer programs with inclusion of computer simulation.

ME 5323 Introduction to Finitie Element Methods (3)
Introductory course on the theory and techniques of finite element analysis for numerical solutions of partial differential equations beginning from energy concepts and foundational constitutive equations. Numerical implementations and solutions are demonstrated by user-created code using modern computer technologies.

ME 5324 Advanced Dynamics (3)
Pre-requisite(s): Graduate standing in Engineering
An advanced study of the mechanical dynamics of systems involving multiple, interconnected rigid bodies. Topics include mathematical expressions of body kinematics, various methods to derive dynamic equations of motion, three-dimensional inertial properties, and dynamic motion constraints.

ME 5325 Advanced Finite Element Methods (3)
Pre-requisite(s): ME 3321 (or equivalent), 4324 (or equivalent), and 4345 (or equivalent)
Advanced analysis of the finite element theory with emphasis on non-linear applications for thermal and fluidic applications. Course will formulate the finite element form from several classes of constitutive equations, discuss solution methods, and construct and implement algorithms for solving the finite element form.

ME 5333 Introduction to Combustion (3)
Understand and apply fundamentals for 1) combustion of gas, solid and liquid fuels; 2) combustion equilibrium and calculation of equilibrium compositions and flame temperature; 3) characterization of flame types; 4) quenching, flammability, ignition, and stabilization of flames; 5) soot formation; and 6) detonations and deflagrations.

ME 5338 Experimental Methods in Heat Transfer and Fluid Flow (3)
Pre-requisite(s): ME 4335 or consent of instructor
Consideration of experimental methods including experiment planning and design, error and uncertainty analysis, temperature measurement (in fluids and solids), flow rate measurement, flow visualization, and advanced data analysis; selected experiments conducted.

ME 5339 Tribology (3)
Topics include the nature of rough surfaces, contact mechanics between noncomformal and nominally-flat surfaces, nature of friction, lubricants and lubrication theory, and surface damage and fatigue. Computational analyses of surfaces and lubricant flow are performed using Python.

ME 5340 Intermediate Fluid Mechanics (3)
Pre-requisite(s): ME 3321
Introduction to vectors and tensors, deformation and stress in fluids, kinematics of fluid flows, conservation laws, Navier-Stokes equations, energy equation, introduction to computational fluid dynamics (CFD), introduction to vorticity dynamics and selected topics in compressible fluid flow.

ME 5341 Intermediate Heat Transfer (3)
Pre-requisite(s): ME 4345 (or equivalent)
Study of conduction, convection, and radiation. Steady and transient one - and multi-dimensional heat transfer with emphasis on analytical methods, numerical techniques, and approximate solutions.

ME 5342 Inviscid Flows (3)
Pre-requisite(s): ME 5340 or concurrent enrollment
Introduction to the dynamics of inviscid, incompressible fluids; vector representation theorems; vorticity transport theorem; solution methods to steady and unsteady, two-dimensional, axisymetric and three-dimensional flows; computational methods for inviscid flows; and forces and moments on bodies in two-dimensional flows.

ME 5343 Computational Fluid Dynamics (3)
Pre-requisite(s): ME 3321
Study of numerical methods tailored to solve thermo-fluids governing equations. Classification of partial differential equation (PDE). Finite difference method. Basic concepts of discretization, consistency, and stability. Applications of numerical methods to selected model PDE. Numerical methods for inviscid flow, boundary-layer flow, and the Navier-Stokes equations. Applications include supersonic compressible and subsonic incompressible flows. Turbulence modeling. Finite volume method. Completion of ME 3321 Fluid Mechanics or equivalent recommended.

ME 5344 Viscoelasticity (3)
The Theory of Viscoelasticity is fundamental in the study of time rate dependent materials, with specific emphasis on applications to engineering systems with plastics and materials with polymeric behavior.

ME 5346 Introduction to Aeronautics (3)
Introduces the applied science of atmospheric flight. The course teaches about airplanes and how they fly from a design and application perspective. Included are topics in fluid dynamics, airfoil and wing theory, aircraft performance, stability, and aircraft design.

ME 5347 Analysis and Design of Propulsion Systems (3)
Pre-requisite(s): ME 3321, 3345
Introduction to compressible flow, including flows with simple area change, heat addition, friction, and shock waves. Analysis, parametric design, and performance of ramjets, turbojets, turbofans, and turboprops. Introduction to the operating principles of major engine components. Introduction to rockets.

ME 5348 Wind Energy (3)
This course presents fundamentals about wind turbines, both commercial and residential. Included are topics in aerodynamics, structures, power generation, control economics, environments, noise, and design.

ME 5351 Intermediate Numerical Methods (3)
Pre-requisite(s): MTH 2311 and 3326 Introduction to engineering computational methods for design, from theory to algorithm to implementation
Topics will include: roots of equations, optimization, linear systems, integration and differentiation, curve-fitting, and systems of ordinary differential equations.

ME 5352 Theory of Elasticity (3)
Pre-requisite(s): ME 3320, 3321, and MTH 3326
The Theory of Elasticity is fundamental to the study of linear and non-linear solid mechanics. This course introduces the foundations of elasticity for a deformable body, including the concept of deformation and stress using tensor calculus.

ME 5353 Continuum Mechanics (3)
Pre-requisite(s): ME 3320 and Graduate standing
Introductory course into the mechanics of a continuous medium. Topics include the foundational concepts of stress, strain, and constitutive relationships presented in Cartesian tensor notation. Studies will focus on both solid and fluid mechanics.

ME 5357 Cardiovascular Engineering and Instrumentation (3)
Cross-listed as BME 5357, EGR 5357, ELC 5357
See BME 5357 for course information.

ME 5360 Renewable Energy Devices (3)
Educates graduate students from engineering disciplines in the design and applications of various renewable energy sources, materials, and devices. Introduces the basic concepts, principles, potentials, and limitations of several energy conversion and storage devices with a particular focus on solar cells, fuel cells, batteries, and supercapacitors.

ME 5364 Introduction to Additive Manufacturing (3)
This course introduces various aspects of additive manufacturing, which has become prominent in industry over the past two decades. The course gives the students a basic understanding of additive manufacturing and its use in design, both for rapid prototyping and for functional manufacturing. The course highlights the advances that additive manufacturing makes upon traditional manufacturing techniques.

ME 5365 Properties and Processing of Electronic Materials (3)
Study of the design and applications of conventional and advanced electronic materials ranging from typical Si and electroceramics to complex oxides and conducting polymers. Fundamental issues controlling their properties, processing, and reliability are addressed. In addition, a variety of thin film deposition techniques such as dc/rf magnetron sputtering, thermal/e-beam evaporation, and chemical vapor deposition are covered.

ME 5382 Mechanical Behavior of Polymers and Polymeric Composites (3)
Pre-requisite(s): ME 3320 or equivalent and ME 3322 or equivalent
Elastic and viscoelastic behavior of polymers and polymeric composites, predicting long-term behavior from short-term tests using time-temperature-superposition; relating chemical structure to mechanical properties for thermosets, thermoplastics, and semi-crystalline plastics; relating processing to mechanical properties; and predicting stiffness and strength from properties of fibers and polymeric matrices.

ME 5383 Deformation and Fracture in Metals (3)
Pre-requisite(s): ME 3320 or equivalent and ME 3322 or equivalent
This course introduces students to advanced theories of deformation and fracture that limit lifetimes in service of components and structures made of metals and alloys. Fracture mechanics are introduced as a tool in the life prediction of components that develop cracks before catastrophic failure. Plastic collapse, creep, fatigue, and environmental stress cracking are covered. Failure analysis methodology and tools are introduced and illustrated.

ME 5385 Failure Analysis: Theory and Practice (3)
Pre-requisite(s): ME 3322
Introduction to basic failure theories and their application to the analysis of component and system failure in service; methodology of systematic failure analysis of actual service failures; introduction to tools used in failure analysis; case studies used extensively for teaching and assignments.

ME 5396 Special Topics in Engineering (3)
Cross-listed as BME 5396, EGR 5396, ELC 5396
See EGR 5396 for course information.

ME 5397 Special Topics in Engineering (3)
Cross-listed as BME 5397, EGR 5397, ELC 5397
See EGR 5397 for course information.

ME 5V99 Master's Thesis (1-6)
Students completing a master's program with a thesis must complete six hours of ME 5V99.

ME 6396 Advanced Topics in Engineeering (3)
Study of advanced topics in engineering. This course may be repeated for a total of four times.

ME 6V97 Engineering Research (1-12)
Pre-requisite(s): Consent of student's supervisory graduate committee and admission to doctoral candidacy
Doctoral students may enroll in up to 12 semester hours of engineering research hours prior to taking the preliminary exam and being accepted into candidacy for the doctoral degree. These engineering research hours will count toward the degree.

ME 6V99 Dissertation (1-6)
Required of all doctoral candidates. In no case will fewer than 12 semester hours be accepted for a dissertation. Students may not enroll for doctoral research hours until they have been officially accepted into candidacy for the doctoral degree. After initial enrollment, students must register for at least one semester hour of doctoral research every term thereafter (summer term excluded).

Military General Surgery (MGS)

MGS 6210 Surgical Basic Principles (2)
Historical surgical perspective on basic cellular, physiological principles of surgery.

MGS 6211 Perioperative Management (2)
Basis of surgery is evaluation of the risk factors of a potential surgical patient. Perioperative management focus on the risk, benefits, and infections of surgery and the complications of anesthesia.

MGS 6212 The Abdomen (2)
The anatomy and physiological process that occur within the abdomen (abdominal wall, umbilicus, peritoneum, mesenteries, omentum, retroperitoneum, hernia, acute abdomen, and acute gastrointestinal hemorrhage).

MGS 6213 Surgery of the Esophagus and Stomach (2)
Anatomy, physiology, disease process, and surgical treatments of the stomach and esophagus, along with hiatal hernia and gastroesophageal reflux disease.

MGS 6214 Surgery of the Small Intestine, Large Intestine, Rectum, and Anus (2)
Surgical anatomy, pathophysiology, disease process, and treatment of the small intestine, large intestine, rectum, and anus.

MGS 6215 Surgery of the Liver and Biliary Tract (2)
Anatomy, pathophysiology, disease process, and treatments of liver and biliary tract.

MGS 6216 Surgery of the Pancreas and Spleen (2)
Anatomy, pathophysiology, disease process, and treatments of the pancreas and spleen.

MGS 6217 Endocrine Surgery (2)
Anatomy, pathophysiology, disease process, and treatment of thyroid, parathyroid, adrenal glands, and endocrine of the pancreas.

MGS 6218 Breast Surgery (2)
Anatomy, pathophysiology, disease process, and treatment of the breast.

MGS 6219 Neurosurgery, Pediatric Surgery (2)
Anatomy, pathophysiology, disease process, and treatments in neurosurgery and pediatric surgery.

MGS 6220 Burn/Critical Care Surgery (2)
Anatomy, pathophysiology, disease process, and treatments associated with burn surgery.

MGS 6221 Trauma Surgery (2)
Anatomy, pathophysiology, disease process, and treatment related to trauma surgery.

MGS 6222 Surgical Critical Care (2)
Anatomy, pathophysiology, disease process, and treatments related to surgical critical care.

MGS 6223 Surgery on the Lung, Chest Wall, and Mediastinum (2)
Anatomy, pathophysiology, disease process, and treatments related to the lung, chest wall, and mediastinum.

MGS 6224 Surgical Oncology (2)
Anatomy, pathophysiology, disease process, and treatment of surgical oncology.

MGS 6225 Vascular Surgery (2)
Anatomy, pathophysiology, disease process, and treatment in vascular surgery.

MGS 6330 Orientation to General Surgery (3)
This rotation emphasizes the clinical skills of providing care and treatment to patients with surgical disease.

MGS 6331 General Surgery Team A (Colorectal, General Surgery, Pediatric) (3)
Rotation is a block emphasizing colorectal and pediatric surgery cases presenting to the General Surgery Department.

MGS 6332 General Surgery Team B (Minimally Invasive Surgery) (3)
This is a clinical block of instruction emphasizing minimally invasive surgery for general surgery and bariatric cases.

MGS 6333 General Surgery Team C (General Surgery) (3)
This rotation is a block emphasizing minimally invasive and bariatric cases presenting to the General Surgery Department.

MGS 6334 General Surgery (WH) (3)
This rotation is a block emphasizing general surgery cases presenting to the General Surgery Department.

MGS 6335 General Surgery Team D (Surgical Oncology) (3)
This rotation is a block emphasizing surgical oncology cases presenting to the General Surgery Department.

MGS 6336 Interventional Radiology (3)
This rotation is a block emphasizing interventional radiology cases presenting to the Interventional Radiology Department.

MGS 6337 Trauma Surgery (Rotation 1) (3)
This rotation is a block emphasizing trauma surgery cases presenting to the Trauma Surgery Department.

MGS 6338 Vascular Surgery (3)
This rotation is a block emphasizing vascular surgery cases presenting to the Vascular Surgery Department.

MGS 6339 Burn Surgery/Burn Critical Care (Rotation 2) (3)
This rotation is a block emphasizing burn surgery/burn critical care cases presenting to the Burn Surgery Department.

MGS 6340 Plastic Surgery (3)
This rotation is a block emphasizing plastic surgery cases presenting to the Plastic Surgery Department.

MGS 6341 Neurosurgery (3)
This rotation is a block emphasizing neurosurgical cases presenting to Neurosurgery Department.

MGS 6342 Trauma Surgery (Rotation 2) (3)
This rotation is a block emphasizing trauma surgery cases presenting to the Trauma Surgery Department.

MGS 6343 Trauma/Surgical Intensive Care Unit (Rotation 1) (3)
This rotation is a block emphasizing trauma/surgery intensive care unit (STICU) cases presenting to the Trauma Surgery Department.

MGS 6344 Trauma/Surgical Intensive Care Unit (STICU) (Rotation 2) (3)
This rotation is a clinical block emphasizing trauma/surgical intensive care unit (STICU) cases that present to the Trauma Surgery Department.

MGS 6345 Burn Surgery/Burn Critical Care (Rotation 1) (3)
This rotation is a clinical block emphasizing burn surgery/burn critical care cases presenting to the Burn Surgery Department.

MGS 6346 Elective Concentration (3)
This rotation is a block emphasizing an elective concentration rotation for the resident.

MGS 6347 Clinical Research (3)
In this course, students develop the knowledge to plan, organize, conduct, and submit for publication an approved Investigative Review Board (IRB) research project.

MGS 6348 Neurosurgery (Rotation 2) (3)
Clinical Rotation in Neurosurgery evaluating Neurosurgery trauma, performing Neurosurgery procedures, interventions, and treatment.

MGS 6349 Orthopaedic Trauma (Rotation 1) (3)
Clinical Rotation evaluating orthopaedic trauma and performing orthopaedic trauma procedures, interventions, and treatments.

MGS 6350 Orthopaedic Trauma (Rotation 2) (3)
Clinical rotation evaluating orthopaedic trauma and performing orthopaedic trauma procedures, interventions, and treatments.

Military Occupational Therapy (MOT)

MOT 6116 Management of Combat and Operational Stress Control Residency (1)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
Provides application and integration of knowledge and skills attained in the in-depth study of combat operational stress control and the role of the occupational therapist; experienced through forty-eight hours of assessment and intervention in the soldier's work environment.

MOT 6128 Clinical Management in Army Occupational Therapy (1)
Pre-requisite(s): Successful completion of DScOT third semester courses
The Clinical Management in Army Occupational Therapy course exposes the student to the supervisory and leadership responsibilities and demands faced by clinical managers in military occupational therapy clinics. The student examines and analyzes evidence-based solutions for routine and complex managerial problems and demands in order to develop a clinical management plan.

MOT 6132 Burn and Trauma Rehabilitation Residency (1)
Pre-requisite(s): Successful completion of DScOT semesters I II courses
Applies the didactic learning from the evaluation and intervention course to the clinic setting with emphasis on assessment and intervention to minimizing devastating and lifelong disability and maximizing patient functional outcome.

MOT 6212 Behavioral Health Residency (2)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
Focuses on the application of evidence-based concepts and skills for selection of occupational therapy behavioral health assessment and intervention in the clinical and operational setting and promotes the role of the occupational therapist as a member of the behavioral health team.

MOT 6213 Evaluation and Intervention: Post-Traumatic Stress & Polytrauma (2)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
Emphasizes the evaluation and intervention of individuals experiencing polytrauma including post-traumatic stress disorder, traumatic brain injury, and amputation. Focuses on evaluating the occupational function, cognitive and social performance, behavioral health, amputee rehabilitation, post-surgical limb care, prosthetic selection, assistive technology associated with prosthetics, prosthetic fitting, training, and management including interventions for ADL and IADL, cognitive retraining, communication and interpersonal skills, and community reintegration. Students explore the current literature to evaluate and apply current evidence-based assessment tools and intervention methods that support occupational performance, role competence, and adaptation, quality of life, and client satisfaction outcomes incorporating to utilize for patients experiencing polytrauma. Students learn to integrate evidence-based knowledge to strengthen and/or modify occupational therapy assessment and intervention. Focuses on the special rehabilitation needs of patients with polytrauma in all settings, who enter both the military and civilian health care environments. Methods of instruction include lecture, discussion, readings, and case study analysis.

MOT 6214 Post-Traumatic Stress & Polytrauma Residency (2)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
The Post-Traumatic Stress Disorder (PTSD) & Polytrauma Residency focuses on the evaluation and intervention of individuals experiencing post-traumatic stress disorder and polytrauma, including TBI and amputation. This course integrates behavioral science knowledge as it relates to occupational therapy and occupational performance in the clinical setting, assessment and intervention including cognitive (i.e., executive functioning), ADL & IADL performance, and social/behavioral performance, and is monitored by a DScOT faculty. Students analyze evidenced-based assessments and intervention methods for their ability to address patient needs and guarantee positive outcomes in the polytrauma patient's occupational performance, role competence, adaptation, quality of life, and/or client satisfaction in the clinical, community, and work settings. The course allows for the clinical application of knowledge gained in the behavioral health and post-traumatic stress, the TBI, and the amputee course that focuses on the evaluation and intervention of polytrauma clients. This residency includes 80 hours of clinical assessment and intervention in a clinical environment. Areas of patient assessment and intervention include cognitive (i.e., executive functioning), ADL & IADL performance, and social/behavioral performance. The student learns to integrate evidence-based knowledge to strengthen and/or modify occupational therapy assessments and interventions of the Soldier, retiree, and family member diagnosed with a Traumatic Brain Injury.

MOT 6221 UE Occupation Centered Intervention & Cultural Awareness Residency (2)
Prerquisite(s): Successful completion of DScOT second semester courses. This course applies the concepts learned from the UE Occupation Centered & Cultural Awareness Intervention course to UE beneficiaries. The application of these concepts allows the student to explore, apply, and integrate the dimensions of occupation, occupation centered practice, critical reasoning, and culture during clinical intervention.

MOT 6223 Critical Research Appraisal (2)
This course introduces the student to critical appraisal of all forms of research in rehabilitation. The purpose of this course is to further develop the student's competence in carrying out and evaluating research. The student develops the skills necessary to find, critically evaluate, and synthesize the available research in order to answer individual research questions and/or create a line of research questions.

MOT 6228 UE Occupation Centered Intervention & Cultural Awareness (2)
Pre-requisite(s): Successful completion of DScOT first semester Courses
Focuses on the ability to explore, apply, and integrate the dimensions of occupation, occupation-centered practice, client-centered practice, reflection, critical reasoning, and culture and their application in the areas of assessment, intervention, and outcome measurement in occupational therapy services for upper extremity beneficiaries.

MOT 6242 Upper Extremity Conditions Residency (2)
Pre-requisite(s): Successful completion of DScOT semesters I, II, and III courses
This is a four-month residency emphasizing the clinical evaluation and treatment of the upper-extremity injured or diseased patient presenting to occupational therapy, under the mentorship of an orthopedic surgeon.

MOT 6243 Advanced Hand Surgery Outcomes for Occupational Therapists (2)
Pre-requisite(s): Successful completion of DScOT semesters I, II, and III courses
This overview of the hand surgeon's model of evaluation and treatment of musculoskeletal disease and trauma and review of outcomes in advanced surgical techniques requires the development and application of a post-operative occupational therapy protocol for treatment of a specialized case.

MOT 6311 Evaluation and Intervention: Behavioral Health (3)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
Emphasizes the advanced evaluation and treatment of behavioral health conditions, introducing the student to the behavioral health knowledge base and evidence-based practice to integrate critical reasoning and evidence-based practice into occupational therapy behavioral health treatment settings.

MOT 6315 Management of Combat and Operational Stress Control (3)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
An in-depth study of combat operational stress control and the role of the occupational therapist, experienced through forty-nine hours of didactics and four days of field training in a simulated combat environment. Includes a four-day field training exercise and a twenty-one-hour project and practicum.

MOT 6317 Qualitative Methods (3)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
Examines qualitative research methods used to enhance evidence-based research for occupational therapists through the analysis of published healthcare research and the employment of qualitative research methodology. Student will also select an appropriate qualitative research method to collect and analyze data associated with his or her research project.

MOT 6319 Essentials of Evidence-Based Practice and Clinical Research (3)
Pre-requisite(s): Acceptance into the US Army Doctor of Science Program in Occupational Therapy
Includes the integration of best evidence and best practice concepts as well as advanced concepts, techniques, and technologies used for the scientific inquiry of applied clinical research. Emphasis is placed on refining research designs for individual projects and preparing a research protocol for approval by the Institutional Review Board.

MOT 6322 Differential Diagnosis in Occupational Therapy (3)
Pre-requisite(s): Successful completion of DScOT first semester Courses
Poses discussion of the medical history and occupational therapy examination findings of somatic and visceral disorders with reference to their influence on occupational therapy upper extremity musculoskeletal diagnosis, evaluation, and intervention.

MOT 6325 Evaluation and Intervention: Ergonomics (3)
Pre-requisite(s): Successful completion of DScOT first semester Courses
Includes the development of advanced clinical skills in evaluating environments, tools, and equipment for ergonomic intervention. Presents the study of work and ergonomic principles to enhance occupational performance. Includes health promotion and wellness, environmental health engineering, and health risk management.

MOT 6327 Quantitative Methods (3)
Pre-requisite(s): Successful completion of DScOT first semester Courses
Includes in-depth discussion and analysis of the research process including measurement theory, experimental design, hypothesis construction and testing, critical evaluation of research, rating scales, sampling, indices of validity and reliability, statistical analysis, and the appropriate use and interpretation of statistical tests.

MOT 6328 Quantitative Methods II (3)
Pre-requisite(s): MOT 6327 Continuation of Quantitative Methods I in which students continue their work with a Faculty Research Advisory Committee on a clinically relevant research project
Specific goals during this course include the completion of a literature review and the beginning of pilot testing and data collection. Also included is material in statistics, which develops the student's use of advanced statistical analysis techniques, including the use of SPSS.

MOT 6331 Evaluation and Intervention: Burn and Trauma Rehabilitation (3)
Pre-requisite(s): Successful completion of DScOT semesters I II courses
Focuses on the evaluation and intervention involved in burn and trauma rehabilitation as it relates to occupational therapy practice. Special emphasis is placed upon assessment and intervention to minimize devastating and lifelong disability and maximize patient functional outcomes both in the clinic and operational environment.

MOT 6336 Aspects of Pharmacology, Complementary and Alternative Medicine, & Nutrition in Occupational Therapy (3)
Pre-requisite(s): Successful completion of DScOT semesters I II courses
Focuses on the role and relationship of nutrition, pharmacology, and complementary/alternative medicine in the treatment of specific populations by occupational therapists where emphasis is placed on medical indications and potential effects of drugs and alternative/complementary medicine as well as nutrition on occupational therapy interventions.

MOT 6337 Field Research for Occupational Therapy (3)
Pre-requisite(s): Successful completion of DScOT semesters I II courses
Builds upon the student's familiarity with the occupational therapy knowledge base, quantitative and qualitative research methodologies, and critical/clinical reasoning and includes the development of a clinical research question, completion of a comprehensive literature review/systematic review, and writing a research protocol that includes informed consent documents.

MOT 6341 Evaluation and Treatment of Upper-Extremity Conditions (3)
Pre-requisite(s): Successful completion of DScOT semesters I, II, and III courses
Emphasizes the evaluation, diagnosing, and treatment of the upper-extremity injuries or diseases of patients presented to occupational therapy. Provides fifty-six hours of didactics including all diagnoses related to upper-extremity trauma and disease. Includes pathophysiology of wounds, arthritides, radiology, laboratory tests, and pharmacology.

MOT 6344 Advanced Professional Paper Product (3)
Pre-requisite(s): Successful completion of DScOT semesters I, II, and III courses
Focuses on the completion of the manuscript from the clinical research project with the goal of publication in a peer-reviewed journal and presentation to the occupational therapy community.

MOT 6441 Upper Extremity & Behavioral Health Conditions Residency (4)
A four-month course emphasizing the clinical evaluation and treatment of the Upper Extremity injured or diseased patient presenting to occupational therapy with comorbid Behavioral Health symptoms of kinesiophobia, pain catastrophizing, and post-traumatic stress from injury. 160 hours of clinical assessment and intervention including all diagnoses related to BH & UE.

Museum Studies (MST)

MST 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

MST 5301 The Museum: History, Philosophy, Prospects (3)
This course provides an overview of museums, the museum profession, and the field of museum studies. Students learn the defining characteristics of different types of museums, how museums have evolved over time, how museums have dealt with subjects that have proven controversial, and recent trends towards greater inclusiveness and respect for other cultures.

MST 5304 Collections Management (3)
Pre-requisite(s): Credit or concurrent enrollment in MST 5301
This course examines the intellectual, physical, legal, financial, social, and ethical challenges of preserving and providing access to museum collections. Through lectures, readings, hands-on activities, and field trips, students explore the theory and practice of collections management and learn how to utilize available resources for collections care in any museum regardless of size.

MST 5309 Museum Education (3)
Pre-requisite(s): Credit or concurrent enrollment in MST 5301
This course examines both directed/formal education and free-choice/informal learning opportunities in museums and how we effectively serve learners of all ages and learning style. An in-depth consideration of the development of programs includes assessment and needs of target audiences, presentation techniques and content selection and organization, logistics, and implementation and evaluation.

MST 5311 Issues in Museum Administration (3)
Pre-requisite(s): Credit or concurrent enrollment in MST 5301
This course provides an overview of museum and non-profit administration issues, including governance, working with a board of trustees, budgetary planning, fund raising, accreditation by the American Association of Museums, and museum ethics. Students gain practical experience in writing grants and preparing a conference-level presentation covering a museum administration issue.

MST 5312 Outreach and Community Relations (3)
Pre-requisite(s): MST 5301
This course provides hands-on experience in researching, creating, and executing strategies in advertising, public relations, marketing, and development/fundraising. Students explore the development of outreach techniques in the United States and create a finished marketing plan for a museum/archive/library partner institution as part of the course.

MST 5318 Ethical Issues in Museums, Libraries, and Archives (3)
Investigation of ethical issues in cultural institutions. All aspects of professional practice in museums, libraries, and archives are examined, including collections management, personnel, and interpretation and exhibition. Cultural patrimony and the repatriation of collections such as Nazi-looted art or Native American collections are also examined.

MST 5323 Historic Preservation (3)
This course examines historic preservation, and the parallel development of historic house museums and historic villages, from early patriotic and volunteer-based efforts such as Mount Vernon, to the development of preservation professionals at Colonial Williamsburg and elsewhere, and ultimately to modern preservation organizations and preservation law as found at the national, state, and local levels.

MST 5324 Archival Arrangement and Description (3)
Introduction to the intellectual and physical organization of archival materials in all media and formats. Students examine the core principles and standards underlying the processes of arrangement and description and their application to different types of archival collections. Students put archival theory into practice, processing a small archival collection.

MST 5326 Archival Technology and Digital Collections Management (3)
Pre-requisite(s): MST 5324
This course examines the evolution of technology in archives and museums with an emphasis on digitization, cataloging, metadata generation, and creation of contextual information. Students create a new, online-accessible digital collection derived from archival resources using technology resources of the Riley Digitization Center in the University Library system.

MST 5327 Special Topics in Museum Studies (3)
Specialized topics in Museum Studies not covered in other museum studies courses. This course may be repeated twice under different topics for a maximum of 9 hours.

MST 5328 American Material Culture (3)
The material remains of the past provide a window into American social, cultural, and political life. Students will learn to interpret museum objects through study of the artifacts themselves through related artifacts and landscapes, and through other forms of evidence that expose their deeper meanings, including probate inventories, letters, diaries, newspapers, books, and maps.

MST 5329 American Decorative Arts (3)
This course examines American decorative arts from the seventeenth century to the mid-twentieth century, particularly furniture, silver, ceramics, glass, textiles, prints, and paintings, with emphasis on the perspectives of maker and user, the influence of Britain and other cultures, differences among regions, differences between urban and rural, and differences over time.

MST 5331 Design and Management of Museum Exhibits (3)
This course considers the public dimension of exhibit design, the needs and interests of varied audiences, different learning styles, and the best interpretive approaches. Classroom theory is combined with in-the-field application, with a particular focus on exhibit planning, teamwork and management, design elements, lighting, interpretation of objects and ideas, labels, and evaluation.

MST 5340 Leadership in Museum Administration (3)
Pre-requisite(s): MST 5311
This course emphasizes the leadership qualities needed to be successful in today's dynamic museum field. The class will explore the "foreign language" of budgets and finances, explore fundraising and strategic grantsmanship, examine the importance of corporate culture, and study models and museum case studies to better understand the importance of leadership in an administrator's success.

MST 5V40 Independent Studies in Museums (1-4)
Pre-requisite(s): Approval of the professor and student's graduate committee required
Students identify an individual research project related to the student's area of interest. Students formulate project objectives, develop working parameters, construct a project design, and demonstrate an ability to complete a project and describe project results. Maximum six semester hours.

MST 5V97 Master's Internship (3-6)
Supervised professional work in a museum or related organization.

MST 5V98 Professional Project (1-6)
Supervised preparation of a professional project, with six semester hours required for graduation.

MST 5V99 Thesis (1-6)
Supervised preparation of the master's thesis, with six semester hours required for graduation.

Music (MUS)

MUS 4110 Advanced Jazz Improvisation (1)
Pre-requisite(s): MUS 3310 or consent of instructor
This course is an in-depth study of modern jazz improvisational techniques. May be repeated for credit.

MUS 4120 Advanced Opera Workshop (1)
Pre-requisite(s): Consent of instructor
Advanced Opera Workshop is an intensive class for advanced singers who aspire to careers in Opera and/or Musical Theatre. In this class students receive intensive one-on-one instruction on their "audition aria package." An accompanist is assigned for the course and students coach each aria or piece of musical theatre to polish it for professional auditions. Students will also have the opportunity to obtain one-on-one help with their professional credentials, taxes as artists and other items as needed. Since one-on-one instruction is the key to the success of this class the number of students enrolled must be limited. Therefore, undergraduates who wish to take this class must receive a nomination from their Vocal Instructor prior to asking for permission from the instructor of the course. Repeatable for credit.

MUS 4121 Performing Recitative (1)
Development of process-based skill sets for learning to sing and perform recitative, primarily in operas by Handel, Mozart, and bel canto composers. Topics include comparing recitativo secco and recitativo accompagnato and the practical performance techniques involved, applying concepts of lyric diction to the learning process, and mastering finer points such as style, pacing, appoggiature, word play, optional rests, and character development.

MUS 4203 Electroacoustic Music Composition (2)
Pre-requisite(s): MUS 1331 and consent of instructor
Literature study, composition, and performance of fixed and interactive electroacoustic music.

MUS 4204 Advanced Orchestration (2)
Pre-requisite(s): MUS 3306
Study of problems in orchestration beyond the general topics addressed in MUS 3306.

MUS 4208 Jazz Theory (2)
Pre-requisite(s): MUS 1101 and 1301; and consent of instructor
This course is an in-depth study of the harmonic and melodic basis of jazz, including the use of modes and extensions in jazz improvisation and composition, and reharmonization and analysis of performers' improvised solos. Students will develop skills in ear training and practical jazz music.

MUS 4210 Organ Methods (2)
For prospective organ teachers: methods and materials; church and concert repertoire.

MUS 4213 Service Playing (2)
Pre-requisite(s): Organ major or consent of instructor
Study of techniques and resources for organ playing in the context of a worship service.

MUS 4218 Opera Project II (2)
Pre-requisite(s): Audition and/or consent of instructor
Training class for singers and choral-conducting students in stage techniques.

MUS 4219 Marching Band/Jazz Pedagogy (2)
Pre-requisite(s): MUS 3001 Philosophy, materials, and techniques of high school marching bands and jazz ensembles

MUS 4220 Acting for Singers I (2)
Pre-requisite(s): Consent of instructor
Acting for Singers I is a beginning acting course for the stage specifically designed to provide appropriate training in acting for young singers who aspire to stage careers in Opera and/or Musical Theatre. The course includes instruction in basic stage deportment for recitals and auditions and is also appropriate for students who plan to teach young vocalists in the future, particularly those called upon to teach Opera Workshop or direct an Opera Scenes Program at the University level and/or direct a Musical Production at the high-school level.

MUS 4221 Acting for Singers II (2)
Pre-requisite(s): MUS 4220
Acting for Singers II is the second of two courses designed to provide appropriate training in acting for young singers who aspire to stage careers in Opera and/or Musical Theatre. This course will focus on the individual student rather than the larger group. Students will deal with problems specific to opera and musical theatre including acting within the time-frame of the composer, necessity of singing out to the audience at all times and connection with the conductor during performances. This course is appropriate for aspiring young artists as well as prospective teachers in the fields of vocal and choral music. Prior to taking this course a student should have taken Acting for Singers I or an equivalent.

MUS 4236 Performer Wellness (2)
Pre-requisite(s): Upper-level standing
This course is designed to address music wellness issues and help musicians adopt a healthy approach to performance that will allow them to perform at their best. Regular performance practice will be integrated with relaxation techniques such as stretching, deep breathing, imagery, and progressive relaxation. Practice and memorization techniques to assist with performance preparation will also be covered.

MUS 4237 Creative Entrepreneurship in Music (2)
Pre-requisite(s): PERF majors or departmental approval
Development of fundamental skills music-based entrepreneurship, and creative thinking beyond the practice room as preparation for 21st-century careers in music.

MUS 4259 Fundamentals of Conducting (2)
Introduction to advanced conducting techniques. Focus will be on strengthening skills from undergraduate conducting courses and building strategies for score preparation, knowledge, and facility.

MUS 4260 Orchestral Conducting (2)
Pre-requisite(s): MUS 3260 or consent of instructor
Advanced study of instrumental conducting techniques and related preparation and score study, specifically applied to orchestral ensembles.

MUS 4261 Advanced Choral Conducting (2)
Pre-requisite(s): MUS 3261
Advanced study of choral conducting techniques and related preparation and score study, specifically applied to choral ensembles.

MUS 4262 Band Conducting (2)
Pre-requisite(s): MUS 3260
Advanced study of instrumental conducting techniques and related preparation and score study, specifically applied to bands and wind ensembles.

MUS 4274 Congregational Song (2)
The study of congregational music used in corporate worship. The course includes the historical development of congregational song and the analysis of its literary, scriptural, musical, and theological content.

MUS 4301 Advanced Analysis (3)
Pre-requisite(s): MUS 3301
Investigation of specialized topics in music analysis, with focus on a particular analytical approach or repertoire.

MUS 4304 Counterpoint (3)
Pre-requisite(s): MUS 2102 and 2302
Principles of modal and harmonic counterpoint.

MUS 4305 Advanced Counterpoint (3)
Pre-requisite(s): MUS 4304
A continuation of MUS 4304. Advanced work in specialized areas of counterpoint.

MUS 4307 Advanced Composition I (3)
Pre-requisite(s): MUS 3304
Continuation of MUS 3308.

MUS 4308 Advanced Composition II (3)
Continuation of MUS 4307. Includes a recital of original works.

MUS 4319 Operatic Role Preparation (3)
Pre-requisite(s): MUEN 1104 or 5004; upper-level standing
Role Preparation will cover the research into the genesis of a specific opera as well as the music of a role from that opera. Students will have the opportunity to learn operatic roles that they, and their applied voice teacher, feel are appropriate for their voices and abilities. Students will then receive musical and dramatic coaching on their roles and will present semi-staged or concert versions of their roles at the end of the semester. May be repeated once for credit.

MUS 4320 Seminar in American Music (3)
This seminar focuses on interpreting and understanding primary sources, both written and musical (scores), related to the various styles and approaches to the creation of American music.

MUS 4321 Symphonic Literature (3)
A survey of orchestral literature.

MUS 4322 Piano Literature I (3)
Pre-requisite(s): PERF majors or departmental approval
Literature of keyboard instruments from early sources to the early nineteenth century.

MUS 4324 Piano Literature II (3)
Pre-requisite(s): PERF majors or departmental approval
Literature of keyboard instruments from the mid-nineteenth century to the present.

MUS 4325 Opera Literature (3)
This course examines opera from its origins in the late sixteenth century to the present. Students will learn about opera's musical and literary conventions, its development, and how operas reflect the musical and cultural values of their areas. The scores to be studied are coordinated with recorded and audio/visual examples, as well as with relevant readings from books and periodicals. Class discussion, presentations, essays, listening tests, and a final project are part of the course.

MUS 4326 American Folk Music (3)
Folk and tribal music in the United States. Specific topics include: music of native Americans, oral tradition music of European immigrants, oral tradition music created in America, African and African-American music, the Latin American musical influence, and ethnomusicology as a discipline of study. Current and historical topics will be included. Students will participate in field research projects.

MUS 4327 Song Literature I (3)
Music for solo voice from its beginnings to the present.

MUS 4329 Song Literature II (3)
Continuation of MUS 4327.

MUS 4331 Band Literature (3)
Literature for wind ensemble and band from early sources to the present.

MUS 4333 Percussion Literature and Pedagogy (3)
Solo and chamber music and pedagogy for percussion instruments.

MUS 4334 String Chamber Literature (3)
Chamber music for string instruments.

MUS 4335 Woodwind Literature and Pedagogy (3)
Solo and chamber music literature and pedagogy for woodwind instruments.

MUS 4336 Brass Literature and Pedagogy (3)
Solo and chamber music and pedagogy for brass instruments.

MUS 4337 Choral Literature (3)
Pre-requisite(s): MUS 3261
Secular and religious choral music representing style periods from the late Renaissance to the present.

MUS 4342 American Musical Theater (3)
Important historical, cultural, musical and production moments in the century-long narrative of the American musical theatre. Specific topics may vary from year to year. The course is designed for upper-level music majors; theatre majors and other students should consult with instructors before enrolling.

MUS 4343 Organ Literature I (3)
The organ and its literature from the earliest manuscripts and tablatures through 1750.

MUS 4344 Organ Literature II (3)
The organ and its literature from 1750 to the present.

MUS 4345 History of Classical Music in the United States (3)
Pre-requisite(s): Upper-level standing or consent of instructor
This course introduces both music majors and non-music majors to the often overlooked contributions of creative Americans to the field of "classical" music from the beginning of the United States' existence to the present time.

MUS 4350 International Music Education (3)
An exploration of music education practices in international school settings, including curricular comparisons, student populations, and program configurations. Attention will be given to any specialized procedures required for those interested in teaching in international environments post-graduation. This course may be repeated once.

MUS 4360 Ethnographic and Analytical Methods in Ethnomusicology (3)
Cross-listed as ANT 4361
Pre-requisite(s): Junior standing or above
Introduction to analytical methods, ethnography, and fieldwork techniques in ethnomusicology in order to equip students with practical tools to conduct ethnographical research and fieldwork.

MUS 4361 Traditional Music and Culture in Africa (3)
Pre-requisite(s): Junior standing and above
Analysis of specific African musical traditions within their cultural, geographical, historical, and social contexts as points of departure for analyzing and understanding broader patterns and dynamics of human activity.

MUS 4362 Traditional Music and Culture in Asia (3)
Cross-listed as AST 4362
Pre-requisite(s): Junior standing and above
Analysis of specific Asian musical traditions within their cultural, geographical, historical, and social contexts as points of departure for analyzing and understanding broader patterns and dynamics of human activity.

MUS 4363 Traditional Music and Culture in Europe (3)
Cross-listed as SEES 4363
Pre-requisite(s): Junior standing and above
Analysis of specific European musical traditions within their cultural, geographical, historical, and social contexts as points of departure for analyzing and understanding broader patterns and dynamics of human activity.

MUS 4364 Traditional Music and Culture in Latin America (3)
Cross-listed as LAS 4364
Pre-requisite(s): Junior standing or above
Analysis of specific Latin American musical traditions within their cultural, geographical, historical, and social contexts as points of departure for analyzing and understanding broader patterns and dynamics of human activity.

MUS 4365 Music and Identity in Texas Culture (3)
Analysis of specific Texas musical traditions within their cultural, historical, and social contexts as points of departure for analyzing broader patterns and dynamics of human activity reinforcing identity.

MUS 4366 Performance Practices in World Music (3)
Pre-requisite(s): Junior level standing and consent of instructor
Academic approach to a variety of performance practice techniques used in traditional and urban musical genres around the world.

MUS 4373 Worship in the Church (3)
A study of the music in worship from biblical times to the present. Includes strengthening worship leadership and planning skills and thereby connecting the principles and practice of music making in worship to the broader life of the Church in a local context.

MUS 4374 The Song of the Church (3)
Cross-listed as THEO 7397
A survey of vocal music in the Christian church, with particular emphasis upon the literary, scriptural, theological, musical, historical, and performance background of congregational song, and an introduction to selected standard sacred choral literature.

MUS 4375 Leadership in Music Ministry (3)
Cross-listed as THEO 7393
A survey of the principles involved in organizing and implementing a comprehensive music ministry, including budgeting, programming, and multiple staff relationships. An introduction to pastoral skills including visioning, hospital visitation, and conflict management.

MUS 4381 Special Topics (3)
An in-depth study of a narrowly circumscribed topic, such as a composer or genre. This course provides the opportunity to utilize special skills and knowledge of outstanding resident or visiting faculty. May be repeated for credit.

MUS 4V09 Advanced Electroacoustic Music Composition (1-3)
Pre-requisite(s): MUS 4203 and consent of instructor
A continuation of MUS 4203. At least one substantial creative project will be completed. Course may be repeated for credit.

MUS 4V13 Workshop in Keyboard Music (1-9)
An intensive workshop on keyboard methods and materials.

MUS 5010 Academic Division Colloquium (0)
This course is oriented to the development and practical application of the student's critical thinking process through lectures and presentations related to the academic field in music.

MUS 5011 Graduate Music History Review (0)
A remedial course for incoming graduate students who show multiple deficiencies on the Music History diagnostic exam. All major periods will be covered, but the course will focus on the specific needs of the students enrolled. Students who pass this course may enroll for any graduate level music history course.

MUS 5037 Church Music Forum (0)
Graduate enrollment in Church Music Forum (see MUS 1007, Undergraduate catalog, for description).

MUS 50R1 Special Recital (0)
Pre-requisite(s): Consent of instructor
Presentation of a recital over and above degree requirements.

MUS 5100 Music Theory Review (1)
Review of part writing, ear training, analysis, and keyboard procedures. Required of graduate students who show deficiencies in theory on the graduate entrance test. Does not count as degree credit.

MUS 5113 Internship in Music (1)
This course provides graduate music students an opportunity to apply what they have been learning in the classroom to practice in their field of study.

MUS 5114 Internship in Piano Teaching I (1)
Pre-requisite(s): Consent of instructor
Teaching of children's classes, college classes, adult leisure piano, or private lessons under faculty supervision. Designed to broaden the student's prior teaching experience.

MUS 5115 Internship in Piano Teaching II (1)
Pre-requisite(s): MUS 5114 and consent of instructor
Continuation of MUS 5114.

MUS 5138 Sight-reading for Pianists (1)
This course focuses on the development of sight-reading skills for pianists. In-class activities and regular practice assignments help the student identify weaknesses and improve sight-reading abilities. Intended for piano majors.

MUS 5141 Performance Document (1)
Writing of a document to accompany the M.M. student's recital. The document will give historical background and analysis of works performed. Document must be completed before recital is given.

MUS 5150 Seminar in Vocal Performance and Pedagogy (1)
Practicum for advanced vocalists in aspects of the singer's art, involving performance and research. May be repeated once for credit.

MUS 5151 Advanced Vocal Coaching (1)
Pre-requisite(s): Consent of instructor
Advanced individual study of solo vocal repertoire for graduate students preparing for recitals, contests, and auditions. May be repeated for a maximum of six total credit hours, but only four credit hours may be used to satisfy degree requirements.

MUS 5152 Graduate Diction Review (1)
A comprehensive review of the lyric diction of Italian, German and French. Required of graduate students who demonstrate deficiencies in diction on the graduate entrance examination. Does not count as degree credit.

MUS 5153 Graduate Russian Lyric Diction (1)
Special laboratory course for voice students dealing with pronunciation and enunciation as applied to singing in Russian. Additional emphasis is placed on Russian song and aria repertoire.

MUS 5170 Graduate Recital (1)
Graduate recitals consist of repertoire learned while the student is in residence for the degree. Guidelines for approval and presentation of these programs are available from the Graduate Program Director.

MUS 5171 Conducting Performance Project (1)
Practical application of conducting skills in a full-scale concert.

MUS 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

MUS 51B1 Graduate Trumpet (1)

MUS 51B2 Graduate Horn (1)

MUS 51B3 Graduate Trombone (1)

MUS 51B4 Graduate Baritone (1)

MUS 51B5 Graduate Tuba (1)

MUS 51H1 Graduate Applied Harp (1)

MUS 51K1 Graduate Piano (1)

MUS 51K2 Graduate Organ (1)

MUS 51K3 Graduate Applied Harpsichord (1)

MUS 51K4 Graduate Carillon (1)

MUS 51K5 Applied Piano: Collaborative (1)

MUS 51P1 Graduate Percussion (1)

MUS 51S1 Graduate Violin (1)

MUS 51S2 Graduate Viola (1)

MUS 51S3 Graduate Cello (1)

MUS 51S4 Graduate Bass (1)

MUS 51S5 Harp (1)

MUS 51V1 Graduate Voice (1)

MUS 51W1 Graduate Flute (1)

MUS 51W2 Graduate Oboe (1)

MUS 51W3 Graduate Clarinet (1)

MUS 51W4 Graduate Bassoon (1)

MUS 51W5 Graduate Saxophone (1)

MUS 5201 Pedagogy of Theory (2)
Survey of materials and methods for teaching theory at high school and college levels.

MUS 5207 Graduate Composition I (2)
Master's level instruction in composition in twentieth-century idioms through the creation of original pieces, supplemented by analysis and pertinent auxiliary exercises.

MUS 5208 Graduate Composition II (2)
Continuation of MUS 5207.

MUS 5209 Graduation Composition III (2)
Continuation of MUS 5208.

MUS 5251 Advanced Choral Conducting (2)
Advanced study of choral conducting techniques and related preparation and score study, specifically applied to choral ensembles.

MUS 5252 Seminar in Vocal Collaboration I (2)
Pre-requisite(s): Undergraduate major/concentration in piano or equivalent background
Standard opera and concert repertoire for the voice in a two-semester sequence: Semester I--Opera Arias, Italian Canzone, English Songs. Graduate pianists collaborate with fellow student vocalists in master class performances. Critique and coaching by director of collaborative piano.

MUS 5253 Seminar in Vocal Accompanying II (2)
Pre-requisite(s): MUS 5252
Continuation of MUS 5252. Semester II: German Lied, French Chanson and Melodie.

MUS 5254 Seminar in Instrumental Collaboration I (2)
Pre-requisite(s): MUS 5252 and 5253
A two-semester survey of the standard sonata repertoire for the following instruments: Semester I - strings. Graduate students in piano will collaborate with fellow student instrumentalists in master class performances. Critique and coaching by director of collaborative piano.

MUS 5255 Seminar in Instrumental Collaboration II (2)
Pre-requisite(s): Undergraduate major/concentration in piano or equivalent
Continuation of MUS 5254. Semester II: woodwinds, brasses, and percussion.

MUS 5260 Orchestral Conducting (2)
Pre-requisite(s): Instructor Approval
Graduate study of instrumental conducting techniques and related preparation and score study, specifically applied to orchestral ensembles.

MUS 5265 Orchestral Conducting Performance Practicum (2)
Pre-requisite(s): MUS 5260
To provide the student a regularly mentored rehearsal and performing experience.

MUS 5266 Choral Conducting Performance Practicum (2)
Pre-requisite(s): MUS 5251
To provide the student a regularly mentored rehearsal and performing experience.

MUS 5267 Band Conducting Performance Practicum (2)
Pre-requisite(s): MUS 5282
To provide the student a regularly mentored rehearsal and performing experience.

MUS 5270 Applied Conducting (2)
Pre-requisite(s): Enrollment restricted to graduate conducting majors and church music majors with conducting emphasis
Private conducting lessons. This course is open only to conducting majors on the M.M. degree and will normally be taken in semesters when the student is not registered for the concentration conducting course or Performance Practicum.

MUS 5282 Band Conducting (2)
Pre-requisite(s): Instructor Approval
Graduate study of instrumental conducting techniques and related preparation and score study, specifically applied to bands and wind ensembles.

MUS 5299 Vocal Pedagogy (2)
A study of the singing voice including anatomy and physiology of the larynx and the breathing mechanism, phonation, basic acoustics, vocal registers, vocal pathologies, and hygiene, among other related subjects.

MUS 52B1 Graduate Trumpet (2)

MUS 52B2 Graduate Horn (2)

MUS 52B3 Graduate Trombone (2)

MUS 52B4 Graduate Baritone (2)

MUS 52B5 Graduate Tuba (2)

MUS 52H1 Graduate Harp (2)

MUS 52K1 Graduate Piano (2)

MUS 52K2 Graduate Organ (2)

MUS 52K3 Graduate Harpsichord (2)

MUS 52P1 Graduate Percussion (2)

MUS 52S1 Graduate Violin (2)

MUS 52S2 Graduate Viola (2)

MUS 52S3 Graduate Cello (2)

MUS 52S4 Graduate Bass (2)

MUS 52S5 Harp (2)

MUS 52V1 Graduate Voice (2)

MUS 52W1 Graduate Flute (2)

MUS 52W2 Graduate Oboe (2)

MUS 52W3 Graduate Clarinet (2)

MUS 52W4 Graduate Bassoon (2)

MUS 52W5 Graduate Saxophone (2)

MUS 5301 History of Music Theory (3)
Theorists and theoretical tracts from the ancient Greeks to the present day.

MUS 5302 Analytical Techniques (3)
Pre-requisite(s): Passing score on the Graduate Music Theory Diagnostic Exam, or passing grade in MUS 5100
A survey and application of analytical approaches and techniques currently employed in the study of music. Required of all graduate students.

MUS 5313 Advanced Pedagogy II (3)
Pre-requisite(s): MUS 5314
Continuation of MUS 5314. Survey of teaching literature for the intermediate and early advanced levels as well as preschool methods and elementary-level curricula for group and private teaching. Graduate students are required to complete a teaching portfolio for certification along with research presentations and additional teaching of music majors in group piano classes.

MUS 5314 Advanced Pedagogy I (3)
Continued survey and leveling of intermediate and early advanced students, with additional emphasis on intermediate technique, research in piano pedagogy, and the teaching of adult students in group and private settings. Students teach group and private lessons in the Piano Laboratory Program. Graduate students create a teaching portfolio and also assist in teaching a class piano course for music majors.

MUS 5319 Foundations and Trends in Ethnomusicology (3)
Pre-requisite(s): MUS 5320
History, philosophies, and issues concerning the discipline of ethnomusicology as illustrated in significant selected literature. Advanced research procedures are applied to a selected topic.

MUS 5320 Research Methods and Bibliography (3)
Resources, research procedures, and writing techniques for music scholarship.

MUS 5321 Seminar in The Middle Ages (3)
Pre-requisite(s): MUS 5320
Selected topics on medieval music in historical and cultural context.

MUS 5322 Seminar in The Renaissance Era (3)
Pre-requisite(s): MUS 5320
Selected topics on renaissance music in historical and cultural context.

MUS 5323 Seminar in The Baroque Era (3)
Pre-requisite(s): MUS 5320
Selected topics on baroque music in historical and cultural context.

MUS 5325 Seminar in The Classic Era (3)
Pre-requisite(s): MUS 5320
Selected topics on music of the long eighteenth century in historical and cultural context.

MUS 5326 Seminar in The Romantic Era (3)
Pre-requisite(s): MUS 5320
Selected topics on music of the long nineteenth century in historical and cultural context.

MUS 5328 Seminar in Music of World War I to the Present (3)
Pre-requisite(s): MUS 5320 Selected topics on music from WWI to the present in historical and cultural context

MUS 5329 Foundations and Trends in Musicology (3)
Pre-requisite(s): MUS 5320
History, philosophies, and issues concerning the discipline of musicology as illustrated in significant selected literature. Advanced research procedures are applied to a selected topic.

MUS 5337 Choral Literature (3)
Choral literature representing style periods from the late renaissance to the present with emphasis upon large works.

MUS 5342 Choral/Vocal Music Ministry (3)
Cross-listed as THEO 7394
A study of adult choirs, youth choirs, and children's choirs, ensembles and soloists including rehearsal techniques, spiritual growth, promotion, management, vocal development, materials, and their role in the life of the church and community.

MUS 5345 Leadership for Ministry (3)
Cross-listed as LEAD 7301
A survey of leadership theory and practice including biblical, historical, and contemporary perspectives.

MUS 5346 Leading the Church's Song (3)
A study of the practical leadership of music in worship in a variety of contexts, helping to develop the understanding and functional skill set required to design and lead worship effectively.

MUS 5347 Liturgical Traditions (3)
MUS 5347 Liturgical Traditions A study of the principal historic worship forms of the Eastern and Western churches with emphasis on the continuity of worship practices, the forms and roles of music used in the liturgical orders, and the relationship of the traditions to Christian worship in the present day.

MUS 5349 Perspectives on Worship (3)
A study of music in worship from biblical times to the present, focusing on the varied perspectives of worship theologians. Includes worship planning and leadership and evaluation of present uses, trends, and emphases.

MUS 5350 Resources for Worship (3)
A survey of resources for faithful and creative planning of corporate Christian worship services, in diverse settings and traditions.

MUS 5351 Sacred Choral Literature (3)
Cross-listed as THEO 7395
A study of choral literature from various genres and periods of music history that is appropriate for use in Christian worship.

MUS 5352 Worship in Global Perspective (3)
This course provides master's students with a broad overview of Christian worship practices around the world, including how practitioners from different regions and traditions approach the relationship between worship, music, and culture.

MUS 5353 Congregational Song in Global Perspective (3)
This course explores aspects of the composition, performance, and reception of Christian congregational song around the world.

MUS 5354 The Business of Ministry (3)
Cross-listed as LEAD 7302
This course enables church leaders to study church business concepts and basic administrative practices in order to enhance the vision and ministry of the church.

MUS 5355 Analysis Seminar (3)
Advanced topics in music theory and analysis. The course may be repeated once for credit..

MUS 5356 Choral/Vocal Music in the Church (3)
A seminar on various types of church vocal ensembles, including rehearsal techniques, organization, recruitment, and the use of these groups in enhancing the spiritual life of the church and community.

MUS 5357 Congregational Song in Historical Perspective (3)
Pre-requisite(s): MUS 4374 In-depth study of selected areas in the history and literature of Christian hymnody

MUS 54B1 Graduate Trumpet (4)

MUS 54B2 Graduate Horn (4)

MUS 54B3 Graduate Trombone (4)

MUS 54B4 Graduate Baritone (4)

MUS 54B5 Graduate Tuba (4)

MUS 54H1 Graduate Harp (4)

MUS 54K1 Graduate Piano (4)

MUS 54K2 Graduate Organ (4)

MUS 54P1 Graduate Percussion (4)

MUS 54S1 Graduate Violin (4)

MUS 54S2 Graduate Viola (4)

MUS 54S3 Graduate Cello (4)

MUS 54S4 Graduate Bass (4)

MUS 54S5 Harp (4)

MUS 54V1 Graduate Voice (4)

MUS 54W1 Graduate Flute (4)

MUS 54W2 Graduate Oboe (4)

MUS 54W3 Graduate Clarinet (4)

MUS 54W4 Graduate Bassoon (4)

MUS 54W5 Graduate Saxophone (4)

MUS 5V16 Research Project in Piano Pedagogy (1-2)
The research project in piano pedagogy is a terminal requirement for the master's degree in Piano Pedagogy and Performance. Students enroll in two hours of MUS 5V16 during the final two semesters of their graduate program with either 1 hour credit for 2 semesters or 2 hours' credit for 1 semester. While enrolled in the course, they conduct research, write their research project, and meet regularly with their supervisor.

MUS 5V89 Special Research Problems (1-3)
Pre-requisite(s): MUS 5320
Advanced individual research project in the student's major field of interest under the guidance of a member of the Graduate Faculty. Subject of research to be agreed upon by the student and professor and approved by the Graduate Program Director prior to registration. The area of study may not duplicate directly any material pertaining to the thesis, nor may the study substitute for any required course. Course may be repeated, with different topic(s), for a maximum total of twelve hours.

MUS 5V99 Thesis (1-3)
hrs.

MUS 5VK1 Graduate Piano (1-5)

MUS 5VK2 Graduate Organ (1-5)

MUS 6199 Non-Dissertation Degree Completion (1)
Pre-requisite(s): Completion of all coursework for the degree
To fulfill requirements for non-dissertation doctoral students who need to complete final degree requirements other than coursework during their last semester, such as the final oral exam, or who must register for at least one hour during the semester they graduate.

MUS 6341 Introduction to Research in Church Music (3)
An introduction to the methodology of scholarly research and writing in church music. A study of bibliography, research technology, and methods of research, specifically as they relate to church music.

MUS 6342 Research in Congregational Song (3)
A study of the history, philosophy, theology, and practice of congregational song. Major components of this study will include reliance upon primary sources as well as study of key persons.

MUS 6343 Research in Church Music History (3)
An in-depth study of selected significant developments, movements, and people in the history of church music. Congregational song, which is covered in Music 6342, will be largely excluded from this course.

MUS 6344 Research in Church Music Philosophy (3)
An exploration and evaluation of the goals, motivations, responsibilities, and parameters affecting the use of music in congregational settings. Congregational song, which is covered in Music 6342, will be largely excluded from this course.

MUS 6345 Research in Christian Worship (3)
Provides in-depth study of the history, philosophy, and practice of liturgy and worship, with particular attention to the role of music.

MUS 6346 Research in Music Ministry (3)
A seminar that addresses various components of music ministry and their history, relationship to traditional pastoral ministry, relationship to current worship practices, and future in the life and work of local congregations.

MUS 6347 Research in Sacred Choral Music (3)
A study of the repertory, functions, and performing forces of sacred choral music in various genres and periods of musical and church history.

MUS 6348 Professional Development and Teaching Practicum (3)
A course that assists church music professionals in gaining information and skills for launching effective careers in teaching or church music ministry. Subjects may include securing a position, understanding higher education, various approaches to research resulting in publication and scholarly presentation, curriculum and course design, teaching effectiveness, and college music administration.

MUS 6V07 Composition (2-3)
Doctoral level instruction in composition in modern idioms through the creation of original musical works, analysis, and auxiliary exercises. Normally taken for three credit hours; taken for two credit hours when enrolled concurrently in MUS 5170 Graduate Recital or with advisor approval.

MUS 6V10 Doctoral Performance Document (1-3)
Writing of a document to accompany the D.M.A. student's second recital. The document will give historical background and analysis of works performed. Document must be completed before recital is given.

MUS 6V70 Applied Conducting (1-3)
Pre-requisite(s): Only DMA Church Music - Conducting Concentrations may enroll
Applied conducting study for doctoral students, open only to conducting concentrations on the D.M.A Church Music major.

MUS 6V99 Dissertation (1-9)
Research, data analysis, writing, and oral/written defense of an approved doctoral dissertation. At least nine hours of MUS 6V99 are required.

Music Ensemble (MUEN)

MUEN 5001 Orchestra (0)
Graduate enrollment in Orchestra (see MUEN 1101, Undergraduate catalog, for description).

MUEN 5002 A Cappella Choir (0)
Graduate enrollment in A Cappella Choir (see MUEN 1100, Undergraduate catalog, for description).

MUEN 5003 Symphonic Band (0)
Graduate enrollment in Symphonic Band (see MUEN 1103, Undergraduate catalog, for description).

MUEN 5004 Opera (0)
Graduate enrollment in Opera (see MUEN 1104, Undergraduate Catalog, for description).

MUEN 5005 Chamber Singers (0)
Graduate enrollment in Chamber Singers (see MUS 1105, Undergraduate catalog, for description).

MUEN 5006 Jazz Ensemble (0)
Graduate enrollment in Jazz Ensemble (see MUEN 1106, Undergraduate catalog, for description).

MUEN 5007 Concert Choir (0)
Graduate enrollment in Concert Choir (see MUEN 1107, Undergraduate catalog, for description).

MUEN 5008 Wind Ensemble (0)
Graduate enrollment in Wind Ensemble (see MUEN 1108, Undergraduate catalog, for description).

MUEN 5009 Concert Band (0)
Graduate enrollment in Concert Band (see MUEN 1109, Undergraduate catalog, for description).

MUEN 5020 Early Music Ensemble (0)
Graduate enrollment in Early Music Ensembler (see MUEN 1120, Undergraduate catalog, for description).

MUEN 5021 Baylor University Men's Choir (0)
Graduate enrollment in Baylor University Men's Choir (see MUEN 1121, Undergraduate catalog, for description).

MUEN 5022 Small Vocal Ensemble (0)
Graduate enrollment in Small Vocal Ensemble (see MUEN 1122, Undergraduate catalog, for description).

MUEN 5024 Women's Choir (0)
Graduate enrollment in Women's Choir (see MUEN 1124, Undergraduate catalog, for description).

MUEN 5025 Baylor Bronze (0)
Graduate enrollment in Baylor Bronze (see MUEN 1125, Undergraduate catalog, for description).

MUEN 5026 Baylor Handbell Ensemble (0)
Ensemble

MUEN 5030 Chamber Music (Strings) (0)
Graduate enrollment in string chamber music (see MUEN 1130, Undergraduate catalog, for description).

MUEN 5031 Chamber Music (Brass) (0)
Graduate enrollment in brass chamber music (see MUEN 1131, Undergraduate catalog, for description).

MUEN 5032 Chamber Music (Woodwinds) (0)
Graduate enrollment in woodwind chamber music (see MUEN 1132, Undergraduate catalog, for description).

MUEN 5033 Chamber Music (Percussion) (0)
Graduate enrollment in percussion chamber music (see MUEN 1133, Undergraduate catalog, for description).

MUEN 5035 Piano Ensemble (0)
Graduate enrollment in piano ensember (see MUEN 1135, Undergraduate catalog, for description).

MUEN 5036 Studio Accompanying (0)
Graduate enrollment in collaborative piano (see MUEN 1136, Undergraduate Catalog, for description).

MUEN 5050 Ensemble (0)
Participation in various ensembles of the School of Music.

MUEN 5093 Baylor Belle Voce - Advanced Womens Ensemble (0)
Pre-requisite(s): By Audition/Consent of Instructor (Conductor) Baylor Bella Voce is a highly select treble choir open primarily to music majors (voice majors, choral music education majors and church music majors) at the graduate level

MUEN 5130 Chamber Music (Strings) (1)
Graduate enrollment in chamber music with strings for students in the Advanced performers Certificate program in piano or organ.

MUEN 5131 Chamber Music (Brass) (1)
Graduate enrollment in chamber music with brass for students in the Advanced Performers Certificate program in piano or organ.

MUEN 5132 Chamber Music (Woodwinds) (1)
Graduate enrollment in chamber music with woodwinds for students in the Advanced Performers Certificate program in piano or organ.

MUEN 5133 Chamber Music (Percussion) (1)
Graduate enrollment in chamber music with percussion for students in the Advanced Performers Certificate program in piano or organ.

MUEN 5136 Advanced Performers Certificate Collaborative Keyboard (1)
Course is only available for students in the Advanced Performers Certificate in piano or organ.

Neuroscience (NSC)

NSC 4130 Advanced Laboratory in Neural Science (1)
Cross-listed as PSY 4130
Pre-requisite(s): NSC/PSY 4330 or concurrent enrollment
Laboratory experiments illustrating methods and procedures in Behavioral Neuroscience.

NSC 4312 Behavioral Medicine (3)
Cross-listed as PSY 4312
Pre-requisite(s): NSC 1106 and 1306 or consent of instructor
Topics include the role of mind, brain, and behavior in health, disease and wellness; the history, philosophy, and current status of health care systems; physiological and behavioral analyses of stress; psychoneuroimmunology; behavioral factors in cardiovascular disease, cancer, drug abuse, and weight management.

NSC 4330 Advanced Principles of Neural Science (3)
Cross-listed as PSY 4330
Pre-requisite(s): NSC 1106-1306 and PSY 1305, or consent of instructor
A study of the structure and function of the human nervous system as related to behavior.

NSC 5100 Psychology and Neuroscience Seminar (1)
Please see course description for PSY 5100.

NSC 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

NSC 5311 Seminar in Memory and Cognition (3)
Cross-listed as PSY 5311
Pre-requisite(s): Psychology Ph
D or Psy.D. students only, or consent of instructor. An advanced treatment of the study of human cognition. Topics to include memory, language, problem solving, intelligence, and thinking.

NSC 5318 Perception (3)
Cross-listed as PSY 5318
Research and theory on sensory and perceptual processes.

NSC 5319 Clinical Neuroscience - Advanced (3)
Cross-listed as PSY 5319
Pre-requisite(s): PSY 4430 or 5330, or consent of instructor
Neuroanatomy, brain structure-function relationships, experimental neuropsychology, and biological theories of abnormal behavior.

NSC 5320 Learning and Behavior Theory (3)
Cross-listed as PSY 5320
Pre-requisite(s): Consent of instructor
Methods of theories of learning and Behavioral Analysis.

NSC 5330 Neuropharmacology (3)
Cross-listed as PSY 5330
Pre-requisite(s): Psychology Ph.D or Psy.D. students only, or consent of instructor
Introduction to pharmacology with emphasis on drugs that act on the nervous system. Absorption distribution and biotransformation of drugs. Drug receptors, site and mechanism of action.

NSC 5360 Neurophysiology (3)
Cross-listed as PSY 5360
Pre-requisite(s): Consent of instructor
Electrical and chemical behavior of neurons--excitable membranes, cell physiology of nerve cells, neural conduction, transmission, reception and integration.

NSC 5430 Neuroanatomy (4)
Cross-listed as PSY 5430
Pre-requisite(s): Consent of instructor
Selected topics in physiological psychology, including laboratory.

NSC 5V04 Graduate Research (1-3)
Pre-requisite(s): Consent of instructor
For research credit prior to admission to candidacy for an advanced degree. May be repeated for credit.

NSC 5V06 Individual Studies in Neuroscience (1-3)
Individual study in areas of neuroscience not covered by formal courses. Meetings are by appointment, and the course may be repeated for credit.

NSC 5V51 Supervised Teaching (1-3)
Cross-listed as PSY 5V51
Advanced study in an area of psychology not covered by formal courses. Course may be repeated with a different topic of study.

NSC 5V71 Selected Topics in Neuroscience (1-9)
Advanced study in an area of neuroscience not covered by formal courses. Course may be repeated with a different topic of study.

NSC 5V96 Research Methods in Neuroscience (1-12)
Selected laboratory methods and techniques in experimental psychology.

NSC 5V99 Thesis (1-3)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least three hours are required.

NSC 6V10 Prospectus Research (1-6)
Pre-requisite(s): Completion of required course work for PhD degree
Supervised research for developing and writing a Dissertation Prospectus Proposal that will be subject to review and approval by the Supervisory Committee.

NSC 6V99 Dissertation (1-12)
Supervised research for the doctoral dissertation. These hours may be distributed over more than one semester.

Nursing (MNUR)

MNUR 6132 Clinical Concepts of Nurse Anesthesia Practice I (1)
Students are introduced to the perioperative management of a patient in a simulated operating room environment utilizing both high fidelity technology and human models. Students learn the necessary equipment and processes utilized by the nurse anesthetist to administer a variety of anesthetics. The Student Registered Nurse Anesthetist will also learn basic and advanced airway management, operating room set up, and patient positioning.

MNUR 6136 Clinical Concepts for Nurse Anesthesia II (1)
Pre-requisite(s): MNUR 6132
This course builds on the concepts and knowledge delivered in Clinical Concepts for Nurse Anesthesia I. Students continue the advancement of patient perioperative management in a simulated operating room environment. Students learn the induction sequence for general anesthesia, develop an anesthetic plan of care for complex patients, and conduct preoperative assessments.

MNUR 6233 Regional Anesthesia and Point of Care Ultrasound I (2)
This course teaches the Student Registered Nurse Anesthetist to apply knowledge of anatomy, physiology, pharmacology, and technology (e.g. ultrasound and nerve stimulation) to the administration and maintenance of regional anesthesia, patient assessment and management, and other related procedures under ultrasound guidance (e.g. central line placement, arterial line placement, intravenous access).

MNUR 6237 Regional Anesthesia and Ultrasound Science 2 (2)
Pre-requisite(s): MNUR 6233
The RAUS II course builds upon the knowledge and skills gained in RAUS I. Students continue to apply their developing knowledge of anatomy, physiology, pharmacology, and technology (e.g. ultrasound and nerve stimulation) to the administration and maintenance of regional anesthesia, patient assessment and management, and other related procedures under ultrasound guidance. The course also introduces additional peripheral and trunk nerve blocks.

MNUR 6321 Health Care Informatics (3)
This course focuses on the methods and tools of information handling relative to selected aspects of anesthesia nursing, health care, education, and research. The process of organizing, collecting, processing, and analyzing of data is explored as a basis for clinical decision-making.

MNUR 6323 Research Evidence into Practice (3)
This course prepares the student to undertake systematic investigations of clinical questions from research, evidence-based practice, and quality improvement perspectives. Students examine strategies and tools for retrieval, compilation, critical appraisal, and application of empirical, reflective, and practice-based information to improve quality of care and health outcomes for populations of interest.

MNUR 6341 Professional Aspects of Nursing Anesthesia (3)
This course provides the Student Registered Nurse Anesthetist with skills to engage in the professional aspects of anesthesia nursing. It prepares the SRNA for the legal ramifications concerning the administration of anesthesia and examines current issues affecting the nurse anesthetist. Also, it outlines historical aspects of the anesthesia practice and shows the progression of the profession through litigation and scope of practice impacts.

MNUR 6342 Healthcare Management (3)
This course provides a foundation in health care economics, financial and marketing functions, and responsibilities of health care leaders. Specific emphasis is placed on the decision-making process involved in assuring fiscal responsibility and management of the exchange process between an organization and the public by which both parties satisfy their needs and wants.

MNUR 6343 Health Policy and Law (3)
This course emphasizes the relationships among health policy, law, and nursing practice at both the clinical and systems level. Develops skills to analyze historical, political, ethical, and legal ramifications of current health policies. Advocacy approaches for policy changes from local to global arenas are examined. Students formulate and critique policy proposals that impact access, cost, and healthcare quality.

MNUR 6344 Leadership in Advanced Practice Nursing (3)
This course provides a solid foundation for providing education in leadership through in-depth analysis of the principles of transformational leadership and organizational behavior pertinent to health care systems. Prepares nursing leaders to use critical thinking skills and evidence-based decision making to affect systems and organizational change.

MNUR 6371 DNP Scholarly Project 1 (3)
This course focuses on the integration of knowledge and skills for a student to design and develop a health care field project in the area of interest. Building on the student's existing clinical competencies, the field project provides an opportunity to gain greater depth and breadth as a leader in direct patient care, health care administration and system development, and nursing education.

MNUR 6372 DNP Scholarly Project 2 (3)
Pre-requisite(s): MNUR 6371
This course provides the student the opportunity to design and evaluate quality improvement methodologies to promote safe, timely, effective, efficient, equitable, and patient-centered care. In addition, the student examines and applies relevant findings to develop guidelines and improve practice in the clinical environment.

MNUR 6373 DNP Scholarly Project 3 (3)
Pre-requisite(s): MNUR 6371, 6372
The culmination of this course is the completion of all steps of the DNP Project to include dissemination through a poster offering, defense, and submission to a peer-reviewed journal of the Chair's selection. The result will be the enhancement of patient care or facility functioning through student research, deductive reasoning, and dissemination of evidence-based information.

MNUR 6411 Biochemistry for Nurse Anesthesia (4)
This course integrates nursing science with basic biophysical sciences to prepare nurses for the highest level of advanced nursing practice in the specialty of anesthesia. The course provides students an opportunity to correlate biochemical principles as they apply to the physiology, pathophysiology, and pharmacology of anesthesia nursing.

MNUR 6415 Advanced Pharmacology for Nurse Anesthesia 2 (4)
Pre-requisite(s): MNUR 6513
This course is the second Pharmacology course to foster advanced understanding of human pathophysiology and therapeutics as a basis for contemporary anesthesia practice. This course complements the biochemistry, physiology, pharmacology, and fundamentals of nurse anesthesia practice courses and emphasizes disease processes and mechanism of action underlying the therapeutic and adverse effects of pharmacotherapies.

MNUR 6422 Research and Statistical Methods (4)
This course emphasizes the research process and statistics used in scientific inquiry. Research designs, theoretical frameworks, and methods are incorporated. The students have the opportunity to analyze data using SPSS. Threats to internal and external validity are examined. Emphasis is on critical appraisal of research and evidence as a basis for translation into practice.

MNUR 6434 Advanced Health Assessment and Diagnosis (4)
This course integrates nursing science with biophysical sciences and anesthesia standards of practice to prepare nurses for the highest level of advanced nursing practice in the specialty of anesthesia. This course provides students with the opportunity to refine their assessment skills with an emphasis on assessing for the presence and quantifying the severity of problems with significant implications for anesthesia care.

MNUR 6513 Advanced Pharmacology for Nurse Anesthesia I (5)
Students learn to apply in-depth knowledge in pharmacology of inhalation agents, IV induction agents, agents that cause smooth muscle relaxation, drugs unique to the administration of anesthesia, agents that affect the autonomic nervous system, neuromuscular blockading agents, and specifically pharmacology of agents that affect the pain pathways. Principles of drug interactions and implications specific to anesthesia.

MNUR 6514 Advanced Anatomy and Physiology II for Nurse Anesthesia (5)
Pre-requisite(s): MNUR 6612
This course fosters advanced understanding of human cardiovascular, respiratory, and endocrine anatomy and physiology as a basis for contemporary anesthesia practice. This course complements the biochemistry, pharmacology, and fundamentals of nurse anesthesia practice courses and emphasizes homeostatic mechanisms in the resting patient.

MNUR 6612 Advanced Anatomy and Physiology I for Nurse Anesthesia (6)
This course fosters advanced understanding of human cellular and neuromuscular anatomy and physiology and regional anatomy as a basis for contemporary anesthesia practice. This course complements the biochemistry, pharmacology, and fundamentals of nurse anesthesia practice courses and emphasizes homeostatic mechanisms in the resting patient as well as gross anatomy to support airway management and regional anesthesia.

MNUR 6631 Introductory Concepts and Principles of Anesthesia Practice (6)
This course provides the principles governing the practice of anesthesia, including Physical Principles, Anesthesia Gas Delivery Systems, Preparation for Administration of Anesthesia, and Intraoperative Management of Anesthesia. Students are introduced to the formulation of anesthetic care plans, anesthetic techniques, prevention of patient complications, procedures and equipment requirements, monitoring, record keeping, and care of equipment.

MNUR 6735 Anesthesia for Surgical Procedures and Special Populations (7)
Pre-requisite(s): MNUR 6631 This course provides additional advanced principles governing the practice of anesthesia, regional anesthesia, anesthesia for special patient populations (e.g. pediatrics and obstetrics) and those with various pathophysiologic presentations (e.g. cardiovascular, pulmonary, endocrine, and neuromuscular), anesthesia for trauma, and anesthesia in austere conditions

MNUR 6V01 Clinical Practicum and Role Development 1 (11)
Pre-requisite(s): MNUR 6344 This course provides the clinical foundational experiences for nursing anesthesia students
Students are required to assess a patient's history, physiology, and social interactions in planning his or her anesthesia care. This course prepares the student as a healthcare leader with skills necessary to safely plan, administer, and manage anesthesia care for patients undergoing surgical and/or other procedures.

MNUR 6V02 Clinical Practicum and Role Development 2 (11)
Pre-requisite(s): MNUR 6V01
Clinical Practicum and Role Development 1 is a prerequisite for this course. Students are assigned more complex clinical cases both in and outside the OR. This course prepares the student to be a healthcare leader able to independently plan, administer, and manage anesthesia care for patients undergoing surgical and/or other procedures. Clinical specialty out-rotations begin during the course.

MNUR 6V03 Clinical Practicum and Role Development 3 (11)
Pre-requisite(s): MNUR 6V02
Clinical Practicum and Role Development 2 is a prerequisite for this course. The focus for students in this course is increasingly complex clinical experiences with reduced levels of supervision. Students in this course are expected to precept incoming junior students, interns, medical students, prospective USAGPAN applicants, and/or new graduate nurses.

MNUR 6V04 Clinical Practicum and Role Development 4 (11)
Pre-requisite(s): MNUR 6V01, 6V02, and 6V03
Clinical Practicum and Role Development 3 is a prerequisite for this course. Students focus on clinical experiences in which they will provide independent, competent anesthesia care to all types of patients and all types of cases. Students are expected to formulate comprehensive care plans quickly for all patient category patients. Students must achieve a score of 425 on the SEE exam to pass this course.

Nursing (NUR)

NUR 4309 Parish Nursing (3)
Pre-requisite(s): Consent of the instructor
Basic preparation to function as a parish/congregation nurse in a faith-based health ministry. This course includes theory related to the theology of health, healing, and wholeness. Roles and functions of the parish nurse are discussed. Emphasis is placed on how to begin a parish nurse ministry including legal and ethical considerations.

NUR 5100 Advanced Pediatric Health Care Management I: Practicum (1)
Co-requisite(s): NUR 5305
Pre-requisite(s): NUR 5332, 5354 and 5351
This course provides the student with clinical experiences within the scope of the Pediatric Nurse Practitioner centered on normal growth and development, health promotion, health maintenance and management of children from birth to adolescence, within the context of the family.

NUR 5103 Diagnostic Reasoning (1)
Pre-requisite(s): NUR 5351, 5332, and 5354
This course includes the application of pathologic disease mechanisms and advanced pharmacotherapy to refine and integrate techniques of history taking, physical examination, and diagnostics. Development of differential diagnoses that are prioritized based on clinical assessment, critical thinking, and clinical reasoning to narrow down the appropriate final diagnoses for adult and gerontology populations.

NUR 5140 Professional Issues and the History of Nurse-Midwifery (1)
The role and image of, and misconceptions about, the nurse-midwife in contemporary society are explored. The historic, political, social, and economic bases of nurse-midwifery practice are examined. Students become familiar with the role of the American College of Nurse-Midwives (ACNM) in professional practice and resources available through the ACNM, as well as regulations and legislation which guide, interpret, and provide a legal and ethical base for future nurse-midwifery practice.

NUR 5153 Advanced Practice FNP I Primary Care Practicum (1)
Co-requisite(s): NUR 5255
Pre-requisite(s): NUR 5332, 5351, and 5354
This practicum course allows the Advanced Practice Nurse student to apply principles of evaluation and management of common acute and chronic illnesses seen in primary care practice.

NUR 5158 Nurse Midwifery I: Primary Care for Women Practicum (1)
Co-requisite(s): NUR 5254
Pre-requisite(s): NUR 5332, 5351, and 5354 and NUR 5254 or concurrent enrollment
This practicum course allows the Advanced Practice Nurse Midwifery student to apply principles of evaluation and management of common acute and chronic illnesses seen in primary care practice for Women.

NUR 5163 Advanced Assessment and Diagnostics of the Newborn/Infant Practicum (1)
Co-requisite(s): NUR 5262
Pre-requisite(s): NUR 5332 and 5361
The student gains clinical experience in assessing the health care needs of healthy and at-risk newborns/infants and their families. This practicum focuses on assessment and evaluation of care to families with at-risk factors during all phases of the childbearing process (antenatal, intra-partum, post-partum, and neonatal periods) with an emphasis on obtaining and interpreting comprehensive assessment and diagnostic data.

NUR 5200 Advanced Pediatric Health Care Management II: Practicum (2)
Co-requisite(s): NUR 5307
Pre-requisite(s): NUR 5332, 5354, and 5351
This course provides the student with clinical experiences within the scope of the Pediatric Nurse Practitioner centered on health promotion, health maintenance and management of acute and common health issues of children from birth to adolescence, within the context of the family.

NUR 5201 Introduction to Statistical Methods (2)
Introduction to Statistical Methods is a non-calculus-based statistics course that provides an overview of descriptive and inferential methods including a brief introduction to probability distributions and how they are used for estimation and comparison of two or more groups. This course addresses how to analyze both continuous and categorical data with examples containing simulated data.

NUR 5202 Genomics in a Pediatric Setting (2)
This course focuses on the relationships among genes, environment, and health in the care of children and adolescents. Emphasis is placed on concepts of prevention and treatment effectiveness within cultural care contexts. Ethical and legal considerations are also addressed.

NUR 5209 Theoretical Concepts for the Advanced Practice Registered Nurse (2)
Pre-requisite(s): Basic statistics course and Graduate level standing
This course focuses on critical analyses of theory and its applicability for advanced practice nursing. The course explores the theoretical foundation of advanced practice nursing through analysis of selected nursing models, theories, and constructs as well as selected theories, models, and concepts from complementary sciences that enhance nursing as a scientific discipline. The relationship between theory and research and their application to advanced practice is explored.

NUR 5211 Servant Leadership and Advanced Practice Nursing (2)
Pre-requisite(s): Graduate-level standing
Application of nursing leadership theories and models in the delivery of advanced practice nursing care to culturally diverse clients (individuals, families, organizations, and global society).

NUR 5213 Adult-Gerontology Acute Care NP Management I: Practicum (2)
Co-requisite(s): NUR 5333
Pre-requisite(s): NUR 5351, NUR 5332, and NUR 5354
This course focuses on the management of adults and older adults with common health problems encountered across multiple acute/chronic care settings. Emphasis is on providing students with an opportunity to utilize theoretical knowledge and clinical decision-making skills in the management of care of adult-gerontology patients experiencing common health problems using evidence-based practice.

NUR 5214 Adult-Gerontology Acute Care NP Management II: Practicum (2)
Co-requisite(s): NUR 5334
Pre-requisite(s): NUR 5351, NUR 5332, NUR 5354, NUR 5333, and NUR 5213
This course builds on AGACNP Management I of adults/older adults with chronic health problems encountered across multiple acute/chronic care settings. Emphasis is on providing students with an opportunity to utilize theoretical knowledge and clinical decision-making skills in the management of care of adult-gerontology patients experiencing chronic health problems using evidence-based practice.

NUR 5215 AGACNP Residency (2)
Pre-requisite(s): NUR 5351, 5332, 5354, 5333, 5213, 5334, 5214, 5335, and 5336
The culmination of acute care in AGACNP Management I/II/III of adults/older adults with complex acute/critical/chronic health problems encountered in multiple settings. Emphasized is high-quality, safe, cost-effective, patient-centered care in acute/critical care settings using evidence-based practice. Critical thinking and legal, ethical, and advanced clinical skills are essential to clinical decision-making using the AACN Synergy Model (2017).

NUR 5242 Nurse-Midwifery II A: Women's Health (2)
Pre-requisite(s): NUR 5452
This course provides students with the knowledge and skills necessary to promote health, maintain wellness, and manage common health problems in pregnant and postpartum women in the ambulatory setting

NUR 5243 Nurse-Midwifery II B: Women's Health and gynecologic care (2)
Pre-requisite(s): NUR 5452
This course provides students with the knowledge and skills necessary to promote health, maintain wellness, and care for women presenting for family planning and well women visits and women seeking care for gynecologic problems and conditions across the lifespan.

NUR 5248 Nurse-Midwifery IV: High Risk Family and Abnormal Gyn Practicum (2)
Pre-requisite(s): NUR 5346 or concurrent enrollment
A clinical course that focuses on the application of the nurse-midwifery process and care of mothers and newborns with complications and individuals with abnormal gynecologic conditions. The goal of this course is to further develop the role and responsibilities of the health care provider in caring for women and families who have a high-risk situation or condition or individuals with abnormal gynecologic conditions.

NUR 5250 Advanced Family Practice III/Low Resource Clinical (2)
Co-requisite(s): NUR 5357
Pre-requisite(s): NUR 5255 and 5153
Approval by faculty and program coordinator required. The clinical site will be arranged by student with help from faculty and must be with a qualified preceptor that meets approval of program coordinator and Baylor University policy and procedure. Continuing evaluation and management of common acute and chronic illnesses seen by the family nurse practitioner with a particular focus on medically underserved/low-resource individuals. A systematic approach to the treatment options across the lifespan is studied for all body systems. Students are given the opportunity to progress toward increasing independence in clinical practice.

NUR 5251 Family Nurse Practitioner International Clinical (2)
Co-requisite(s):
Pre-requisite(s): NUR 5356 and 5359
An International Clinical Course that will require cross-cultural independent clinical management of acute and chronic illnesses across the life span and focus on health-related issues relevant to a targeted international population, with the majority of the clinical hours to be completed in an international location.

NUR 5254 Nurse-Midwifery I: Primary Care of Women (2)
Co-requisite(s): NUR 5158
Pre-requisite(s): NUR 5354, NUR 5332 and NUR 5351
This course focuses on refinement of diagnostic reasoning strategies and the knowledge and skills necessary to promote health, prevent illness, and manage common primary care needs of individuals from puberty through menopause. Health promotion/wellness models and biopsychosocial and cultural theories are integrated throughout the course as role development of the Certified Nurse-Midwife within the community is explored.

NUR 5262 Advanced Assessment and Diagnostics of the Newborn/Infant (2)
Co-requisite(s): NUR 5163
Pre-requisite(s): NUR 5332 and 5361
The course focuses on the knowledge and skills necessary to perform comprehensive physical assessments and interpretation of diagnostic data on newborns/infants and their families. Systematic data collection, diagnostic reason, and clinical problem solving for a variety of newborns and infants is emphasized. Content focuses on perinatal assessment, fetal assessment, gestational age assessment, neurobehavioral and developmental assessments of newborns and infants, and the use of diagnostics such as laboratory studies, radiographs, instrumentation, and monitoring devices.

NUR 5266 Advanced Neonatal Nursing Practicum I (2)
Co-requisite(s):
Pre-requisite(s): NUR 5163 and 5262
This practicum focuses on developing clinical competency in the advanced practice role and in the pathophysiology, stabilization, management, and evaluation of the stable and acute high-risk newborn/infant. By using the processes of expert practice, consultation, collaboration, administration, and research utilization, the student provides advanced nursing management to a caseload of hospitalized newborns/infants and their families. Students are given the opportunity to progress toward increasing independence in clinical practice.

NUR 5280 Health Informatics and Innovations in Technology (2)
This course focuses on obtaining, analyzing, and using information to make patient-centered decisions and solve problems. The integration of current emerging technologies into practice to enhance care outcomes is explored.

NUR 5284 Psychiatric Mental Health NP Management I: Clinical (2)
Co-requisite(s): NUR 5282
This course focuses on common mental health disorders of diverse populations across the life span. Students participate in direct patient care in a psychiatric setting. Application of evidence-based clinical practice guidelines, pharmacological and non-pharmacological treatment, and tools and methods for promoting safe, patient-centered care are emphasized.

NUR 5291 Psychiatric Mental Health Residency (2)
Pre-requisite(s): NUR 5282, 5284, 5285, 5392, 5393, 5394, and 5387
This course continues building knowledge, skills, and competence to diagnose and treat acute and chronic mental illness across the lifespan. It builds upon the previous clinical practicums and is based on mental health theories, concepts, and clinical models. Application of evidence-based clinical practice guidelines, pharmacological and non-pharmacological treatment, and tools and methods for promoting safe, patient-centered care are emphasized.

NUR 5305 Advanced Pediatric Health Care Management I: Primary Care (3)
Co-requisite(s): NUR 5100
Pre-requisite(s): NUR 5354, 5332, and 5351
This course prepares the Pediatric Nurse Practitioner student to address the primary health care needs of children and adolescents, utilizing patient-and-family centered care. The course focuses on normal growth and development, health promotion, health maintenance, and management of children from birth to adolescence, within the context of the family.

NUR 5307 Advanced Pediatric Health Care Management II: Acute & Common Health Care Needs (3)
Co-requisite(s): NUR 5200
Pre-requisite(s): NUR 5305 and 5100
This course prepares the Pediatric Nurse Practitioner (PNP) student to address the acute and common health care needs of children and adolescents, utilizing patient-and-family centered care. The course focuses on health promotion, health maintenance, and management of acute and common health issues of children from birth to adolescence, within the context of the family.

NUR 5308 Advanced Pediatric Health Care Management III: Chronic Health Needs (3)
Co-requisite(s): NUR 5309
Pre-requisite(s): NUR 5307 and 5200
This course prepares the Pediatric Nurse Practitioner student to identify and address potential and actual chronic health needs of children and adolescents. The course focuses on providing direct care, teaching, and management to children and adolescents, and their families, experiencing complex, life-long processes.

NUR 5309 Advanced Pediatric Health Care Management III: Practicum (3)
Co-requisite(s): NUR 5308
Pre-requisite(s): NUR 5307 and 5200
This course provides the student with clinical experiences within the scope of the Pediatric Nurse Practitioner centered on health promotion, health maintenance and management of chronic health issues of children from birth to adolescence, within the context of the family.

NUR 5311 Gerontology Considerations for APRN Practice (3)
This course focuses on healthcare of geriatric patients by identifying normal and abnormal changes of the aging body and psychosocial and physiological processes related to aging with particular attention to environmental, circumstantial, and behavioral concerns including cognition, perception of health, performance status, falls, malnutrition, pharmacotherapy, substance abuse, elder neglect and abuse, and end of life issues.

NUR 5312 The Roles and Business of the Advanced Practice Registered Nurse (APRN) (3)
This course covers the analysis and synthesis of the multidimensional role and responsibilities of advanced practice nursing. This includes the financial role and responsibilities of Advanced Practice Registered Nurses. The business aspects of being an Advanced Practice Registered Nurse are included.

NUR 5314 Scientific Inquiry (3)
Pre-requisite(s): NUR 5201
The course emphasizes the critical appraisal and synthesis of evidence derived from quantitative and qualitative research and the relevance of the evidence to advanced practice. Skills necessary for evidence-based practice are developed.

NUR 5332 Advanced Human Pathophysiology (3)
This course focuses on developing an advanced knowledge base of pathophysiology across the lifespan for advanced nursing practice. The principles and laws that govern the life-process, well-being, and optimal function of human beings, sick or well, will be explored. Attention will be given to etiology, pathogenesis, and developmental and environmental influences, as well as clinical manifestations of major health problems.

NUR 5333 Adult Gerontology Acute Care NP Management I: Common Problems (3)
Pre-requisite(s): NUR 5351, 5332, and 5354
Assess, diagnose, and coordinate high-quality, cost-effective, evidence-based, patient-centered care of adults with common health problems via health promotion and disease prevention and management. Engage in collaboration with the interprofessional team and assess the impact of social, spiritual, psychological, and economic determinants of health which are essential roles of the AGACNP to provide care that is diverse, inclusive, and equitable.

NUR 5334 Adult Gerontology Acute Care NP Management II: Chronic Problems (3)
Co-requisite(s): NUR 5214
Pre-requisite(s): NUR 5351, 5332, 5354, 5333, and 5213
Focuses on high-quality, cost-effective, evidence-based, patient-centered care by formulating diagnoses, treatment, and evaluation plans to improve outcomes of adults with chronic health problems in a variety of settings. Interprofessional team collaboration and evaluation of the impact of social, spiritual, psychological, and economic determinants of health are essential for the AGACNP to provide care that is diverse, inclusive, and equitable.

NUR 5335 Adult Gerontology Acute Care NP Management III: Acute & Critical Care (3)
Co-requisite(s): NUR 5336
Pre-requisite(s): NUR 5351, 5332, 5354, 5333, 5213, 5334, and 5214
Emphasizes high-quality, cost-effective, evidence-based, patient-centered care by formulating diagnoses, treatment, and evaluation plans to improve patient outcomes of adults in acute/critical care settings. Interprofessional team collaboration and evaluation of the impact of social, spiritual, psychological, and economic determinants of health in adults are essential to providing acute/critical care that is diverse, inclusive, and equitable.

NUR 5336 Adult-Gerontology Acute Care NP Management III: Practicum (3)
Co-requisite(s): NUR 5335
Pre-requisite(s): NUR 5351, 5332, 5354, 5333, 5213, 5334, and 5214
This course builds on AGACNP Management I/II of adults/older adults with complex acute/critical/chronic health problems encountered in multiple settings. Emphasis is on high-quality, safe, cost-effective, patient-centered care in acute/critical care settings using evidence-based practice. Critical thinking and legal, ethical, and advanced clinical skills implementation are essential to clinical decision-making using the AACN Synergy Model (2017).

NUR 5344 Nurse-Midwifery III: Care of the Childbearing Family (3)
Pre-requisite(s): NUR 5V43
This course focuses on application of the Nurse-Midwifery process for the care of healthy women during childbirth and the newborn.

NUR 5345 Nurse-Midwifery III: Care of the Childbearing Family Practicum (3)
Pre-requisite(s): NUR 5344 or concurrent enrollment
This course provides students with clinical experiences to demonstrate synthesis, integration, and translation of the knowledge and skills necessary to promote health, maintain wellness, and manage common health problems in women experiencing childbirth and in the care of the essentially normal newborn. Use of information technology in the clinical practice setting is expected. The nurse-midwifery management model of care is used in the provision of care to clients.

NUR 5346 Nurse-Midwifery IV: High Risk Family and Abnormal Gynecologic Conditions (3)
Pre-requisite(s): NUR 5345
This course focuses on further development of application of the nurse-midwifery process to the care of mothers and newborns with complications and to individuals with abnormal gynecologic conditions. Knowledge of high-risk pregnancies and abnormal gynecologic conditions is continuously acquired and builds upon previous and concurrent courses.

NUR 5348 FNP I: Primary Care for FNP APRNS (3)
Co-requisite(s): NUR 5240
Pre-requisite(s): NUR 5332, 5351, and 5354
This course is the refinement of diagnostic reasoning strategies needed for primary care management of patients with commonly occurring health problems. This course provides students the knowledge and skills necessary to promote health, prevent illness, and manage the common primary care needs of individuals of all ages, from a variety of cultural, ethnic, and racial backgrounds, while providing the conceptual basis for advanced nursing practice. Health promotion/wellness models and biopsychosocial and cultural theories are integrated throughout the course. Role development of the Advanced Practice Nurse within the community is explored.

NUR 5349 Global Healthcare and Missions (3)
This course prepares students to evaluate the health needs for culturally, ethnically, geographically, and economically diverse populations; develop solutions; and evaluate outcomes from a Christian perspective. The course focuses on cultural analysis and key global health concepts to enhance the effectiveness of the Advanced Practice Registered Nurse working in global and/or cross-cultural health care settings.

NUR 5351 Advanced Pharmacology (3)
Use of advanced pharmacotherapeutics, herbals and dietary supplements for primary health care across the life span. Drugs used to treat and manage common illnesses and conditions are the focus of the course. Content includes indication, selection, adverse effects, and client education related to use of prescribed medication. Clinical decision-making and review of laws governing prescriptive authority are also emphasized.

NUR 5354 Advanced Health Assessment/Promotion/Disease Prevention (3)
Pre-requisite(s): NUR 5332 or concurrent enrollment
Expansion of prerequisite knowledge of health and physical assessment. Comprehensive physical, psychosocial, spiritual, and cultural assessments across the life span are studied. Health promotion and disease prevention during life transitions are incorporated into the assessment process. Advanced health assessment and disease prevention concepts and techniques are practiced. Beginning technical skills used in clinical diagnostic procedures are included.

NUR 5356 Family Health Care Management II (3)
Co-requisite(s): NUR 5359
Pre-requisite(s): NUR 5153 and 5255
Prepares the Family Nurse Practitioner to assume continued responsibility for evaluation and management of acute common and increasingly complex problems in primary care. A systematic approach to current evidence-based assessment, diagnostic testing, diagnosis, and management options is taught from a primary care perspective. Indications for collaboration, consultation, and/or referral to other health care providers are emphasized as an integral part of the nurse practitioner's role.

NUR 5357 Family Health Care Management III (3)
Pre-requisite(s): NUR 5356 and 5359
Prepares the family nurse practitioner student to continue to assume responsibility for evaluation and management of patients in primary care. A focus of the course is to prepare the student to assess and manage selected complex health problems. Indications for collaboration, consultation, and/or referral to other health care providers are emphasized as an integral part of the nurse practitioner's role.

NUR 5359 Advanced Family Practice II (3)
Co-requisite(s): NUR 5356
Prerequisites(s): NUR 5153 and 5255. Continuing evaluation and management of common acute and chronic illnesses seen by the family nurse practitioner. A systematic approach to the treatment options across the lifespan is studied for all body systems. Students are given the opportunity to progress toward increasing independence in clinical practice.

NUR 5360 Embryology and Developmental Physiology (3)
This course is designed to provide the student with a greater depth of understanding of developmental physiology of the fetus and neonate. Principles of growth and development, physiologic maturation of organ systems, birth physiology, and transition to extrauterine life through early infancy will be covered. Adaptation of physiologic stress and alterations from normal will also be addressed.

NUR 5361 Advanced Newborn/Infant Pharmacotherapeutics (3)
This course provides the student with an in-depth understanding of pharmacotherapeutics for newborns and infants. Content focuses on the alterations seen in the principles of pharmacokinetics and pharmacodynamics when applied to newborn/infant physiology, special considerations of drug therapy in the newborn/infant, and advanced nursing management of selected newborn/infant therapeutics. Issues associated with drug therapy in the neonatal intensive care unit and evaluation of experimental therapies are included. The course also provides essential information needed to obtain prescriptive authority for advanced practice neonatal nurses.

NUR 5363 Advanced Neonatal Nursing Practicum II (3)
Pre-requisite(s): NUR 5266
This practicum focuses on developing increasing clinical competency in the advanced practice role and in the pathophysiology, stabilization, management, and evaluation of the stable and acute high-risk newborn/infant. By using the processes of expert practice, consultation, collaboration, administration, and research utilization, the student will provide advanced nursing management to an increasing caseload of hospitalized newborn/infants and their families. Students are given the opportunity to progress toward increasing independence in clinical practice.

NUR 5365 Advanced Neonatal Nursing Management I: High-Risk & Critically Ill Newborns/Infants (3)
Pre-requisite(s): NUR 5163 and NUR 5262
Theoretical and practical knowledge needed for advanced practice neonatal nurses (APNN) to manage the health care needs of culturally diverse newborns/infants in neonatal intensive care units (NICU). Content focuses on stabilization, management and evaluation of high-risk and critically ill newborns/infants and their families. Responsibilities of the APNN in perinatal-neonatal health care policy and delivery systems management are also emphasized.

NUR 5367 Advanced Neonatal Nursing Management II: Acute & Chronic Problems of Newborns/Infants (3)
Pre-requisite(s): NUR 5365
Theoretical and practical knowledge needed for advanced practice neonatal nurse (APNN) to manage the health care needs of culturally diverse newborns/infants in neonatal intensive care units (NICU) and post-discharge NICU graduates through the first two (2) years of life. Content focuses on stabilization, management, and evaluation of acute and chronic illness during infancy. Responsibilities of APNN in perinatal-neonatal health care policy and delivery systems management are also emphasized.

NUR 5369 Advanced Neonatal Nursing Practicum III Residency (3)
Pre-requisite(s): NUR 5363
This practicum focuses on continuing to develop increased clinical competency, delivery room management, and team management in the advanced practice role and in the pathophysiology, stabilization, management, and evaluation of high-risk infants with increasing acuity. By using the processes of expert practice, consultation, collaboration, administration, and research utilization, the student provides advanced nursing management to a caseload of hospitalized infants and their families with complex health needs. Students are given the opportunity to progress toward increasing independence in clinical practice.

NUR 5370 Practice Residency for Midwifery (3)
Pre-requisite(s): Completion of all specialty clinical practicum courses
Students will have the opportunity to practice in the full scope of the nurse-midwifery role. Student experiences will lead to increasing expertise in providing safe, effective, efficient and ethical care.

NUR 5393 Psychiatric Mental Health NP Management II: Practicum (3)
Co-requisite(s): NUR 5392
Pre-requisite(s): NUR 5284
The focus of this course is acute and chronic, serious mental health disorders of diverse populations across the life span. Students refine their skills in assessment, diagnosis, and treatment using pharmacologic and non-pharmacologic modalities, evidence-based clinical practice guidelines, and pharmacological and non-pharmacological treatment. Tools and methods for promoting safe, patient-centered care and treatment are emphasized.

NUR 5400 PNP Primary Care Residency (4)
Pre-requisite(s): NUR 5100, 5200, and 5309
A residency requiring independent clinical management of health promotion and acute and chronic illnesses of children and adolescents across the pediatric life span. Synthesis of practice management skills pertaining to economics, reimbursement for services, and time management are emphasized, as is implementation of transcultural nursing concepts. Concepts of research are applied in the clinical setting.

NUR 5440 Primary Care Women's Health and Pediatric Management for the Family Nurse Practitioner (4)
Pre-requisite(s): NUR 5240 and 5348
This course prepares the advanced practice nurse to care for women from adolescence throughout the lifespan and pediatric patients from birth to adolescence. Emphasis is on female reproductive gynecologic health, and normal growth and development and common illnesses in children. Principles of health promotion, disease prevention, assessment, and management of primary care health issues for these populations are presented.

NUR 5450 Family Nurse Practitioner Residency (4)
Pre-requisite(s): NUR 5356 and 5359
A residency requiring independent clinical management of acute and chronic illnesses across the life span. Synthesis of practice management skills pertaining to economics, reimbursement for services, and time management will be emphasized as well as implementation of transcultural nursing concepts. Concepts of research will be applied in the clinical setting.

NUR 5V08 Special Topics in Advanced Nursing (1-3)
Pre-requisite(s): Graduate standing
The special topics, variable credit course provides opportunity for advanced study in areas not covered by formal nursing courses.

NUR 5V43 Nurse-Midwifery II: Women's Health Practicum (1-3)
Pre-requisite(s): NUR 5242 or concurrent enrollment
This course provides students with clinical experiences to demonstrate synthesis, integration, and translation of the knowledge and skills necessary to promote health, maintain wellness, and manage pregnancy, contraception, and common gynecologic problems. Use of information technology in the clinical practice setting is expected. The nurse-practitioner and nurse-midwifery management models of care are used in the provision of assessment, diagnosis, intervention, and evaluation for clients.

NUR 5V90 APRN International Clinical (1-6)
Pre-requisite(s): NUR 5351, 5332, and 5354
An International Clinical Course requiring cross-cultural independent clinical management of acute and chronic illnesses across the life span, with focus on health-related issues affecting targeted international populations. Most clinical hours are completed in an international location. Focus is on practice management skills in low resource settings, time management, and cross-cultural learning concepts.

NUR 6102 Doctor of Nursing Practice-Executive Nursing Leadership-Project 2 (1)
Pre-requisite(s): NUR 6203
This is the second in a series of three seminars that guide the student in development thru completion of the scholarly DNP-ENL Project. In this second course the student finalizes and gets approval for the project plan proposal and completes IRB review as needed.

NUR 6103 Doctor of Nursing Practice-Executive Nursing Leadership-Project 3 (1)
Pre-requisite(s): NUR 6102
This seminar is the third and last DNP-ENL project course. During DNP-ENL 3 the student finalizes the project. The student prepares and gives a compelling presentation to gain endorsement for the project in the practice environment. To further demonstrate DNP-Executive Nursing Leadership skills, knowledge, and influence, the student formally presents the project to other health professionals and faculty.

NUR 6110 Data Management for the Advanced Practice Nurse (1)
Pre-requisite(s): Basic statistics course, NUR 5314, and NUR 6375
This course provides basic skills for managing scientific data through all stages of a DNP Project (collection, cleaning, analysis, and interpretation). Students gain experience using quantitative and qualitative (e.g., SPSS and NVivo) statistical software to clean messy data, merge data from multiple sources, restructure data for analysis, choose appropriate statistical analyses, run statistical analyses, and interpret statistical results.

NUR 6175 Scientific Inquiry for Executive Nurse Leaders (1)
Scientific inquiry for executive nurse leaders focuses on the developing understanding of how scientific knowledge applies to executive nursing leadership practice. The emphasis of the course is on evidence-based practice and appraisal.

NUR 61C2 DNP Project II (1)
Pre-requisite(s): NUR 63C1
This course involves the implementation of the DNP project. During DNP Project II the student is expected to be actively engaged in project implementation. IRB submission (if required) must be accomplished prior to project implementation if it was not accomplished in DNP Project I.

NUR 6202 The NICU Graduate (2)
This course provides an overview of the care of the NICU graduate: the infant after NICU discharge through two years of life. The course focuses on parent and family transitions, the care of infants post-discharge, growth and development, immunizations, wellness visits, acute care visits, special considerations for those with long-term complications, and consulting services.

NUR 6203 Doctor of Nursing Practice-Executive Nursing Leadership-Project 1 (2)
Co-requisite(s):
Pre-requisite(s): NUR 6175 and 6275
This is the first in a series of three seminars that guide the student in development through completion of the scholarly DNP-ENL Project. In this first course the student identifies the area of focus, identifies the gap, designs the innovation or transformation, and determines key influential components (AIM model) to operationalize during the DNP project process.

NUR 6272 Applied Ethics for Advanced Practice Nursing (2)
Students explore the development and philosophical foundation of nursing ethics. Ethical dilemmas encountered by advanced practice nurses in a variety of settings are identified and systematically analyzed.

NUR 6275 Translational Science for Executive Nurse Leaders (2)
Pre-requisite(s): NUR 6175
Translational science for executive nurse leadership builds on knowledge gained in NUR 6175 Scientific Inquiry for Executive Nurse Leaders. The emphasis of NUR 6275 is to promote executive nursing leadership skills relevant to implementation and sustainment of evidence-based practice.

NUR 62C3 DNP Project III (2)
Pre-requisite(s): NUR 61C2
This Seminar, the third of four Capstone courses, involves the implementation of the Capstone project. In Capstone 3 the student is expected to be actively engaged in project implementation. IRB submission (if required) must be accomplished in Capstone 3 if it has not been accomplished in Capstone 2.

NUR 62C4 DNP Project IV (2)

NUR 6301 Developing Executive Nursing Presence, Authority, and Influence (3)
This course assists nurse leaders in embracing the factors, attributes, and processes that can strategically influence their constituents' goals and perceptions. The course focuses on nurse executives' applying knowledge-based competencies and using communication traits that reflect the appropriate authority and status required to successfully influence decisions locally, nationally, and globally.

NUR 6302 Resource Attainment and Allocation (3)
Advanced business principles and skills are critical to strategically attaining and allocating financial and human resources. The course focuses on knowledge and skills that are essential to operationalize fiscal and human resources for current and future care delivery models. The content includes advanced financial business skills, alternative funding options, staffing models, and human resource and workforce development.

NUR 6303 Influential Communication & Relationship Building (3)
This course examines specific knowledge and traits that impact the executive's proficiency in interacting and purposefully creating influential macro and micro relationships and actualizing desired outcomes. The focus is on identification of key constituents' perspectives and determining the most effective communication methods and timing to influence relationships, gain credibility, and actualize goals.

NUR 6304 Optimizing Quality and Safety Outcomes (3)
This course provides advanced knowledge and skill regarding concepts in quality, safety improvement, and risk management including collaboration, leading teams, system design, evaluating quality, safety, and risk management data and implementing micro and macro initiatives. This course has an experiential learning option to apply knowledge and skills in a selected practice setting.

NUR 6305 Business Intelligence and Advanced Decision-making in Complex Healthcare Organizations (3)
This course focuses on the use of business and healthcare technology data to improve and predict performance, influence and optimize decisions in health care, and promote effective strategy development to improve operational and clinical outcomes. The course provides an opportunity to collaborate with healthcare leaders to apply knowledge in a selected setting.

NUR 6306 Creating Excellence in Professional Practice Environments (3)
This course addresses visioning, strategic planning, and designing structures and processes that will advance excellence in professional nursing practice. The emphasis is on developing skills and knowledge that will support developing and sustaining a practice environment that promotes optimal outcomes for patients, nursing, and organizations and elevates the perception of nursing practice.

NUR 6307 Strategic Economic and Financial Concepts (3)
The course examines current trends in healthcare economics and the current and potential impact on organizational financial practices. The emphasis is on developing specific skills and knowledge a nurse executive can use to effectively respond to changing economic and financial expectations and improve stakeholder perception of nursing's value to the organization.

NUR 6308 Transforming Systems and Care Delivery Models for Diverse Populations and Emerging Needs (3)
This course examines different models of care delivery, outcomes, and emerging trends in the United States and globally. The emphasis is on gaining a theoretical, evidenced-based, and global perspective to be able to effectively influence transformation of systems and care delivery models in response to the emerging needs of diverse populations.

NUR 6309 Pediatric Acute Care Nurse Practitioner I (3)
Co-requisite(s): NUR 6311
Pre-requisite(s): NUR 5332 or 5351
This course prepares the Acute Care Pediatric Nurse Practitioner student to identify and address potential and actual health care needs of the acutely ill or injured child. Course content focus encompasses clinical judgment, decision-making, and procedural skills for delivering complex acute, critical, and chronic health care to ill or injured children, within the context of the family.

NUR 6310 Evidence Informed Health Policy for the Executive Nurse Leader (3)
Examines how policy affects nursing practice and the delivery of health care. Provides information to facilitate the identification, analysis, and interpretation of emerging priority areas for health care from state, national, and international perspectives. Reviews the policy development process and identifies opportunities for nurse participation and influence. Also discusses ethical implications of policy development and implementation.

NUR 6311 Pediatric Acute Care Nurse Practitioner II (3)
Co-requisite(s): NUR 6406
This course expands preparation of the Acute Care Pediatric Nurse Practitioner student for identifying and addressing potential and actual health care needs of the acutely ill or injured child. This course focuses on mastery of essential competencies to meet the specialized needs of infants and children with complex acute, critical, and chronic health conditions and advanced roles of the acute care pediatric nurse practitioner.

NUR 6316 Transforming Health Care Organizations and Changing Outcomes (3)
This course examines key factors used to assess complex health care organizations, including identification, development, implementation, and evaluation of change strategies that ensure optimal patient care quality and safety outcomes

NUR 6369 Clinical Genetics in Practice (3)
This course explores the identification, evaluation, and implementation of evidence-based genomics practices that can be used to prevent and control leading chronic, infectious, environmental, and occupational diseases. The familial, social, economic, and psychological implications of genetic testing are analyzed.

NUR 6371 Nursing Informatics (3)
This course focuses on the current role of information technology in nursing practice. Emerging trends and informatics are explored. Students will become familiar with application of information science and computer technologies in health care, biomedical research, and education of health professionals.

NUR 6373 Clinical Epidemiology (3)
Pre-requisite(s): NUR 5314
An integration of basics of epidemiology (e.g. incidence, distribution and determinants of disease) and public health in order to promote knowledge and skills in care for vulnerable populations as individuals and aggregate. Basics of study of populations, biostatistics and environmental data will be included. This course builds upon NUR 5314 Scientific Inquiry.

NUR 6375 Translational Science (3)
Pre-requisite(s): NUR 5314 or a passing grade in a masters-degree level research methods course
This course builds upon knowledge gained in Scientific Inquiry (NUR 5314) or a masters-level research course. Students in Translational Science gain advanced skills in appraising the results of scientific and other evidence, learn strategies to translate evidence into practice, and evaluate outcomes relevant to advanced practice nursing.

NUR 6377 Policy and Implications for Health (3)
This course provides the student with information to facilitate the identification and analysis of emerging priority areas for health from state, national, and international nursing perspectives. The role of advocate for population groups from a position of leadership is emphasized.

NUR 63C1 DNP Project I (3)
Pre-requisite(s): NUR 6110
This course provides the student the opportunity to develop a written proposal for the DNP project.

NUR 6406 Pediatric Acute Care Nurse Practitioner II: Practicum (4)
Co-requisite(s): NUR 6311
Pre-requisite(s): NUR 5232, 5233, 5351
This course provides the student with expanded clinical experiences within the scope of the Acute Care Pediatric Nurse Practitioner centered on addressing potential and actual health care needs of the acutely ill or injured child.

NUR 6407 Pediatric Acute Care Nurse Practicum I (4)
Co-requisite(s): NUR 6309
This course provides the student with clinical experiences within the scope of the Acute Care Pediatric Nurse Practitioner centered on addressing potential and actual health care needs of the acutely ill or injured child.

NUR 6V09 Doctor in Nursing Practice Executive Nursing Leadership Residency (2-6)
Co-requisite(s): NUR 6103
Pre-requisite(s): NUR 6101, 6102, 6301, 6302, 6303, 6304, 6305, 6306, 6307, 6308, 6375, and 6377
The residency provides an in-depth executive experiential opportunity focused on a personally designed plan. The plan will lead to increasing expertise and influence in promoting evidence-based practice, strategically leading change, transforming care models, and improving patient outcomes with an emphasis on current and emerging healthcare organizations and systems in a targeted healthcare organization.

NUR 6V76 Advanced Practice Nursing Residency (1-6)
Pre-requisite(s): APRN students: Completion of all specialty clinical courses
Post-MS to DNP students: completion of all core courses. [For APRN students] This course provides the student with in-depth clinical opportunities by focusing on personally designed experiences that lead to increasing expertise in providing safe, effective, and efficient care in focused populations. [For post MS to DNP students] This course provides the student with in-depth, personally-designed experiences that lead to a beginning mastery of the DNP Essentials.

Nutrition Sciences (NUTR)

NUTR 4351 Life Cycle Nutrition (3)
Pre-requisite(s): A minimum grade of C in NUTR 2351 or consent of instructor
Nutritional needs of individuals as they progress through the life cycle from birth through aging, with considerations of concomitant problems.

NUTR 5350 Dietetic Internship (3)
Pre-requisite(s): Departmental approval required
Supervised off-campus experiences in medical nutrition therapy, food systems management, and public health nutrition settings.

NUTR 5351 Nutrition and Aging (3)
Cross-listed as GRT 5351
Pre-requisite(s): NUTR 2351 or consent of instructor
Nutritional needs of individuals as they age. Disease prevention, nutrition assessment, and the central role of nutrition in maintaining health and well-being.

NUTR 5352 Pediatric Nutrition (3)
Pre-requisite(s): Graduate standing
An in-depth investigation of all aspects of pediatric nutrition. The course will cover nutrition concerns from conception through adolescence.

NUTR 5354 Nutrition in Public Health (3)
Pre-requisite(s): 12 hours undergraduate in nutrition and related subjects, or consent of instructor
A comprehensive study of Public Health and the role Nutrition plays in maintaining the health and well-being of communities.

NUTR 5355 Macronutrients and Metabolism (3)
Pre-requisite(s): Graduate standing
An in-depth investigation of all the macronutrients (fats, carbohydrates, and protein) and their metabolic activity.

NUTR 5356 Micronutrients and Phytochemicals (3)
Pre-requisite(s): Graduate standing
An in-depth investigation of micronutrients and their metabolism with the focus on the action, interaction and sources of vitamins and minerals.

NUTR 5357 Global Aspects of Food and Nutrition (3)
Pre-requisite(s): Graduate standing
Nutritional issues in developing countries, including an analysis of factros contributing to food supply, nutritional status including malnutrition, effect of under-nutrition, and methods of assessing nutritional status and interventions.

NUTR 5358 Emerging Issues in Food and Nutrition (3)
Pre-requisite(s): Graduate standing
Readings, discussion, and analysis of one or more emerging trends and developments in nutrition and food sciences.

NUTR 5359 Advanced Medical Nutrition Therapy (3)
Pre-requisite(s): Graduate standing
Nutrition in disease, including the biochemistry and pathophysiology of nutrition care, effects of disease, metabolism, advanced medical nutrition therapy, assessment, and therapeutic intervention.

NUTR 5360 Resource Management in Nutrition and Food Systems (3)
Pre-requisite(s): Graduate standing and successful completion of NUTR 3435 or equivalent
Principles of management applied to foodservice systems including institutions and restaurants and nutritional care delivery.

NUTR 5370 Research Methods in Nutrition Sciences (3)
Pre-requisite(s): Graduate standing
An in-depth investigation of research procedures in Nutrition Sciences.

NUTR 5380 Clinical Sports Nutrition (3)
Pre-requisite(s): NUTR 2351 or 4386, or consent of instructor
In-depth study of clinical sports nutrition.

NUTR 5386 Nutrition for Sport and Fitness (3)
Pre-requisite(s): NUTR 2351 or consent of instructor
Advanced study of nutritional concepts for individuals and team sport participants across the life span with a focus on selection of optimal dietary/nutritional approaches and timing as related to performance needs, maximizing performance, body composition, energy balance, and unique nutrient needs for specific sport participants. Non-scientifically-based information related to food and nutrition in sports will be addressed.

NUTR 5387 Advanced Human Nutrition (3)
Pre-requisite(s): NUTR 2351; successful completion of BIO 1305, CHE 1301, 1341, 3341 or consent of instructor
Advanced scientific study of nutrients and other human health-promoting substances.

NUTR 5V93 Special Topics in Nutrition and Food Sciences (1-6)
Pre-requisite(s): Graduate standing and consent of instructor
Special topics in Nutrition and Food Sciences. May be repeated with different topics for up to six hours.

Occupational Therapy Doctorate (OTD)

OTD 6122 Conditions Impacting Occupational Performance (1)
Pre-requisite(s): Successful completion of all Semester 1.1 coursework or permission of Program Director
This course examines the pathophysiology of selected cellular, integumentary, neuromuscular, cardiovascular, and pulmonary health conditions and their associated effects on health and wellness across the lifespan. The role of occupational therapy in addressing occupational performance needs for persons with such health conditions is emphasized while social determinants of health for persons, groups, and populations are explored.

OTD 6124 Professional Competencies I (1)
Pre-requisite(s): Successful completion of all Semester 1.1 coursework or permission of Program Director
Introduction to professional roles and responsibilities of the occupational therapy practitioner with emphasis on effective communication, intraprofessional collaboration, and interprofessional team dynamics. Integration of emotional/social intelligence, learning theories, learning styles, characteristics of learners through the lifespan, and health literacy education approaches.

OTD 6140 Professional Leadership and Advocacy (1)
Pre-requisite(s): OTD 6233 and 6216
This course examines the concepts underlying the application, study, and science of occupation. It provides an overview of culturally-related topics and their relationship to occupational therapy and views toward disabilities in society at large and within the military culture. Course prerequisites are Professional Practice and Ethical Formation Seminar and Clinical Education Seminar.

OTD 6144 Professional Development (1)
Pre-requisite(s): Successful completion of all Semester 2.1 coursework or permission of Program Director
Examines professional behavior, development, and roles (e.g., fieldwork educator, entrepreneur, faculty, consultant, advocate, and servant leader). The student completes a professional portfolio based upon self-assessment, reflection, and career goals.

OTD 6147 Conditions Impacting Occupational Performance II (1)
Pre-requisite(s): Successful completion of all Semester 2.1 coursework or permission of Program Director
Examination of the pathophysiology of selected health conditions and their associated effects on occupational performance and participation for children and youth populations. Intervention strategies and service delivery models used to address the occupational performance needs of children with such health conditions are emphasized. Safety considerations related to various conditions and the implications for practice are discussed.

OTD 6150 Pedagogy- Issues in Teaching and Learning in Higher Education (1)
Co-requisite(s): OTD 6155
Pre-requisite(s): OTD 6243
This course serves as preparation for the doctoral teaching internship and for a potential career in higher education. The course focuses on didactic and clinical instruction within higher education.

OTD 6155 Military Healthcare Policy and Injury (1)
Pre-requisite(s): OTD 6315 and OTD 6140
This course introduces students to US civilian and Military Healthcare System (MHS). Health-care regulations, policies, OT services, insurance, documentation, and reimbursement are addressed and compared between the civilian and MHS. This course addresses issues related to work performance, including work conditioning, work hardening, functional evaluation, supported employment, job coaching, job analysis, and basic ergonomics.

OTD 6161 Leadership and Advocacy (1)
Pre-requisite(s): Successful completion of all Semester 3.1 coursework or permission of Program Director
Principles of leadership and advocacy essential for individual and professional growth. Integration of knowledge and skills to advocate for patients and programs by influencing regulatory environment, and refinement and evaluation of skills in interprofessional communication and collaboration. Exploration of topics and methods of advocacy that promote the role of occupational therapy in addressing societal needs.

OTD 6167 Doctoral Mentorship and Research III (1)
Pre-requisite(s): OTD 6241 and OTD 6259
This course is the third in a series of four doctoral mentorship courses that provide the foundational work for development of the 16-week Doctoral Capstone Experience & Project (OTD 6V85 Doctoral Capstone Experience & OTD 6387 Doctoral Capstone Project). Students further engage in planning for the doctoral capstone experience and related doctoral capstone project. Students complete their needs assessment, literature review, and proposal.

OTD 6177 Doctoral Mentorship and Research IV (1)
Pre-requisite(s): OTD 6216, OTD 6241, OTD 6259, and OTD 6167
This course is the fourth in a series of four doctoral mentorship courses that provide the foundational work for development of the 16-week Doctoral Capstone Experience and Project (OTD 6V85 Doctoral Capstone Experience and OTD 6387 Doctoral Capstone Project). Students continue to engage in planning for the doctoral capstone experience and related doctoral capstone project. These are focused on developing in-depth exposure.

OTD 6196 Hybrid Learning in the Healthcare Clinic and Classroom (1)
Overview of evidence-based research and theory supporting the use of online and hybrid environments for adult learning in the healthcare clinic or classroom setting. Includes a historical perspective of online and hybrid learning for occupational therapy practice and education with practical strategies to support and enhance learning in a virtual environment.

OTD 6210 Evidence-Based Practice (2)
Exploration of the knowledge and tools critical to locating, selecting, analyzing, and applying scholarly literature to support evidence-based OT clinical decisions. The course serves as a first step in the identification of a Capstone Project focus area.

OTD 6212 Scholarly Practice I (2)
Pre-requisite(s): Admission to the Entry Level OTD program
This course introduces application of research principles to evidence-based practice and service competency. The student learns the steps required to develop a research proposal, conduct a research study, and disseminate research results. The ability to frame evidence-based practice questions, obtain peer-reviewed research, and develop beginning competence in the fundamentals of conducting a literature review is developed.

OTD 6213 Pathophysiology in Occupational Therapy (2)
Based on illness and disease within a systems framework, this course provides a basic understanding of pathophysiology as a change from normal physiological functioning of various human body systems. It is a corequisite with Semester I courses. Emphasis is placed on select conditions most often encountered by occupational therapists. The student uses critical thinking to analyze signs and symptoms based on knowledge of pathophysiology.

OTD 6214 Research Methods I (2)
Co-requisite(s): OTD 6218
The first of a two-part series, this course is an in-depth analysis of Research Design, Statistics, and Critical Appraisal of Research Literature. This course introduces students to the basic and advanced concepts, techniques, and technologies used in the scientific inquiry of applied clinical research.

OTD 6215 Neuroscience in Occupational Therapy (2)
Pre-requisite(s): Admission to the Entry Level OTD program
Examination of the theoretical explanations of occupational choices viewed through a neuroscience lens. Contemporary concepts of brain-function that support occupation are explored with emphasis on sensory, motor, and cognitive processes. Lab activities emphasize elements of the neurologic examination with an introduction to commonly employed measures and tools for assessment.

OTD 6216 Professional Practice and Ethical Formation Seminar (2)
This course introduces the concept of professional development for the eventual transition from student to professional practitioner. It is a corequisite with Semester I courses. Students explore self-reflection and self-assessment as related to continuing competence and professional behaviors. A learning portfolio is developed and used throughout the remainder of the program to demonstrate achievement of instructional and graduation outcomes.

OTD 6217 Analysis of Human Occupation Across the Lifespan (2)
Pre-requisite(s): Admission to the Entry Level OTD program
Exploration of occupational performance and physical, social-emotional, behavioral, and cognitive development throughout the lifespan. Typical and atypical changes in normative life tasks and occupational roles in relationship to environment and culture are discussed.

OTD 6218 Evidence Based Practice Research Proposal (2)
Co-requisite(s): OTD 6214, OTD 6216, OTD 6315
This is the first in a series of courses that provide the research base for the OTD Program. It is a corequisite with Semester I courses. The student identifies a research study through an Institutional Review Board (IRB) approved research protocol. Students use the integration of best evidence and best practice concepts, as well as advanced concepts, techniques, and technologies used for scientific inquiry of applied clinical research.

OTD 6220 Professional Development and Leadership (2)
In-depth analysis of criteria for professional excellence, advanced credentialing, and leadership in occupational therapy; development of a professional portfolio emphasizing competency in an evidence-based practice specialty or for preparation for teaching in an OT or OTA program. Exploration of leadership and power.

OTD 6224 Research Methods II (2)
Pre-requisite(s): OTD 6218 and OTD 6214
The second of a two-part series, this course is an in-depth analysis of Research Design, Statistics, and Critical Appraisal of Research Literature. This course is a continuation of Research Methods I in which students continue their work with a Faculty Research Advisory Committee on a clinically relevant research project.

OTD 6225 Fieldwork Seminar IA: Mental Health (2)
Pre-requisite(s): Successful completion of all Semester 1.1 coursework or permission of Program Director
Development of clinical reasoning, therapeutic use of self, and the occupational therapy process is emphasized with a focus on development of and socialization to professional behavior and attitudes. Simulation and faculty-led experiences promote an organized approach to implementation of the occupational therapy process including evaluation, intervention, and targeting of outcomes. Includes service delivery models within mental health settings.

OTD 6226 Occupational Therapy Across the Lifespan (2)
Pre-requisite(s): OTD 6315, OTD 6213, OTD 6214, OTD 6216, OTD 6515, and OTD 6218
This course gives the student an overview of human development throughout the lifespan with an emphasis on the areas that are important to occupational therapy and rehabilitation. Areas include: (1) the major developmental achievements at each age level, (2) beginning developmental assessment and observation, (3) professional communication skills, and (4) examples of major health problems and issues for each age with application to OT.

OTD 6227 Occupational Therapy Process Across the Lifespan (2)
Pre-requisite(s): Successful completion of all Semester 1.1 coursework or permission of Program Director
Examines professional reasoning through completion of an occupational profile, analyzing activities and occupations, and creating intervention plans using a variety of models of practice and frames of reference.

OTD 6228 Occupational Therapy Clinical Skills (2)
Co-requisite(s): OTD 6323, OTD 6328
Pre-requisite(s): All Semester I courses
Co-requisite(s): OTD 6328 and 6323. The evaluation and treatment of biomechanical factors in Occupational Therapy Across the Lifespan are discussed. Course prerequisites are all Semester I courses, and corequisites include Neuroscience and Human Movement. The student gains skill in analyzing movement, muscle palpation, goniometry of range of motion, and manual muscle testing.

OTD 6229 OT Theory (2)
Co-requisite(s): OTD 6226
Pre-requisite(s): All 1st Semester courses
Basic knowledge of theories, models of practice, and frames of reference used in critical thinking and professional reasoning are discussed as a means to inform occupational therapy assessment and interventions for persons within multiple contexts and environments. The student demonstrates foundational knowledge and applies concepts.

OTD 6230 Teaching and Educational Theory in Occupational Therapy (2)
An overview of current research and theory related to the education of occupational therapy practitioners, including academic and clinical education experiences. Emphasizes major concepts of adult learning with a focus on active learning and cooperative learning principles.

OTD 6233 Clinical Education Seminar (2)
Co-requisite(s): OTD 6431
Pre-requisite(s): OTD 6315 and OTD 6213
This course puts into practice the student's competency to detect the need for occupational therapy intervention and to select and apply the clinical and non-clinical approaches necessary to facilitate a client's occupational performance within his/her context. In order to prepare the student to evaluate and treat adult and elderly clients with differing conditions, emphasis is placed on the development of problem-solving abilities.

OTD 6235 Level IA Fieldwork (Mental Health) (2)
Co-requisite(s): OTD 6431
Pre-requisite(s): OTD 6315 and OTD 6229
Level I fieldwork affords students the opportunity for hands-on assessment, evaluation, treatment planning, and client intervention. The student learns to be part of the therapy team and professionally interact with clients and interdisciplinary teams. This fieldwork provides the opportunity for students to translate into a clinical setting.

OTD 6236 Physical Rehabilitation: Lab (2)
Co-requisite(s): OTD 6334, OTD 6435
This lab course addresses occupation-based practice for adults and older adults with physical impairments resulting in rehabilitation needs. Students practice assessment and interventions to improve occupational performance of clients across occupational therapy domains and through the occupational therapy process as related to rehabilitation.

OTD 6237 Communication and Engagement in the Therapeutic Process (2)
Pre-requisite(s): Successful completion of all Semester 1 coursework or permission of Program Director
Development of client interaction skills that facilitate therapeutic use of self as a style of therapeutic communication that promotes change and growth. Includes consideration of multicultural factors that strongly influence professional communication, developing and facilitating participation in groups, and using group process as a therapeutic tool.

OTD 6238 Fieldwork Seminar IB: Adult and Older Adult (2)
Pre-requisite(s): Successful completion of all Semester 1 coursework or permission of Program Director
Development of clinical reasoning is emphasized with a focus on the development of and socialization to professional behavior and attitudes. Simulation and faculty-led experiences promote an organized approach to implementation of the occupational therapy process including evaluation, intervention, and targeting of outcomes. Includes service delivery models for adult and older adult populations in various settings.

OTD 6239 Level IB Fieldwork: Adults and Older Adults (2)
Co-requisite(s): OTD 6435
Pre-requisite(s): OTD 6315 and 6229
Level I fieldwork affords students the opportunity for hands-on assessment, evaluation, treatment planning, and client intervention. The student learns to be part of the therapy team and professionally interact with clients and interdisciplinary teams. This fieldwork provides the opportunity for students to translate their behavior, skills, performance, and knowledge into a clinical setting.

OTD 6240 Program Evaluation & Development (2)
Concepts and strategies for assessment of practice outcomes and program evaluation including grant-writing. Students access and analyze data to examine the needs of a community that warrants occupational therapy interventions. Topics include the development of outcome tools, basis of outcomes research, selection and availability of outcome tools, and challenges for implementation.

OTD 6241 Doctoral Mentorship and Research I (2)
Pre-requisite(s): OTD 6218, OTD 6214, and OTD 6224
This course is the first in a series of four doctoral mentorship courses that provide the foundational work for development of the 16-week Doctoral Capstone Experience and Project (OTD 6V85 Doctoral Capstone Experience & OTD 6387 Doctoral Capstone Project). This course examines qualitative research methods used to enhance evidence-based research for occupational therapists and serves as an introduction for various qualitative research methods.

OTD 6242 Occupational Therapy Service Delivery and Organization (2)
Pre-requisite(s): Successful completion of all Semester 2.1 coursework or permission of Program Director
Basic principles of health care systems providing occupational therapy to individuals and organizations are examined. The student learns to integrate knowledge of delivery models, policies, and systems related to various current and emerging practice settings and makes clinical decisions for individuals and populations through application and synthesis of theory and evidence-based reasoning.

OTD 6243 Management and Program Development (2)
The student gains knowledge and understanding of contextual factors, social systems, policy, and legislation that impact the management and delivery of occupational therapy services in the military and civilian settings. This course occurs in the fourth semester of the OTD program. It provides foundational managerial knowledge and skills that will support the OTD 6155 Healthcare Policy and Injury course offered in the fifth semester.

OTD 6245 OT Psychosocial COSC and Wellness (2)
Pre-requisite(s): OTD 6229 and 6430
The Clinical Education Seminar focuses on management of combat and operational stress casualties and learning combat and operational stress control (COSC) doctrine. This course provides an in-depth study of combat and operational stress control and delineates the role of occupational therapists as members of the interdisciplinary team and unit. The student analyzes the full scope and application of FM 4-02.51.

OTD 6246 Scholarly Practice II (2)
Pre-requisite(s): Successful completion of all Semester 2.1 coursework or permission of Program Director
An in-depth examination of research and its relationship to multiple areas of practice and practice assumptions. The student acquires an in-depth understanding of theory-based research, selecting appropriate methodology and units of analysis in the design of research, ways of evaluating practice, and approaches to analyzing data. Includes analysis and synthesis of qualitative data.

OTD 6247 Level IC Fieldwork: Children and Youth (2)
Co-requisite(s): OTD 6445
Level I Fieldwork affords students the opportunity for hands-on assessment, evaluation, treatment planning, and client intervention. The student learns to be part of the therapy team and professionally interact with clients and interdisciplinary teams. This fieldwork provides the opportunity for students to translate their behavior, skills, performance, and knowledge into a clinical setting.

OTD 6248 Occupational Performance and Theories of Practice (2)
Pre-requisite(s): Successful completion of all Semester 2.1 coursework or permission of Program Director
This course focuses on the models and frames of reference that shape occupational therapy practice in relationship to engagement in occupation. The student participates in the critique and discussion of the theoretical perspectives commonly used in occupational therapy practice and examines the role of theory in the clinical decision-making process as it relates to clients across the lifespan.

OTD 6250 Level ID Fieldwork: Upper Quarter (2)
Co-requisite(s): OTD 6451
Pre-requisite(s): OTD 6515, OTD 6323, and OTD 6228
Level ID Fieldwork, Upper Quarter Evaluation and Intervention affords students the opportunity for hands-on assessment, evaluation, treatment planning, and client intervention. The student learns to be part of the therapy team and professionally interact with clients and interdisciplinary teams. This fieldwork provides the opportunity for students to translate into a clinical setting.

OTD 6255 Management of Occupational Therapy Services (2)
Pre-requisite(s): Successful completion of all Semester 2 coursework or permission of Program Director
This course provides an overview of practice management fundamentals and applies principles to various aspects of leadership and personal development, strategic planning, and business operations. The student gains knowledge in health care management, human resources, team dynamics, organizational structures, and fiscal management as these relate to occupational therapy practice.

OTD 6256 Fieldwork Seminar IC: Children and Youth (2)
Pre-requisite(s): Successful completion of all Semester 2 coursework or permission of Program Director
Development of clinical reasoning, therapeutic use of self, and the occupational therapy process is emphasized with a focus on development of and socialization to professional behavior and values. Simulation and faculty-led experiences promote an organized approach to implementation of the occupational therapy process and service delivery models as applied to children and youth and their families.

OTD 6257 Educational Strategies and Learning in Healthcare and Academic Settings (2)
Pre-requisite(s): Successful completion of all Semester 2 coursework or permission of Program Director
An examination of best evidence associated with teaching and learning in community, clinical, and academic settings. Exploration of teaching strategies across a wide range of practice settings based on consumer needs, contexts, roles, task demands, resources, and expected outcomes. Includes methods for professional presentations and interprofessional teaching.

OTD 6258 (2)
Pre-requisite(s): OTD 6216 and 6241
This course guides students in the process of military professional leadership and development: self-reflection and self-assessment; identification of specific individual competencies for development; goal setting; and selection of educational, professional development and growth activities.

OTD 6259 Doctoral Mentorship and Research II (2)
Pre-requisite(s): OTD 6241, 6214, and 6224
The second in a series of four courses required for completion of the doctoral capstone project. At the beginning of this course, the Capstone Faculty Mentor (CFM) and Capstone Site Mentor (CSM) for the doctoral capstone are assigned. The student begins a needs assessment for the project site, develops learning objectives, begins a literature review, and drafts the student's individualized specific goals and a capstone proposal.

OTD 6262 Professional Competencies II (2)
Pre-requisite(s): Successful completion of all Semester 3.1 coursework or permission of Program Director
Fundamental basis of theory and skills necessary for selecting and utilizing physical agent modalities and splinting within the context of occupational therapy practice. Advanced critical thinking and problem-solving skills are developed through various case studies, self quizzes, splint analyses, laboratory exercises, and self-evaluation. Licensure requirements and competency issues are addressed.

OTD 6265 Program Development (2)
Pre-requisite(s): Successful completion of all Semester 3.1 coursework or permission of Program Director
This course examines community health and education practices for groups, communities, and populations. It bridges the biomedical and sociocultural aspects of health through grant attainment and program development. Practice models are explored for health promotion, facilitating occupational performance and wellness, and population health across the lifespan in community-based settings.

OTD 6272 Doctoral Capstone II (2)
Pre-requisite(s): OTD 6340 Doctoral Capstone I The second course in a series of three courses required for completion of the doctoral capstone project
Students develop methods and procedures and submit a proposal for implementation and evaluation of the planned capstone project.

OTD 6280 Doctoral Capstone III (2)
Pre-requisite(s): OTD 6272 and 6340 The third in a series of three courses required for completion of the doctoral capstone project
Implementation of capstone project including data collection and data analysis, or program evaluation with conclusions. Preparation of abstract for publication. Dissemination of the results of an applied and innovative project in response to an identified need in the profession.

OTD 6285 Scholarly Practice III (2)
Pre-requisite(s): Successful completion of all Semester 5.1 coursework or permission of Program Director
Students are guided in the application of cumulative knowledge from previous courses and fieldwork experiences. Independent study and sample examinations prepare students for the National Board for Certification in Occupational Therapy (NBCOT) examination. Students present the Doctoral Capstone Proposal for peer and faculty review and complete the Occupational Therapy Knowledge Evaluation (OTKE) that tests clinical knowledge and skills.

OTD 6298 Hybrid Teaching Strategies for the Healthcare Clinic and Classroom (2)
Pre-requisite(s): OTD 6196
Examines theoretical perspectives and current literature supporting instructional design strategies and technology integration in a hybrid learning environment for healthcare clinical and classroom settings. Includes exploration of learning technologies and development of learning artifacts for online and face-to-face instruction. Peer teaching encourages student-driven exploration of a current topic in hybrid education and/or telehealth.

OTD 6309 Doctoral Capstone Project (3)
Pre-requisite(s): Successful completion of all Semester 6.1 coursework or permission of Program Director
Implementation of the capstone project, including data collection and data analysis, or program evaluation with conclusions. Preparation of abstract or article for publication. Dissemination of results for an applied and innovative project designed in response to an identified need in the profession.

OTD 6310 Advances in Occupational Therapy Practice (3)
Critical analysis of the American Occupational Therapy Association (AOTA) Occupational Therapy Practice Framework and other professional documents that serve as resources for addressing contemporary OT practice issues. Focus is directed on analyzing current professional trends including those representing advances in global, national, state, and local organizations. Requires completion of a Professional Development Plan.

OTD 6311 Foundations of Occupational Therapy (3)
Pre-requisite(s): Admission to the Entry Level OTD program
This course examines the historical foundations, philosophical base, core values, and code of ethics of the profession. Occupation-based models of practice and the Occupational Therapy Practice Framework (OTPF) are examined with a focus on analysis of the domain of occupational therapy. Structured learning experiences facilitate professional development and the transition to professional roles. Includes an experiential lab component.

OTD 6315 Foundations of Occupational Therapy (3)
Co-requisite(s): OTD 6213, OTD 6216
This course provides the student with foundational knowledge of the occupational therapy profession, development of the profession, and professional ethics, values, and responsibilities. Content addresses both historical and contemporary professional perspectives. The student learns and practices fundamental elements of activity analysis and client observation.

OTD 6320 Occupational Therapy Conceptual Foundations (3)
Study of the complexity of human occupation, occupational science, and the impact of historical and contemporary advances in occupational therapy theory. The validity and reliability of occupation-based assessment instruments and the efficacy of evidence-based treatment interventions are studied particularly as they relate to meeting the occupational needs of society.

OTD 6323 Human Movement (3)
Pre-requisite(s): OTD 6515
This course provides the student with understanding of normal human movement and gives a clinical perspective to the science of movement and to the pathology movement as deviation from the norm. Both kinematics (describing movement) and kinetics (the forces influencing movement) will be addressed. The course is designed for occupational therapy (OT) students with focus on clinical application of kinesiology to support children and adults.

OTD 6328 Neuroscience (3)
Pre-requisite(s): OTD 6515 and OTD 6213
With an emphasis on the relationship between structure and function, this course provides didactic and laboratory study of the human nervous system including neuroanatomy, neurophysiology, and disorders of the human nervous system. Prerequisites are Clinical Anatomy and Lab, and Pathophysiology in Occupational Therapy. The student engages in clinical problem solving by applying neuroscience principles to case studies of neurological disorders.

OTD 6330 Clinical Reasoning: Forms of Inquiry in Advanced Practice (3)
Advanced topics in clinical reasoning with an emphasis on narrative inquiry and occupational science. Exploration of biomedical and phenomenological approaches to examining individual and personal meanings of illness and health.

OTD 6333 Human Movement (3)
Pre-requisite(s): Successful completion of all Semester 1 coursework or permission of Program Director
Fundamental knowledge of the structure and function of the neuromuscular, musculoskeletal, and cardiovascular systems with application to occupational performance and assessments related to palpation, muscle testing, and goniometry. Analysis of dysfunctional impact on occupational performance is a focus.

OTD 6334 Physical Rehabilitation: Neurorehabilitation (3)
Pre-requisite(s): OTD 6213, OTD 6515, OTD 6328, OTD 6323, and OTD 6228
This course addresses occupation-based practice for adults and older adults with physical impairments resulting in rehabilitation needs. Students learn to facilitate occupational performance of clients across occupational therapy domains and through the occupational therapy process as related to rehabilitation.

OTD 6340 Doctoral Capstone 1 (3)
The first in a series of three courses required for completion of the doctoral capstone project. Development of the doctoral capstone plan to include the literature review, needs assessment, identification of individualized learning objectives, plans for supervision, and an evaluation plan.

OTD 6350 Human Performance Optimization (3)
Pre-requisite(s): Student must be actively enrolled in a U.S Army-Baylor OTD Program and completed semester 4 courses.
The Human Performance Optimization course educates an inter-professional care team of military allied health students (PT, OT, RD) who collaboratively develop and deliver holistic individual and unit services in a resource-constrained military environment outside of standard clinical care environments. Holistic services include rehabilitation, reconditioning, and human performance optimization to support the unit mission and commander's intent.

OTD 6360 Wellness and Health Promotion (3)
Pre-requisite(s): Successful completion of all Semester 3.1 coursework or permission of Program Director
Focus on prevention health, wellness, and fitness related to injury prevention, nutritional influences, fitness testing, and exercise prescription in an apparently healthy population. Development and adaptation of injury prevention and/or exercise programs based on test results. Course includes participation in selected complementary and alternative health interventions.

OTD 6383 Doctoral Mentorship II (3)
Pre-requisite(s): Successful completion of all Semester 5.1 coursework or permission of Program Director
Methods and procedures for the planned Doctoral Capstone Project are developed with a proposal for implementation and evaluation submitted. The student collaborates and reflects on issues related to occupational therapy practice including service delivery, supervision, and ethical considerations across a variety of practice settings.

OTD 6387 Doctoral Capstone Project (3)
Co-requisite(s): OTD 6V85
Pre-requisite(s): Completion of level II fieldwork (OTD 6V60 and 6V65)
One of the final, culminating experiences in the OTD Program is the Capstone Project, which demonstrates a synthesis of OTD program outcomes. Incorporating principles of evidence-based and occupation-based practice, students address a specific healthcare problem or health outcome and implement practice changes that improve health care, health care delivery, or health-related outcomes.

OTD 6396 Developing Hybrid Teaching Skills for the Healthcare Clinic and Classroom (3)
Pre-requisite(s): OTD 6298
Application of educational theory and research for the development and evaluation of hybrid programs to foster active adult learning in healthcare clinical and classroom environments. Using simulated scenarios, the development of a learning module or intervention plan is scaffolded through the course. Included is the production of teaching artifacts and refinement of the electronic teaching portfolio.

OTD 6420 Mental Health Populations and Practice in Occupational Therapy (4)
Pre-requisite(s): Successful completion of all courses in Semester 1.1 coursework or permission of Program Director
Historical and current models for application of occupational therapy to psychosocial problems. Reflective video analysis and faculty-led experiences to aid the socialization process into roles and styles of occupational therapists in mental health practice and other psychosocial settings. Task analysis and activity analysis techniques for participation in human occupation.

OTD 6430 Adult & Older Adult POP & PRAC in OT (4)
Pre-requisite(s): Successful completion of all Semester 1 coursework or permission of Program Director
Evaluation and intervention for adults using ICIDH systems as a framework. Application of screening, planning, applied treatment, and evaluation approaches including acquisition, restorative, and compensatory strategies for adult and older adult populations.

OTD 6431 Occupational Therapy in Mental Health (4)
Co-requisite(s): OTD 6435
Pre-requisite(s): Abnormal Psychology, OTD 6315, OTD 6226, and OTD 6229
Occupational therapy services for persons with psychosocial deficits and conditions that impact occupational performance during acute episodes, chronicity, rehabilitation, wellness, illness prevention, and health promotion are examined. Course prerequisites are Foundations in Occupational Therapy, Occupational Therapy Across the Lifespan, and OT Theory. The student learns through an integrated process of active learning and fieldwork.

OTD 6435 Occupational Therapy with Adult and Older Adult Populations (4)
Co-requisite(s): OTD 6431
Pre-requisite(s): OTD 6315, OTD 6226, and OTD 6229
The influence of occupation-based practice on the health and well-being of adults and older adults with impairments that impact participation is studied. Course prerequisites are Foundations in Occupational Therapy, Occupational Therapy Across the Lifespan, and OT Theory. The student learns to facilitate client performance to improve health in natural environments, such as the home, community, and workplace.

OTD 6445 Occupational Therapy with Children and Youth Populations (4)
Pre-requisite(s): OTD 6315, OTD 6226, and OTD 6229
This course addresses occupation-based practice for children and youth with impairments resulting in rehabilitation needs. Students learn to facilitate occupational performance of clients and their families across occupational therapy domains and through the occupational therapy process as related to rehabilitation.

OTD 6450 Children & Youth Populations & Practice in OT (4)
Pre-requisite(s): Successful completion of all Semester 2 coursework or permission of Program Director
Occupational therapy theory and rationale of competency-based assessments and interventions for physical, developmental, sensory integrative, perceptual/cognitive, and psychosocial impairment as it applies to children and youth and their families. Application of pediatric frames of reference to specific problems within the framework of the multicultural family.

OTD 6451 Upper Quarter Evaluation and Intervention (4)
Pre-requisite(s): OTD 6515, 6323, and 6228
This course emphasizes the evaluation and treatment of the upper extremity injured or diseased patient presenting to occupational therapy. The course material includes all diagnoses related to upper-extremity trauma and disease, orthopedic casting and splinting for the upper extremity, and wound care

OTD 6515 Clinical Anatomy and Lab (5)
This didactic and laboratory human musculoskeletal anatomy course emphasizes functional understanding of common injuries and conditions related to bones, muscles, and peripheral nerves most pertinent to OT. Course prerequisites are Pathophysiology in Occupational Therapy, and Neuroscience. The student studies musculoskeletal structures of prosected human cadaver specimens (bones, muscles, and nerves) during hands-on laboratory experiences.

OTD 6572 Doctoral Mentorship I (5)
Pre-requisite(s): Successful completion of all program coursework and current enrollment in OTD 6V75 Level II Fieldwork I or permission of Program Director
Development of a scholarly Doctoral Capstone Project Plan to include literature review, needs assessment, identification of individualized learning objectives, plans for supervision, and evaluation plan.

OTD 6V09 Doctoral Capstone Experience (15)
Pre-requisite(s): Successful completion of all Semester 5.2 coursework or permission of Program Director
In-depth experience in one or more of the following areas: clinical practice, research, leadership, program and policy development, advocacy, education, and/or theory development. This experience requires application and synthesis of professional knowledge and concentrated skills with 560 hours of a mentored doctoral capstone experience in the student's selected area.

OTD 6V60 Level IIA Fieldwork (1-12)
Co-requisite(s): OTD 6167
Pre-requisite(s): Completion of Practicum II Level I Fieldwork (OTD 6235, 6239, 6247, and 6250
A 16-week, full-time, supervised fieldwork experience in a clinic environment, hospital, school, or community agency. The course focuses on developing and integrating clinical skills and professional behaviors in designated practice areas of occupational therapy for competence as an entry-level practitioner.

OTD 6V65 Level II B Fieldwork (1-12)
Co-requisite(s): OTD 6177
Pre-requisite(s): OTD 6350, OTD 6239, OTD 6247, and OTD 6250
A 16-week, full-time, supervised fieldwork experience in a clinic environment, hospital, school, or community agency. The course focuses on developing and integrating clinical skills and professional behaviors in designated practice areas of occupational therapy for competence as an entry-level practitioner.

OTD 6V70 Independent Study (1-3)
This course is organized as a (one-credit; two-credit; three-credit) independent study course under the supervision of an assigned faculty member. It is a student-designed course that provides the student with an opportunity to receive direct interaction and guidance from a faculty member. This course is intended to integrate the core courses and elective courses within the occupational therapy curriculum.

OTD 6V75 Level II Fieldwork I (12)
Pre-requisite(s): Successful completion of all semester 3.2 coursework or permission of Program Director
Initial full-time fieldwork experience under direct supervision of licensed Occupational Therapist. Twelve weeks of full-time direct patient/client care activity supervised by qualified Fieldwork Educator.

OTD 6V80 Level II Fieldwork II (12)
Pre-requisite(s): Successful completion of all semester 4.2 coursework or permission of Program Director
Second full-time fieldwork experience under the direct supervision of a licensed Occupational Therapist. Twelve weeks of full-time direct patient care activity supervised by a qualified Fieldwork Educator. Continued development of the student's professional competency and personal transformation to an entry-level therapist is emphasized.

OTD 6V85 Doctoral Capstone Experience (1-15)
Co-requisite(s): OTD 6387
Pre-requisite(s): Completion of Level II Fieldwork (OTD 6V60 and 6V65)
Students pursuing a doctoral degree (OTD) are required to complete a 14-week Capstone Experience. This capstone experience develops occupational therapists with advanced skills (those beyond a generalist level), and it is integral to acquiring deeper practice-scholar competencies as reflected in the program's curriculum design.

PhD in Preaching (PHDP)

PHDP 6350 History of Preaching from the First Testament to Wycliffe (3)
A detailed historical study of preaching in the First Testament, the development of the synagogue sermon, the forms of preaching in Christian Scripture as kerygma and didache, preaching in the earliest church, Hellenistic rhetorical influences on preaching, patristic preaching in the East and West, the Alexandria and Antioch schools, monastic preaching, and preaching of the Middle Ages and High Middle Ages to Wycliffe.

PHDP 6351 History of Preaching from the Reformation to Post-Modern Preaching (3)
An analytical study of primary preaching sources and contemporaneous homiletical theory from the Reformation to the present, an analysis of the sermonic contexts in political and intellectual history, the hermeneutical and exegetical approach to scripture, the rhetorical models, the theosymbolic impact, and the use of cultural references in sermons.

PHDP 6352 Exegetical Method for Preaching (3)
A detailed examination of exegetical method as supportive of biblical preaching. Stress is placed on primary research in the consensus representative authors and works for each exegetical school.

PHDP 6354 Homiletical Theory and Methods (3)
Based on the literature of the last 100 years, modern and early post-modern developments in preaching are examined against larger trends in church and society. The psychological, neo-orthodox, deductive, inductive, narrative, phenomenological, law/gospel, and postmodern schools of preaching will be considered as the major representatives of each homiletic approach.

PHDP 6358 The Practice of Preaching (3)
A detailed examination of the role of delivery in the effectiveness of preaching through careful analysis of the practice of preaching through delivery. Attention is given to the place vocal dynamics (volume, pitch, pace, pause, etc.) and body language (facial expression, eye contact, posture, gestures, etc.) have in effective communication. Members of the seminar each preach a sermon for careful analysis.

PHDP 6360 Studies in OT and Proclamation (3)
A study of selected Old Testament texts. While considerable attention will be given to historical, literary, and theological issues, the course will also address hermeneutical matters related to proclamation. Course may be repeated when content differs for a maximum of nine (9) semester hours.

PHDP 6361 Studies in the New Testament and Proclamation (3)
A study of selected New Testament texts. While considerable attention is given to historical, literary, and theological issues, the course also addresses hermeneutical matters related to proclamation. Course may be repeated when content differs for a maximum of nine (9) semester hours.

PHDP 6362 Studies in Theology and Proclamation (3)
An examination of various topics in systematic or historical theology. Implications for proclamation will also be considered. Course may be repeated when content differs for a maximum of nine (9) semester hours.

PHDP 6363 Hermeneutics for Preaching (3)
A detailed consideration of hermeneutical approaches to the biblical text and their impact on contemporary preaching. The seminar includes examination of biblical passages with a view to varied hermeneutical outcomes that stand with, in front of, behind, and beyond the text. The seminar will examine perspectives in minoritized, feminist, European, Global South, and non-Protestant hermeneutics.

PHDP 6364 Teaching Preaching (3)
This course enables doctoral students of homiletics to develop skills for teaching an entry-level course in preaching. The course provides students with a background in educational theory and curriculum design, pedagogical/andragogical tools, and practice in sharpening their skills as instructors of preaching.

PHDP 6365 Research Methodology (3)
This course examines research approaches and methodologies as related to preaching and writing. The course explores writing for research and other platforms and includes reading assignments, discussion, presentations, and writing assignments, preparing the student for academic article writing, dissertation writing, and other writing platforms.

PHDP 6366 Victorian and Edwardian Preaching: Preaching in the Grand Style (3)
Informed opinion considers the Victorian and Edwardian eras the zenith of English language preaching in the grand rhetorical style and tradition. The literary remains of these periods embrace preaching from the poetic, cultured sermons of F. W. Robertson to the rugged Anglo-Saxon speech of C.H. Spurgeon.

PHDP 6367 Studies in Minoritized Preaching Traditions (3)
A detailed study of minoritized culture preaching traditions in the U.S. context. Participants engage with preaching theories and practices in minoritized homiletics, wrestle with the significance of context and location in reading and preaching biblical texts, increase their levels of intercultural competence as preachers and teachers of preaching, and enhance their homiletical capacity to serve an intercultural church.

PHDP 6370 Preaching and Culture: Engaging Societal Shifts in North America (3)
This seminar examines how recent societal shifts have impacted homiletical engagement with culture in the North American context(s). After constructing a biblical-theological rationale for cultural engagement, participants will analyze three shifts in particular – secularization, technologization, and interculturation – and their broader impact on preaching, congregational life, and society.

PHDP 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

PHDP 6V99 Dissertation (1-9)
Supervised research for the doctoral dissertation. A total of nine semester hours is required for the completion of the dissertation. Students register for dissertation hours during dissertation research and receive credit for them when the dissertation is approved.

Philosophy (PHI)

PHI 4310 Philosophy of Science (3)
An analysis of philosophical problems about science. Such central concepts as law, causation, induction, hypothesis, theory, verification, and models are studied. Presuppositions and methodologies of different sciences may be examined. The relation of scientific views to moral, social, and metaphysical problems is considered.

PHI 4311 Epistemology (3)
Pre-requisite(s): Two PHI courses or consent of instructor
A critical examination of classical and current problems in theories of knowledge. Attention is given to such problems as meaning, truth, the knowing situation, universals, knowledge of the external world and of other minds, and validation of knowledge claims. The contributions of recent movements such as logical empiricism, linguistic analysis, phenomenology may be studied.

PHI 4314 History of Philosophy: Patristic and Medieval (3)
The history and development of philosophy from 250 to 1400 A.D. Some of the major philosophers studied include Augustine, Boethius, John Scotus Erigena, Anselm, Abelard, Avicenna, Averroes, Maimonides, Bonaventure, Thomas Aquinas, John Duns Scotus, and William of Ockham. Special emphasis will be placed on the significance of pre-Enlightenment thinkers to the development of the Enlightenment and Modernity.

PHI 4318 Philosophy of Law (3)
A critical study of historical and contemporary approaches to primary issues in jurisprudence and the philosophy of law, including tort law, criminal law, and Constitutional law.

PHI 4320 The Philosophy of Religion (3)
Pre-requisite(s): Two PHI courses or consent of instructor
A philosophical inquiry into such topics as the existence and nature of God, religious experience, immortality, the problem of evil, the relationship between reason and faith, the meaning of religious language and symbols, and the validity of religious knowledge claims. Methods of contemporary philosophical analysis are used in clarifying religious concepts.

PHI 4321 Metaphysics (3)
Pre-requisite(s): Two philosophy courses or consent of instructor
A critical analysis of classical and contemporary metaphysical systems and problems. These include the world views found in the philosophies of naturalism, idealism, personalism, positivism, pragmatism, organicism, and existentialism. Problem areas considered are mind-body relations, cosmology, ontology, philosophical anthropology, universals, determinism, and freedom. Basic categories such substance, cause, time, space, matter, and form are critically examined. Attention also is focused upon methods and criteria employed in metaphysical study.

PHI 4324 Philosophy in Literature (3)
A critical study of philosophical material in literature, that is, a study of the philosophy to be found in essays, novels, poems, and plays. Among the authors usually studied are Plato, Aristotle, Theophrastus, Lucretius, Voltaire, Goethe, Ibsen, Nietzsche, Kafka, Camus, Sartre, Malraux, Hesse and selected contemporary novelists.

PHI 4331 Latin American Philosophy (3)
Pre-requisite(s): Upper-level standing
Philosophical and intellectual movements in Latin America from the colonial times to the present. These movements include scholasticism, eclecticism, utilitarianism, romanticism, positivism, vitalism, phenomenology, and existentialism and philosophies of liberation. Works of major representatives of these movements (including such men as Bello, Mora, Sierra, Varona, Deustua, Caso, Korn, Vasconcelos, Farias Brito, Vaz Ferreira, and Romero) are studied.

PHI 4340 East Asian Philosophy (3)
Cross-listed as AST 4340
An historical and critical survey of the major movements in Chinese, Indian, or Japanese philosophy. Course may be repeated once with different area of concentration.

PHI 4341 Contemporary Continental Philosophy (3)
A critical study of philosophical movements in Europe during the past one hundred and fifty years. Some of the major philosophers studied include Nietzsche, Husserl, Adorno, Heidegger, Merleau-Ponty, Sartre, de Beauvoir, Wittgenstein, Russell, Carnap, Gadamer, Habermas, Lyotard, Foucault, and Derrida. Movements studied include phenomenology, positivism, naturalism, critical theory, existentialism, structuralism, deconstructionism, and post modernism. Course may be repeated once with a different area of concentration.

PHI 4342 Contemporary American Philosophy (3)
A critical study of philosophical movements in the United States during the past one hundred years. Some of the philosophers whose works are studied include Pierce, James, Royce, Dewey, Mead, Lewis, Santayana, Whitehead, and Quine. Recent movements such as critical realism, naturalism, humanism, personalism, logical positivism, and linguistic analysis are also studied.

PHI 4345 Intermediate Logic (3)
Cross-listed as MTH 3345, PHI 3345
Pre-requisite(s): Upper-level standing
The language of first-order logic as a formal deductive system.

PHI 4353 Philosophy of Language (3)
Pre-requisite(s): Two PHI courses or consent of instructor
Critical examination of the basic problems in general semantics and philosophy of language, giving special attention to the major authors in these fields.

PHI 4360 Contemporary Ethical Theory (3)
Pre-requisite(s): Two philosophy courses or consent of instructor
Major issues in contemporary ethical writings. Course may be repeated once for credit if topic varies.

PHI 4361 Social Philosophy (3)
Cross-listed as PSC 4353
A critical survey of the fundamental concepts and theories used in justifying social institutions. Problems such as authority, law, freedom, rights, equality, responsibility, power, justice, the state, and justification of open societies are considered.

PHI 4365 Jewish Philosophy (3)
Pre-requisite(s): Upper-level standing or consent of instructor
Jewish philosophy in the twentieth century, with emphasis on the relation between mortality and morality, justice and totalitarianism, faith after the Holocaust, and individualism and revolution.

PHI 4379 Islam and Democracy (3)
Pre-requisite(s): Upper-level standing
Examines the evolution of political philosophy and institutions in Muslim culture.

PHI 4V99 Special Topics in Philosophy (1-3)
Pre-requisite(s): Senior or graduate standing and consent of instructor
Faculty-directed individual, group, or class research project. Course may be taken up to three times with a different topic for a maximum of 9 credit hours.

PHI 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

PHI 5301 Readings from Plato (3)
Topics include Plato's philosophical contributions in metaphysics, epistemology, ethics, social and political philosophy, and aesthetics. Additional topics may include the philosophical uses of literary form, and the role of psychology and the emotions in an adequate philosophical understanding of human nature and the common good. Students learn a variety of interpretive approaches to Plato and also become familiar with the secondary literature on Plato. The course may be taken up to three times with different topics for a total of nine hours course credit.

PHI 5302 Readings from Aristotle (3)
We read from Aristotle's writings around a theme, e.g., metaphysics, epistemology, logic, ethics, politics, aesthetics, or psychology. Students become conversant with Aristotle's writings and important secondary literature. Course may be taken up to three times with different topics for a total of nine hours course credit.

PHI 5303 Ethics in the Western Tradition (3)
A survey of central philosophical texts and ideas shaping ethics in the Western tradition.

PHI 5306 Readings from Kierkegaard (3)
An intensive reading of selected philosophical works of Soren Kierkegaard, drawn from his pseudonymous and non-pseudonymous authorship. Focuses on significant philosophical issues discussed in Kierkegaard's works, putting him in conversation with important philosophers both from the past and from the contemporary world. Course may be taken up to two times with different topics for a total of 6 hours course credit.

PHI 5310 Value Theory (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A seminar on the major interpretations of the nature and meaning of value, with particular attention to the relation between value theory and ethics. Course may be repeated once with a different topic of study.

PHI 5311 Readings from the Philosophers (3)
Cross-listed as PSC 5311
Pre-requisite(s): For Political Science or Philosophy graduate students only; or consent of instructor
An intensive, critical reading of selected works of major philosophers such as Plato, Aristotle, Augustine, Aquinas, Descartes, Locke, Hume, Kant, Hegel, Nietzsche, Heidegger, Russell, and Rawls. Other philosophers may be added to this list. May be taken a maximum of six times if different topic, not to exceed eighteen semester hours.

PHI 5312 Topics in Classical Philosophy (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical study of philosophers from the classical world; may include figures from the pre-socratic origins of philosophy to the times of epicurean and stoic philosophers, including especially Plato and Aristotle. Course may be taken up to three times with different topics for a total of nine hours course credit.

PHI 5313 Topics in Action Theory (3)
An in-depth study of relevant recent and/or more classical philosophical literature on one or more selected topics such as free will, responsibility, practical rationality, decision theory, and intention. Course may be taken up to three times with different topics for a total of nine hours course credit.

PHI 5314 Topics in Modern Philosophy (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical study of philosophers from the Modern Period, including thinkers from the sixteenth to the nineteenth centuries. Course may be taken up to three times if topic is different for a total of nine hours credit.

PHI 5315 Topics in Philosophy of Mind (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A philosophical examination of the nature of the human mind and its relation to the body as well as theories that account for the nature of consciousness, intentionality, and other features of mentality. Course may be taken up to three times when topic is different for a total of nine credit hours for the course.

PHI 5316 Contemporary Philosophical Problems (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
Examination of historical, normative, and analytical problems which have arisen in the history of philosophy and an examination of the systems of philosophy which have emerged from the consideration of these problems. May be taken six times if different topic, not to exceed eighteen semester hours.

PHI 5318 Logic for Philosophers (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
In this course the student should gain formal tools that are useful in a wide-range of areas of philosophy, including: propositional logic, quantificational logic, basic set theory, basic probability theory, and basic modal logic.

PHI 5319 Philosophical Writing (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
This course contains a significant amount of epistemology, metaphysics, and ethics. This course has as its goal mastering the art of writing a critical essay in philosophy, an essential skill for success in graduate school in philosophy and for publication success after securing a faculty position in philosophy.

PHI 5320 Special Topics in Philosophy (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
Special research topics to be undertaken by students under direct supervision of the professor. Course may be taken a maximum of four times if different topic, not to exceed twelve hours.

PHI 5321 Topics in Epistemology (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
Covers a broad array of issues concerning the nature of successful cognition of the sort sought after in purely theoretical activities. May focus on issues such as the nature and possibility of knowledge, the threat of skepticism, and the nature of rationality and justification, as well as on current controversies in the literature, including controversies with the value of knowledge, debates between foundationalists and coherentists, the Gettier problem, and many others. Course may be taken up to three times when the topic is different for a total of nine credit hours for the course.

PHI 5322 Topics in Metaphysics (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
Covers a broad array of issues concerning the nature of being and reality, involving topics concerning God, the world, and the self. May focus on related topics such as ontology, category theory, substances and attributes, space and time, causation, and possible worlds. Course may be taken up to three times when topic is different for a total of nine credit hours for the course.

PHI 5330 Readings in Ancient and Medieval Philosophy (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical readings course on primary sources and ancient and medieval philosophy. The course concludes with a comprehensive written examination over the sources.

PHI 5331 Readings in Modern and Contemporary Philosophy (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical readings course on primary sources in modern and contemporary philosophy. The course concludes with a comprehensive written examination over the sources.

PHI 5333 Seminar in Political Philosophy (3)
Cross-listed as PSC 5333
See PSC 5333 for course information.

PHI 5342 Seminar on Religion, Law, and Politics (3)
Cross-listed as PSC 5342
An examination of the liberal and republican traditions of government and their relationship to church-state relations, with particular emphasis on how philosophers, legal theorists, and/or theologians assess the influence of both traditions on the American constitutional system. Among the topics that may be discussed are the debates about liberalism, religious liberty, religious establishment, the employement of religious reasons in a liberal regime, and the nature of public reason.

PHI 5343 Classical Political Thought (3)
Cross-listed as PSC 5343
See PSC 5343 for course information.

PHI 5350 Workshop in Teaching Philosophy (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
This course will address a broad range of pedagogical issues involved in becoming a successful philosophy teacher. Topics include: educational theory, organizational strategies, practical techniques for effective lecturing, practical techniques for stimulating discussion, the logistics of evaluation, the scholarship of teaching and the importance of ongoing self-assessment of classroom performance.

PHI 5353 Medieval Political Thought (3)
Cross-listed as PSC 5353
See PSC 5353 for course information.

PHI 5360 Contemporary Ethical Theory (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical study of issues in contemporary ethical theory; may be taken up to three times with different topics of study, not to exceed nine semester hours.

PHI 5361 Topics in Contemporary Philosophy of Religion (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
This course investigates issues in contemporary philosophy of religion. Course may be taken up to three times with different topics, not to exceed a total of nine hours of course credit.

PHI 5362 Issues in Contemporary Philosophy of Science (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical study of issues in contemporary philosophy of sciences; may be taken up to three times with different topics of study, not to exceed nine hours of course credit.

PHI 5363 Modern Political Thought (3)
Cross-listed as PSC 5363
See PSC 5363 for course information.

PHI 5365 Topics in Philosophy of Language (3)
Pre-requisite(s): For philosophy graduate students only or by departmental approval
A critical study of issues in philosophy of language. Meaning, reference, intentionality and extensionality are among possible topics to be considered using primary sources in contemporary philosophy. May be taken up to three times with different topics not to exceed nine total credit hours.

PHI 5393 Advanced Seminar in Political Philosophy (3)
Cross-listed as PSC 5393
See PSC 5393 for course information.

PHI 5V99 Thesis (1-6)
Research, writing, and oral defense of an approved master's thesis. A minimum of six semester credit hours of PHI 5V99 is required.

PHI 6V10 Prospectus Research (1-6)
Pre-requisite(s): PHI 5330 and 5331; and completion of regular course work
Supervised research for developing and writing a Dissertation Prospectus Proposal that will be the subject of a preliminary exam that will admit students to candidacy. A student may repeat this course for credit, with a maximum of eighteen total hours.

PHI 6V99 Dissertation (1-12)
Supervised research for the doctoral dissertation.

Physical Therapy (Doctoral) (PHT)

PHT 5191 Special Topics: Seminar I (1)
Concentrated study of a particular topic in physical therapy.

PHT 5192 Special Topics: Seminar II (1)
Concentrated study of a particular topic in physical therapy.

PHT 5193 Special Topics: Seminar III (1)
Concentrated study of a particular topic in physical therapy.

PHT 5194 Special Topics: Seminar IV (1)
Concentrated study of a particular topic in physical therapy.

PHT 5230 Essentials of Evidence-Based Practice and Clinical Research (2)
The integration of best evidence and best practice concepts as well as advanced concepts, techniques, and technologies used for the scientific inquiry of applied clinical research. Emphasis is placed on refining research designs for individual projects and preparing a research protocol for approval by the Institutional Review Board.

PHT 5321 Aspects of Pharmacology and Nutrition in Physical Therapy (3)
Role and relationship of nutrition and drug therapy in the treatment of specific populations treated by physical therapists; medical indications and potential effects of drugs on physical therapy treatments; nutritional principles related to exercise.

PHT 5323 Pathophysiology of Therapeutic Exercise (3)
An in-depth exploration of exercise physiology and pathophysiology related to the cardiovascular, respiratory, and musculoskeletal systems. Emphasis will be placed on utilizing this information as a basis for evaluating patients with selected pathologies commonly seen in physical therapy, and designing and implementing treatment programs.

PHT 5326 Functional Physical Therapy Anatomy and Biomechanics: Lower Quarter (3)
Advanced dissection course in human gross anatomy with emphasis on the origin of function. Ligaments, bones, and bones are dissected and their interrelationships emphasized especially with the lower extremities. All tissues and joint structures are analyzed from an anatomical as well as functional perspective.

PHT 5327 Functional Physical Therapy Anatomy and Biomechanics: Upper Quarter (3)
Advanced dissection course in human gross anatomy with emphasis on the origin of function. Ligaments, bones, and muscles are dissected and their interrelationships emphasized especially with the upper extremities. All tissues and joint structures are analyzed from an anatomical as well as functional perspective.

PHT 5331 Quantitative Evaluation (3)
Assessment of the uses, advantages, validity, reliability, and sources of error of evaluation procedures in physical therapy.

PHT 5341 Differential Diagnosis in Orthopaedic Physical Therapy (3)
Discussion of the subjective and objective findings of somatic and visceral disorders of the various systems with reference to their influence on physical therapy evaluation and rehabilitation or the need for referral to a physician.

PHT 5349 Radiology for Physical Therapists (3)
Familiarizes the physical therapist with procedures used in radiology related to neuromuscular and musculoskeletal disorders. Emphasis placed on correlation of radiological findings with clinical signs and symptoms.

PHT 5382 Evaluation and Mobilization: Lower Quarter (3)
Interpretation of basic science knowledge and development of clinical skills needed to complete a differential evaluation and proceed to effective treatment of lower quarter dysfunction.

PHT 5383 Evaluation and Mobilization: Upper Quarter (3)
Interpretation of basic science knowledge and development of clinical skills needed to complete a differential evaluation and proceed to effective treatment of upper quarter dysfunction.

PHT 5392 Evaluation and Mobilization: Advanced Lower Quarter (3)
Review of basic science knowledge and refinement of clinical skills needed to complete a differential evaluation and proceed to effective treatment of lower quarter dysfunction. Development of advanced clinical skills in treatment progression and application of combined movements, and grade V mobilization techniques (manipulation) which will increase efficiency, accuracy, and clinical outcomes.

PHT 5393 Evaluation and Mobilization: Advanced Upper Quarter (3)
Review of basic science knowledge and refinement of clinical skills needed to complete a differential evaluation and proceed to effective treatment of upper quarter dysfunction. Development of advanced clinical skills in treatment progression and application of combined movements, and grade V mobilization techniques (manipulation) which will increase efficiency, accuracy, and clinical outcomes.

PHT 6101 Advanced Practicum in Physical Therapy (1)
Supervised experience in a specialized area of interest such as administration, teaching, research, or advanced evaluation and treatment procedures.

PHT 6111 Advanced Orthopaedic/Sports Medicine and Surgery for Physical Therapists (1)
Review of the orthopaedic surgeon's model of evaluation and treatment of musculoskeletal injuries. Update current orthopaedic and sports medicine surgical procedures and rehabilitation guidelines.

PHT 6150 Orthopaedic Lecture Series I (1)
The Orthopaedic Lecture Series, developed for the West Point Joint & Soft Tissue Trauma Fellowship, provides lectures from some of the top orthopaedic and rehabilitation specialists in the country. The residents are invited to present their research at this forum, which prepares them to present in front of leading experts in orthopaedics and sports medicine.

PHT 6151 Orthopaedic Lecture Series II (1)
A continuation of The Orthopaedic Lecture Series, developed for the West Point Joint and Soft Tissue Trauma Fellowship, which provides lectures from some of the top orthopaedic and rehabilitation specialists in the country. The residents are invited to present their research at this forum, which prepares them to present in front of leading experts in orthopaedics and sports medicine.

PHT 6152 Orthopaedic Lecture Series III (1)
A continuation of courses PHT 6150 and 6151. The Orthopaedic Lecture Series, developed for the West Point Joint and Soft Tissue Trauma Fellowship, provides lectures from some of the top orthopaedic and rehabilitation specialists in the country. The residents are invited to present their research at this forum, which prepares them to present in front of leading experts in orthopaedics and sports medicine.

PHT 6191 Independent Study I (1)
Variable content. Clinical practicum with direct one-to-one clinical mentoring with specialization in advanced orthopedic physical therapy.

PHT 6192 Independent Study II (1)
Variable content. Clinical practicum with direct one-to-one clinical mentoring with specialization in advanced orthopedic physical therapy.

PHT 6193 Independent Study III (1)
Variable content. Clinical practicum with direct one-to-one clinical mentoring with specialization in advanced orthopedic physical therapy.

PHT 6194 Independent Study IV (1)
Variable content. Clinical practicum with direct one-to-one clinical mentoring with specialization in advanced orthopedic physical therapy.

PHT 6292 Special Topics: Seminar I (2)
Concentrated study of a particular topic in sports medicine as it relates to the overall health and performance of an athlete/soldier.

PHT 6293 Special Topics: Seminar II (2)
Concentrated study of a particular topic in sports medicine as it relates to the overall health and performance of an athlete/soldier.

PHT 6294 Differential Diagnosis in Sports Medicine (2)
Discussion of subjective and objective findings of somatic and visceral disorders of the various systems with reference to their influence on physical therapy evaluation and rehabilitation or the need for referral to a physician.

PHT 6310 Soft Tissue and Bone Pathophysiology (3)
Fundamental concepts of pathophysiological processes of injury and disease as related to causes, mechanisms, clinical manifestations, diagnostic techniques and management. Basic science of soft tissue and bone pathophysiology with emphasis on relationship to clinical/field evaluation, intervention and post-operative rehabilitation.

PHT 6320 Athletic Injuries I (3)
Basic and advanced concepts for the recognition, examination, diagnosis, management and prevention of injuries. Injuries are presented in general terms as well as sport specific. Classroom and practical exposure to acute and chronic injuries, to include injury prevention are addressed.

PHT 6321 Athletic Injuries II (3)
A continuation of PHT 6320 exposing the residents to advanced concepts for the recognition, examination, diagnosis, management and prevention of athletic injuries. Injuries are presented in general terms as well as sport specific. Classroom and practical exposure to acute and chronic injuries, to include injury prevention are addressed.

PHT 6332 Field Research in Physical Therapy (3)
Designs, data collection techniques, and analyses for field research in physical therapy. Critical application of surveys, observational studies, case studies, and single case designs to clinical field problems in physical therapy. Emphasis is on the development of analytical skills requisite for field research in physical therapy.

PHT 6333 Advanced Professional Paper Project (3)
This course focuses on methods of evaluating health status and outcomes of physical therapy intervention. Design, measurement and analysis are covered. This course is designed to guide the residents in conducting and completing original clinical research. Review of the literature of selected topics, pilot research studies, and the course instructor may approve independent research projects. Focus will be placed on assisting the residents to be participants in the research process.

PHT 6340 Functional Anatomy and Biomechanics I (3)
Advanced course in functional anatomy and biomechanics of the upper/lower quarter and spine with emphasis on orthopedic and sports related trauma and pathology. The course will correlate basic science with clinical concepts for diagnosis, intervention and injury prevention. All tissues and joint structures are analyzed from an anatomical as well as functional perspective.

PHT 6341 Functional Anatomy and Biomechanics II (3)
A continuation of PHT 6340. Advanced course in functional anatomy and biomechanics of the upper/lower quarter and spine with emphasis on orthopedic and sports related trauma and pathology. The course will correlate basic science with clinical concepts for diagnosis, intervention and injury prevention. All tissues and joint structures are analyzed from an anatomical as well as functional perspective.

PHT 6379 Advanced Radiology in Sports Medicine (3)
Familiarize with procedures used in radiology related to neuromuscular and musculoskeletal disorders. Emphasis placed on correlation of radiological findings with clinical signs and symptoms.

PHT 6384 Independent Study (3)
Concentrated study of a particular topic related to musculoskeletal pathology in sports medicine.

PHT 6387 Research and Statistics I (3)
This course is designed to introduce residents to advanced concepts, techniques, and technologies used in the scientific inquiry of applied clinical research, with the emphasis on sports medicine. Topics to be investigated include measurement theory and the scientific method, the research process, experimental design, hypothesis construction and testing, critical evaluation of physical therapy research, sampling, indices of validity and reliability, parametric and non-parametric statistics, data collection, and coding schemes. This course focuses on methods of evaluating health status and outcomes of physical therapy intervention. Design, measurement and analysis are covered. This course is also designed to guide the residents in conducting and completing original clinical research. Review of the literature of selected topics, pilot research studies, independent research projects may be approved by the course instructor. Focus will be placed on assisting the residents to be participants in the research process.

PHT 6388 Research and Statistics II (3)
A continuation of PHT 6387 and is designed to further introduce residents to advanced concepts, techniques, and technologies used in the scientific inquiry of applied clinical research, with the emphasis on sports medicine. Topics to be investigated include measurement theory and the scientific method, the research process, experimental design, hypothesis construction and testing, critical evaluation of physical therapy research, sampling, indices of validity and reliability, parametric and non-parametric statistics, data collection, and coding schemes. This course focuses on methods of evaluating health status and outcomes of physical therapy intervention. Design, measurement and analysis are covered. This course is also designed to guide the residents in conducting and completing original clinical research. Review of the literature topics, pilot research studies, independent research projects may be approved by the course instructor. Focus will be placed on assisting the residents to be participants in the research process. Dissemination of research findings in the form of manuscripts, poster and platform presentations will also be covered.

PHT 6389 Research and Statistics III (3)
A continuation of PHT 6387 and 6388. This course focuses on the dissemination of research findings in the form of manuscripts, poster and platform presentations will also be covered.

PHT 6391 Clinical Fellowship I (3)
Clinical practicum with specialization in orthopaedic physical therapy emphasizing advanced orthopaedic evaluation and treatment procedures in the provision of direct patient, orthopaedic care.

PHT 6392 Clinical Fellowship II (3)
Clinical practicum with specialization in orthopaedic physical therapy emphasizing advanced orthopaedic evaluation and treatment procedures in the provision of direct patient, orthopaedic care.

PHT 6393 Clinical Fellowship III (3)
Clinical practicum with specialization in orthopaedic physical therapy emphasizing advanced orthopaedic evaluation and treatment procedures in the provision of direct patient, orthopaedic care.

PHT 6394 Clinical Fellowship IV (3)
Clinical practicum with specialization in orthopaedic physical therapy emphasizing advanced orthopaedic evaluation and treatment procedures in the provision of direct outpatient, orthopaedic care.

PHT 6395 Advanced Sports Medicine Practicum I (3)
Field and courtside basic and advanced practical applications for the recognition, examination, diagnosis, and management of athletic injuries. Coverage for an athletic event may be with another faculty member or independently (usually not until third or fourth semesters). Athletic venues will consist of USMA intramural and inter-collegiate sports. Residents will also be sent on TDY to cover Army Sports at trial camps, Armed Forces, National and CISM competitions. TDYs will be in CONUS and OCONUS.

PHT 6396 Advanced Sports Medicine Practicum II (3)
A continuation of PHT 6395 for field and courtside basic and advanced practical applications for the recognition, examination, diagnosis, and management of athletic injuries. Coverage for an athletic event may be with another faculty member or independently (usually not until third or fourth semesters). Athletic venues will consist of USMA intramural and inter-collegiate sports. Residents will also be sent on TDY to cover Army Sports at trial camps, Armed Forces, National and CISM competitions. TDYs will be in CONUS and OCONUS.

PHT 6397 Advanced Sports Medicine Practicum III (3)
Continuation of PHT 6395 and 6396. Field and courtside basic and advanced practical applications for the recognition examination, diagnosis, and management of athletic injuries. Coverage for an athletic event may be with another faculty member or independently (usually not until third and fourth semesters). Athletic venues will consist of USMA intramural and inter-collegiate sports. Residents will also be sent on TDY to cover Army Sports at trial camps, Armed Forces, National and CISM competitions. TDYs will be in CONUS and OCONUS.

Physical Therapy (PT)

PT 6107 Emerging Topics in Physical Therapy (1)
The purpose of this course is to provide the students with lectures and interaction with a distinguished visiting professor. The topics and scholars are chosen annually by the faculty. Typically two visiting scholars provide a daylong interaction with the students. Topics include current issues in the practice and profession of physical therapy.

PT 6120 Evidence Based Practice I (1)
The purpose of this course is to prepare and equip uniformed services physical therapists with the knowledge, skills, and abilities necessary to practice evidence-based physical therapy throughout their career. This is the first of a two-part course that develops the elements that serve as the foundation of evidence-based practice. EBP I focuses on the concepts of evidence-based practice with particular emphasis on literature search strategies and forming answerable clinical questions. In addition, the critical appraisal of literature is fostered in conjunction with the material presented in Research Methods I.

PT 6121 Evidence Based Practice II (1)
Pre-requisite(s): PT 6120 This course prepares and equips uniformed services physical therapists with the knowledge, skills, and abilities necessary to practice evidence-based physical therapy throughout their career
This course builds upon the foundation established in EBP I. EBP II focuses on the concepts of evidence-based practice with particular emphasis on critical appraisal of the literature. The evaluative approach to diagnostic tests and screening tools prepares the students to judge the evidence on the accuracy and validity of diagnostic tests and the application of important diagnostic tests in the care of a specific patient. The evaluative approach to studies of treatment and intervention prepares the student to judge the evidence on clinical trials and systematic reviews. In addition, discussions on how the clinician proceeds in the absence of evidence occur. The focus of this course is on the tests and intervention used in patients with musculoskeletal disorders.

PT 6131 Clinical Pathophysiology (1)
This course presents the fundamental concepts involved in the pathophysiological processes of injury and disease. Specifically discussed are the causes, mechanisms, clinical manifestations, diagnostic techniques, and clinical management of these various injury and disease processes.

PT 6142 Clinical Medicine III (1)
Pre-requisite(s): PT 6240 and PT 6241
The information presented in this course reinforces previous neurologic and pediatric education and assists student understanding and application of evidence-based examination, evaluation, assessment, treatment, and referral of adult and pediatric patients with various neurological disorders. This course presents a variety of clinical medicine topics to include adult neurology, pediatric neurology, management of cognitive disorders, and the mechanisms of speech and language disorders.

PT 6151 Pharmacology for Physical Therapists (1)
The purpose of this course is to prepare uniformed services physical therapists for their role as physician extenders by providing instruction in general pharmacologic principles, drugs prescribed by physical therapists, drugs with significant impact on physical therapy practice and issues related to drug prescription.

PT 6172 Research Methods III (1)
Pre-requisite(s): PT 6270 and 6271 A continuation of Research Methods I and II in which students continue their work with Faculty Research Advisory Committee on a clinically relevant research project
Specific goals include: the completion of data collection and analysis, development of poster and platform presentations, oral research presentations, and individual research defense.

PT 6204 Diagnostic Imaging and Procedures (2)
This course presents an eclectic collection of topics related to issues in radiology and nuclear medicine. The emphasis is placed on musculoskeletal imaging with plain films, CT scans, and MRI, and an introduction to musculoskeletal ultrasound. In addition, instruction in medical laboratory diagnostic tests for physical therapists is provided. Lecture and laboratory work in electrophysiologic testing (EMG & NCV) is conducted.

PT 6209 Primary Care Musculoskeletal Physical Therapy (2)
Pre-requisite(s): PT 6402, 6503, and 6601
This course provides lectures, labs, and case-based learning experiences in differential diagnosis and medical screening in clinical settings. This course is taught in two sections and spans the duration of three academic semesters and the student's clinical internship year. During the first and second semester a regional approach to primary care is covered in one-hour instructional blocks for each of the seven regions. The third semester pulls from the regional course information and shifts the focus onto the various medical systems of the body and teaches the physical therapy student how to conduct a review of systems. The student will integrate this knowledge during their internship clinical experience (fourth semester) and apply it to a real patient case.

PT 6212 Neuroanatomy (2)
Pre-requisite(s): PT 6410 and 6511 A discussion of the normal anatomy of the brain and spinal cord and their supporting structures Introduction to the Pain and Temperature, Discriminatory Touch and Conscious Proprioception, and Pyramidal Motor Pathways. In depth study of the microscopic structures of the central nervous system. A problem solving approach to fundamental neuroanatomical pathologies.

PT 6230 Neuromuscular Physiology (2)
This course will consist of a study of normal neuromuscular physiology. The emphasis will be on the cellular functions of neurons and muscle fibers. The goals of the course are to provide foundational knowledge about human function, enhance the student's ability to make quantitative and qualitative observations, and facilitate understanding of the clinical sciences.

PT 6240 Clinical Medicine I (2)
This class consists of topics in pathology, medicine, and surgery with emphasis on signs and symptoms resulting from abnormalities, disease, or trauma that produce disorders of movement. Substance abuse, depression, post-traumatic stress disorders, and cultural variations are presented with an emphasis on how these conditions impact the physical therapy management of patients. This is a lecture-based course taught primarily by guest speakers (subject matter experts) including physicians, physician assistants, medical social workers, dieticians and occupational therapists. Program faculty members present the lectures on arthritis. Group discussion of case scenarios is part of the instructional hours on arthritis.

PT 6241 Clinical Medicine II (2)
Pre-requisite(s): PT 6240 This course consists of an eclectic collection of topics that include a general and specific review of the endocrine, renal, and immune systems; discussion of pelvic floor dysfunction, incontinence, and urinary tract disorders; wound healing and burn care; and a review of women’s health topics specific to post-mastectomy rehabilitation and musculoskeletal dysfunction associated with pregnancy

PT 6250 Therapeutic Interventions (2)
This course is comprised of a wide spectrum of introductory material regarding therapeutic interventions and provides a foundation for the prescription and application of these interventions in patients with neuromusculoskeletal disorders. This course will include topics on planning treatment programs, clinical teaching and patient education, therapeutic exercise, introduction to joint and soft tissue mobilization and manipulations, bandaging, basic ambulation, and wheelchairs. This course consists of lecture and lab periods.

PT 6253 Orthotic and Prosthetic Interventions (2)
Functional and surgical anatomy of upper and lower member amputations and conditions requiring upper/lower member and spinal orthotic intervention are presented. Physiology/pathophysiology of upper and lower member amputations to include predisposing and complicating factors of traumatic and surgical amputations as well as etiology and response to treatment are covered. The physiologic effects of and response to upper/lower member and spinal orthotic intervention are discussed. Conditions requiring amputation intervention and orthotic use are presented and the biomechanical principles of prosthetic and orthotic fabrication are outlined as are the indications for their selection and use. All phases of upper/lower amputee management are covered in depth and include: preoperative phase, early postoperative phase, rehabilitative phase, and prosthetic fitting phase. Psychomotor tasks related to the upper/lower amputee and the upper/lower member and spinal orthotic patient care are practiced. Discharge planning and self-care/prevention techniques for the amputee and orthotic patient are discussed.

PT 6270 Research Methods I (2)
The first of a three-part series, this course is an in-depth analysis of research design, statistics, and critical appraisal of research literature. This course introduces students to the basic and advanced concepts, techniques, and technologies used in the scientific inquiry of applied clinical research. Topics to be investigated include the research process and the scientific method, measurement theory, indices of validity and reliability, hypothesis construction and testing, constructing a clinical question, sampling, data collection and coding schemes, experimental design, a hierarchy of evidence, survey research, and guides for critical appraisal of research. During Research Methods I, students begin work on a clinically relevant research project under the direction and supervision of a Faculty Research Advisory Committee.

PT 6271 Research Methods II (2)
Pre-requisite(s): PT 6270 This course is a continuation of Research Methods I in which students continue their work with a Faculty Research Advisory Committee on a clinically relevant research project
Specific goals during this course include the completion of a literature review and the beginning of pilot testing and data collection. Also included is Statistics II, which develops the student's use of advanced statistical analysis techniques, including the use of SPSS analytic software.

PT 6280 Executive Leadership and Management (2)
Pre-requisite(s): Semester II courses
This course is designed to help junior officer physical therapists develop their executive skills for future clinic leadership/management and for their future leadership positions. The course is the study of management leadership theory and concepts drawn from the behavioral and social sciences and applied to leadership and management in the diagnosis, prediction and analysis of human behavior in organizations. In addition to helping students understand and address change in their own leadership styles, the course addresses change theory, strategic planning, and consulting. The course also includes elements of clinic design and management, continuous quality improvement, legal and legislative issues in physical therapy, and consulting/health promotion. This course is specific to graduates' needs as new Army/Air Force/Navy/Public Health physical therapists. The course has been tailored to the work of a physical therapy professional, where a large part of the position is dealing with people, including patients, personnel, supervisors, third party payers and other professionals. These same skills developed, as a junior officer, will serve the officer well in various future assignments with increased levels of responsibilities. This Executive Skills course is also closely aligned with the LAMP (leadership, administration, management preparation) skills identified by the APTA Section on Administration.

PT 6281 Physical Therapy in Deployed Environments (2)
This course is designed to prepare uniformed service physical therapy students for their roles and responsibilities while deployed for combat operations and support/sustainment operations. The purpose of this course is derived from the principle of “Sports Medicine on the Battlefield - operational readiness through injury prevention and early intervention” developed at the United States Military Academy, West Point, New York. The concepts for managing injured elite athletes and returning them to the playing field as quickly and safely as possible share the goal of returning injured soldiers to their units in garrison or combat. This course provides students an opportunity to develop core-advanced competencies in orthopaedic triage and management of acute musculoskeletal and neurological injuries while deployed. These same evidence-based competencies are used to return injured soldiers - “tactical athletes” - to a high level of military technical and tactical readiness. This course also brings students to an advanced level of understanding in general medicine topics (triage, differential diagnosis, and orthopaedics) and methods of tracking procedures and patient outcomes.

PT 6282 Injury Control and Prevention (2)
This course provides an overview of methods to control/prevent musculoskeletal injuries in physical training environments to include special populations training. It introduces the student to the epidemiology of musculoskeletal physical training injuries, explores intrinsic and extrinsic risk factors for injury as identified in the literature, and teaches the student how to develop an injury control program utilizing the five basic steps of surveillance, research, intervention, outcomes measurement/program monitoring, and program modification. The course is completed with a brief overview of the descriptive and analytical aspects of epidemiologic research as well as a review of specific study designs as applied to injury control research.

PT 6300 Physical Therapy Fundamentals (3)
This course is comprised of a wide spectrum of introductory material including biomechanics and kinesiology, the basic physical examination, joint motion assessment and measurement, muscle strength and flexibility testing, neuromuscular screening, vital signs, cardiopulmonary resuscitation, patient management issues, handling and positioning of patients, written and oral communication, medical records, professional organizations and responsibilities, and professional ethics.

PT 6306 Cardiopulmonary Physical Therapy (3)
The purpose of this module is to prepare physical therapists to consider the cardiovascular system as an integral component of all patients, not solely those patients who have manifest cardiovascular disease. The primary emphasis is how therapeutic exercise can be used in the prevention and treatment of cardiovascular disease, including the effects of exercise on other established risk factors. The student will receive instruction in principles of cardiopulmonary exercise physiology and how these principles can help guide them as they prescribe exercise in a variety of patients. Physical Therapy assessment of patients with cardiovascular disease is addressed, as are the diagnostic imaging and the medical (including pharmacological) and surgical management of patients. Recommended staffing and operation of a cardiac rehabilitation service is presented, and techniques to maximize patient compliance with the Physical Therapy prescription are reviewed.

PT 6308 Lifespan Physical Therapy (3)
Pre-requisite(s): Semester II courses
The purpose of this course is to prepare physical therapy students to conduct a clinical examination, evaluation, diagnosis, prognosis, and intervention in pediatric and geriatric clients with neuromusculoskeletal disorders. A framework of normal development and aging will be presented and serve as a course foundation.

PT 6313 Neuroscience (3)
Pre-requisite(s): Semester II courses
Neuroscience is a formidably comprehensive discipline that combines neurobiology, molecular science, psychology, neuroanatomy, and neurophysiology. This course fosters an understanding of human perception and movement from a basic science level. It complements Neuroanatomy instruction and emphasizes the functional aspects of various neural systems. Normal peripheral and central nervous system function and the pathophysiology of various neurological disorders is discussed. Both a conceptual understanding of the principles of CNS organization and some memorization of specific nuclei and pathways is required. The primary end state of this course is a solid understanding of nervous system structure and function and a foundation that allows students to master future concepts that will be presented in the Neuromuscular Physical Therapy and the Lifespan Physical Therapy courses.

PT 6333 Clinical Exercise Physiology (3)
This course begins with an overview of cardiopulmonary physiology during rest and exercise in the well individual. Students are then introduced to the principles of exercise prescription for the well individual, American College of Sports Medicine exercise guidelines, exercise and nutritional approaches to weight loss, and screening for risk factors for physical activity. Practical exercises include field and laboratory exercise testing of strength, power, and aerobic capacity.

PT 6352 Physical Agent Interventions (3)
This course discusses the roles and mechanisms of various physical agents used in physical therapy and rehabilitation to reduce pain, enhance healing, improve motion, and assist in the recruitment of muscle activity. It is important for the therapist to have a solid understanding of the normal physiology of the cardiovascular and neuromuscular system prior to using an agent that can alter the function of these tissues. A background in the physiology of healing and of modulation of pain serves as a basis for the rationale for using any physical agent. This course provides the foundation needed in clinical decision-making regarding patient care options and physical agents.

PT 6354 Advanced Therapeutic Interventions (3)
Pre-requisite(s): PT 6250
The purpose of this course is to prepare and equip physical therapists with advanced intervention skills to be used in the management of the musculoskeletal system. An emphasis will be placed on skill advancement for clinical decision-making, developing and progressing integrated treatment plans, and honing the motor skills necessary for the effective application of spinal and extremity manual therapy, soft tissue mobilization, trigger point dry needling, and therapeutic exercise. Skill laboratories will include a core set of manual therapy procedures (mobilization and manipulation), soft tissue mobilizations, dry needling procedures, therapeutic taping procedures, and therapeutic exercise as they relate to clinical case scenarios. Students will be expected to demonstrate proficiency in designing and demonstrating a complete treatment plan using sound clinical and evidence-based reasoning.

PT 6402 Musculoskeletal Physical Therapy II - Spine (4)
Pre-requisite(s): PT 6601 This course includes an introduction to the biomechanics, kinesiology, and specific terminology of spinal movement The course emphasizes applying evidence-based practice in all areas of spinal management, including the use of treatment-based classification systems to guide the evaluation and treatment of patients with mechanical neck and back pain. Where little evidence exists, a pragmatic, impairment-based approach integrating basic principles of biomechanics and pathokinesiology is used. A large portion of the course is devoted to carefully monitored laboratory palpation, examination, and intervention sessions. Evidence-based interventions such as patient education, therapeutic exercise, and manual therapy (muscle energy techniques, mobilization, and thrust manipulation) build upon the models previously presented in lower extremity courses.

PT 6405 Neuromuscular Physical Therapy (4)
Pre-requisite(s): Semester II courses
This course presents the physical therapy examination, evaluation, and intervention of clients with neurological conditions, including, but not limited to: polyneuropathy, spinal cord injury, stroke, traumatic brain injury, multiple sclerosis, and Parkinson's disease. Therapeutic interventions for clients with neurological impairments and activity limitations to be discussed include, but are not limited to: activities of daily living and functional training, assistive/adaptive devices, electrical stimulation, biofeedback, therapeutic exercise including PNF, facilitation/inhibition procedures, gait and balance training, orthoses, hydrotherapy, and patient and family education.

PT 6410 Anatomy I (4)
This course presents a discussion of the normal anatomy of epithelial, connective, muscle, and nervous tissues including osteology and arthrology. Also discussed are the peripheral and autonomic nervous systems. This course also consists of an in-depth study of the gluteal, thigh, knee, leg and foot regions including extensive dissection and prosection study of each region.

PT 6503 Musculoskeletal Physical Therapy III - Upper Member (5)
Pre-requisite(s): Semester II courses
This course includes the biomechanics, kinesiology, and clinical disorders of the upper member. This course, coupled with the anatomy of the upper member, prepares students to competently examine a patient with upper extremity dysfunction, evaluate the information and establish a clinical diagnosis, and develop a physical therapy intervention plan. A large portion of the time is spent in the laboratory setting practicing palpation skills, the performance of clinical tests, and application of therapeutic treatment techniques that include therapeutic exercise, manual therapy (muscle energy techniques, mobilization, and manipulation), and patient education.

PT 6511 Anatomy II (5)
Pre-requisite(s): PT 6410 This course provides an in-depth study of the spine, back, neck, thorax, abdomen, pelvis, shoulder, arm, elbow, forearm, wrist and hand
Also discussed are the anatomy of the face and temporomandibular joint.

PT 6601 Musculoskeletal Physical Therapy I - Lower Member (6)
This course includes the biomechanics, kinesiology, and clinical disorders of the lower member. This course, coupled with PT 6410 (Anatomy I), is designed to prepare students to competently examine a patient with lower extremity dysfunction, evaluate the information and establish a clinical diagnosis, and develop a physical therapy intervention plan. A large portion of the time will be spent in the laboratory setting practicing palpation skills, the performance of clinical tests, and application of therapeutic treatment techniques that include therapeutic exercise, manual therapy (muscle energy techniques, mobilization, and manipulation), and patient education.

PT 6660 Physical Therapy Practice I (6)
Pre-requisite(s): Semester I and II courses
This course occurs at the conclusion of the second semester and consists of a full-time clinical experience at carefully selected medical treatment facilities. The emphasis of the experience is the management of patients in musculoskeletal, acute care, or in-patient orthopedic rehabilitation environments. A heavy emphasis of this clinical experience is student integration of fundamental physical therapy skills and management of the musculoskeletal system.

PT 6V98 Physical Therapy Internship (36)
Pre-requisite(s): Semester III courses and successful completion of comprehensive oral examinations
This year-long internship is a directed clinical experience in various physical therapy settings. The internship experience is designed to broaden and increase the depth of clinical practice to bring the student to the level of an independently practicing doctor of physical therapy. In order to achieve this level of experience, the internship will require both focused and non-focused experiences in a wide range of clinical practice environments.

Physics (PHY)

PHY 4322 Advanced Topics in Classical Physics (3)
Pre-requisite(s): PHY 3320, 3330, and MTH 3326
Continuation of PHY 3320 and 3330. Topics normally include: dynamics of systems of particles: rigid-body motion; coupled oscillations; the wave equation in one dimension; gauge transformations; electromagnetic waves in conductors and nonconductors; dispersion; multiple radiation; Linard-Wiechert potentials; relativistic electrodynamics.

PHY 4340 Statistical and Thermal Physics (3)
Pre-requisite(s): PHY 3372 and MTH 3326
Topics normally include: basic probability concepts; macroscopic thermodynamics; statistical thermodynamics; kinetic theory; quantum statistics.

PHY 4350 Introduction to Stellar Structure and Evolution (3)
Pre-requisite(s): PHY 2455; and MTH 3326 or concurrent enrollment
A quantitative study of the physics of stars and stellar systems. Topics include observed properties of stars and the physics underlying those properties, radiation and stellar spectra, the interior structure of stars, the life cycles of stars, white dwarfs, neutron stars, and black holes.

PHY 4351 Introduction to Modern Cosmology (3)
Pre-requisite(s): PHY 4350 and MTH 3326
An introduction to modern cosmology, including observational cosmology, Newtonian gravity, relativistic cosmological models, thermal history of the universe, dark matter and dark energy, inflationary models, the origin of the light elements, structures in the universe, and the cosmic microwave background radiation. The principles of Einstein's general theory of relativity and observations in experiments will also be covered.

PHY 4360 Computer Models in Physics (3)
Pre-requisite(s): PHY 3320, 3372, and CSI 3324
Application of contemporary computer methods to the solution of physics and engineering problems. Theory and applications of finite difference equations. Deterministic, discrete, and continuous models. Computer graphics. Waves in classical and quantum physics. Monte Carlo calculations, electric circuits, partial differential equations in physics and engineering.

PHY 4372 Introductory Solid State Physics (3)
Pre-requisite(s): PHY 3373
Topics normally include: crystal structure; reciprocal space; elastic and thermal properties; electronic structure; the Fermi surface; elementary semiconductor physics; dielectric and magnetic properties of solids.

PHY 4373 Introductory Nuclear and Particle Physics (3)
Pre-requisite(s): PHY 3373
Topics normally include: nuclear structure and models; angular momentum and isospin; conservation laws and discrete symmetries; electromagnetic and weak interactions; quark model; nuclear and particle astrophysics.

PHY 4374 Introduction to Relativistic Quantum Mechanics (3)
Pre-requisite(s): PHY 3373
Dirac's equation, its covariance properties, its solutions; Foldy-Wouthuysen transformation and exact results; propagator theory; applications in various areas of physics.

PHY 5155 Advanced In-Situ Instrumentation Techniques (1)
Cross-listed as ENV 5155
Pre-requisite(s): PHY 4155, 4350, and concurrent enrollment in 4351
Computer modeling and instrument design and development of detectors for the in-situ measurement of physical and dynamic characteristics of dust in interplanetary space and planetary ring systems.

PHY 5180 Graduate Physics Colloquium (1)
Pre-requisite(s): Enrollment in graduate program
Students are required to register for the weekly colloquium and to present papers. No more than three semester hours may be counted on a master's degree and no more than six may be counted on the Ph.D. degree.

PHY 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

PHY 5320 Classical Mechanics I (3)
Pre-requisite(s): PHY 4322
Elementary mechanics, variational principles, Lagrange's equations, two-body central forces, scattering, kinematics, rotations, rigid body motion, and Hamilton's equations of motion; special relativity, including covariant Lagrangian formulation.

PHY 5321 Classical Mechanics II (3)
Pre-requisite(s): PHY 5320
Small oscillations; canonical transformations; Hamilton-Jacobi theory; canonical perturbation theory; Lagrangian and Hamiltonian densities, critical points, Lyapunov exponents, bifurcation, chaos, noise, and other topics in non-linear dynamics.

PHY 5330 Electromagnetic Theory I (3)
Pre-requisite(s): PHY 4322 and 5360 (concurrently)
Advanced electrostatics and magnetostatics, boundary-value problems, time-varying fields, conservation laws, plane electromagnetic waves, wave guides and resonant cavities, and simple radiating systems and diffraction.

PHY 5331 Electromagnetic Theory II (3)
Pre-requisite(s): PHY 5330
Magnetohydrodynamics and plasma physics, advanced relativistic electrodynamics, collisions of charged particles, scattering, Lienard-Wiechert potentials and radiation by moving charges, Bremsstrahlung, the method of virtual quanta, dynamic multipole fields, radiation damping, self-fields of a particle, and scattering and absorption by a bound system.

PHY 5340 Statistical Mechanics (3)
Pre-requisite(s): PHY 4340 and credit or concurrent registration in PHY 5360
Probability, statistical methods, classical and quantum statistical mechanics, postulates, ensembles, ideal systems, real gases, cluster expansions, liquid helium, and phase transitions.

PHY 5342 Solid State Physics (3)
Pre-requisite(s): PHY 4372 and 5370
Theory of solids: crystal symmetry, lattice dynamics, band theory, lattice defects, impurity states. Applications to the thermal, magnetic, and electrical properties of solids.

PHY 5350 Fundamentals of Stellar Structure and Evolution (3)
Pre-requisite(s): PHY 4350 and 4351
Stellar structure, hydrostatic equilibrium, radiative transfer, stellar surface phenomena, and corona interactions. Cosmical electrodynamics and nuclear reactions in astrophysics, basic stellar evolution, variable stars, degenerate cores, white dwarfs, and neutron stars.

PHY 5351 General Relativity (3)
Pre-requisite(s): PHY 5360
A systematic exposition of Einstein's general theory of relativity, with emphasis on applications to astrophysical and cosmological problems.

PHY 5352 Space Plasma Physics (3)
Pre-requisite(s): PHY 4322 and 5360 (concurrently) or consent of the instructor
Space plasma and electromagnetic field phenomena; the guiding center drift equation (with applications); adiabatic invariant theory; the basic equations of magnetohydrodynamics; plasma convection, currents (including Chapman-Ferraro currents and ring currents), oscillations; magnetohydrodynamic boundaries, diffusion, waves, shocks, and instabilities.

PHY 5360 Mathematical Physics I (3)
Pre-requisite(s): MTH 2321 and 3325
Theory of analytical functions, Laplace and Fourier transforms, Fourier series, theory of distributions, ordinary differential equations, eigenvalue problems, special functions defined by eigenvalue problems, Green's functions, partial differential equations, radiation problems and scattering problems.

PHY 5361 Mathematical Physics II (3)
Pre-requisite(s): PHY 5360 or consent of instructor
Conformal mapping, electrostatic problems, dispersion relations, asymptotic expansions, method of steepest descent, calculus of variations, Rayleigh-Ritz principle, finite-dimensional vector spaces, matrix theory, orthogonal transformations, normal coordinates, Hilbert vector spaces, unitary transformations, resolvent operators, operator calculus, integral equations, and approximate methods for solution of boundary value problems.

PHY 5370 Quantum Mechanics I (3)
Schrodinger equation, eigenfunctions and eigenvalues, harmonic oscillator, and hydrogen atom. WKB approximation, collision theory, matrix formulation of quantum mechanics, transformation theory, and representation theory, including Schrdinger and Heisenberg picture.

PHY 5371 Quantum Mechanics II (3)
Pre-requisite(s): PHY 5370
Angular momentum algebra, Pauli Principle, many-particle systems, conservation laws, symmetry principles, time-dependent approximation methods, time-independent approximation methods, atoms, molecules, and relativistic wave equations.

PHY 5381 Special Topics in Physics (3)
Pre-requisite(s): Consent of instructor and the departmental adviser
Selected topics in physics. May be repeated once with change of content.

PHY 5V95 Graduate Research (1-9)
Pre-requisite(s): Consent of student's research supervisor and departmental adviser
The research is intended for those students who have not yet passed the Ph.D. qualifying examination and who have not yet selected a Ph.D. dissertation topic. May be repeated for no more than twelve semester hours of credit. (Not to be counted on master's degree). (0-9) or

PHY 5V99 Thesis (1-6)
Pre-requisite(s): Twelve semester hours of graduate work and consent of the department

PHY 6350 Relativistic Astrophysics (3)
Pre-requisite(s): PHY 5350 and 5351
Relativistic astrophysics, and the final stages of stellar evolution; supernovae, binary stars, accretion disks, pulsars; extragalactic radio sources; active galactic nuclei; compact objects.

PHY 6351 Cosmology (3)
Pre-requisite(s): PHY 5350 and 5351
Cosmology: extragalactic distance determinations; relativist relativistic cosmological models; galaxy formation and clustering; thermal history of the universe, microwave background; cosmological tests, advanced topics in general relativity.

PHY 6352 High-Energy Astrophysics (3)
Pre-requisite(s): PHY 5330, 5340, 5360 and 5370
Radiative transfer, scattering, the interaction of matter and radiation, atomic and molecular structure, magnetodrodynamics and plasma physics, accretion disks and spiral density waves.

PHY 6370 Advanced Quantum Mechanics (3)
Pre-requisite(s): PHY 5371
Identical particles and symmetry, self-consistent field theory, spin and angular momenta, electromagnetic interactions, semiclassical radiation theory, many-body perturbation theory, topics in scattering theory. Applications to atomic, molecular, and nuclear systems.

PHY 6371 Relativistic Quantum Mechanics (3)
Pre-requisite(s): PHY 5371
Klein-Gordon equation, Dirac equation, solutions of Dirac equation for scattering and bound states, non-relativistic limits of Dirac solutions, hole theory, Feynman diagrams, quantum electrodynamics, renormalization procedures, non-electromagnetic processes, solutions.

PHY 6372 Elementary Particle Physics (3)
Pre-requisite(s): PHY 5371
Basic concepts of elementary particle physics; symmetries, groups, and invariance principles; hadron-hadron interactions; static quark model of hadrons; weak interactions; brief introduction to quantum chromodynamics.

PHY 6373 Quantum Field Theory I (3)
Pre-requisite(s): PHY 4374, 5370, 5371, or 6371; or consent of instructor
Second quantization of free fields; second quantization of interacting fields; elementary processes - Q.E.D. and non-Q.E.D. examples; perturbation theory methods for higher order processes; renormalization theory; path integral realization of quantum field theory.

PHY 6374 Quantum Field Theory II (3)
Pre-requisite(s): PHY 6373
Modern formulation of quantum field theory: quantization and renormalization of gauge theories, both Abelian and non-Abelian; third quantization; applications in the Q.E.D. example; SU2L XU1 theory; quantum chromodynamics; grand unified theories; theories of everything including quantum gravity such as the superstring theory.

PHY 6375 Quantum Field Theory III (3)
Pre-requisite(s): PHY 6374
Continuation of 6374: Detailed theory of higher order corrections to Standard Model and beyond the Standard Model processes; detailed presentation of recent developments in superunification, superstring/M theory, superstring field theory, and other approaches to quantum general relativity, depending on instructor. May be repeated for credit by instructor for a maximum of nine credits.

PHY 6380 Special Topics in Advanced Physics (3)
Pre-requisite(s): Consent of student's graduate committee
Special topics which are related to specialized fields of research sponsored in the department. May be repeated once with change of content.

PHY 6V00 Dissertation Proposal (1-9)
Pre-requisite(s): Permission of Physics Graduate Program Director
Research for doctoral students studying for preliminary examinations or preparing their dissertation topic proposals.

PHY 6V99 Dissertation (1-12)
Pre-requisite(s): Consent of the student's supervisory committee and admission to candidacy
A minimum of twelve semester hours is required.

Political Science (PSC)

PSC 4300 Political Behavior (3)
Psychological and social dimensions of political behavior including political images, culture and socialization, participation, leadership, elites, parties and interest groups, voting behavior, and decision making processes.

PSC 4303 International Human Rights (3)
Pre-requisite(s): Upper-level standing
The philosophy and implementation of human rights protection in the United States and abroad.

PSC 4304 Governments and Politics of Latin America (3)
Forms of organization, functions, and operations of governments in Latin America, with emphasis on contemporary conditions, trends, and distinctive types of Latin American institutions and policies.

PSC 4305 International Law (3)
Nature and origins of international law and the rights, duties, and responsibilities of the states under that law, as well as the problems which have arisen in its interpretation and enforcement.

PSC 4307 Environmental Law (3)
Cross-listed as ENV 4307
See ENV 4307 for course information.

PSC 4310 Politics and Communication (3)
Cross-listed as CSS 4310
The dynamic relationships between political and communication institutions; topics include political discourse, news and information, and portrayal of politics in popular entertainment.

PSC 4313 Politics and Literature (3)
Pre-requisite(s): Upper-level standing
Study of fundamental questions of political theory as treated in works of literature. Topics may include authority, law and discretion, the individual and the community, and the nature of freedom, especially as these issues emerge in different political orders. This course may be taken more than once, for a maximum of six credit hours, when content differs.

PSC 4314 Government and Politics of Mexico (3)
Constitutional development and political processes in the Mexican federal system. Emphasis will be placed on twentieth-century constitutional and political change, with special attention given to the current scene.

PSC 4315 Political Geography (3)
Concepts and principles of political geography. Analysis of dynamics of spatial relations and interactions of states. Comparison of main approaches, including geo-politics. Study of state elements, especially territorial integrity and frontiers. Survey and analysis of world political patterns.

PSC 4316 Grand Strategy (3)
Pre-requisite(s): Upper-level standing
The relationship between a great power's grand strategy and stability in international politics.

PSC 4320 African American Politics (3)
Pre-requisite(s): Upper-level standing
Contemporary African American politics, including leading theories and paradigms, important social and political movements, prominent leaders, party politics, and role of the "Black Church.

PSC 4321 Administrative Law (3)
Nature and the law of the administrative procedure, of separation and delegation of powers, and of the scope of judicial review and other remedies against administrative actions.

PSC 4322 Seminar in Public Administration (3)
Pre-requisite(s): Upper-level standing
A course for upper-level undergraduates and graduate students contemplating careers requiring administrative skills. Topics, which will be chosen to meet the special needs of students, include the study of public personnel techniques and methods, project design and analysis, and program budgeting.

PSC 4324 British Government and Politics (3)
Foundations, processes, and politics of British government. Emphasis will be given to political parties and interest groups, parliament, cabinet and administration, judiciary, and the prime minister. Analysis of current political issues and policies will be undertaken.

PSC 4325 Asian International Relations (3)
Cross-listed as AST 4325
Historical and cultural background and structure of the emerging international order in Asia, with particular attention to the role of Japan, Russia and the Soviet successor states, and the People's Republic of China.

PSC 4330 Urban Political Processes (3)
Cross-listed as ENV 4330
Political institutions and processes in metropolitan areas, including social, economic, and governmental problems resulting from increased urbanization.

PSC 4334 Governments and Politics of the Middle East (3)
Political structures and processes of the Middle East nations with an emphasis on elites, political parties, interest groups, and bureaucracies. Inter-regional relations, nationalism, the impact of religion and the Arab-Israeli conflict will be considered. Problems of nation-building, regional cooperation, as well as super- and great-power penetration, will also be explored.

PSC 4335 Public Discourse and Foreign Policy (3)
Cross-listed as CSS 4353
See CSS 4353 for course information.

PSC 4340 African American Communication (3)
Cross-listed as CSS 4354
See CSS 4354 for course information.

PSC 4342 Public Policy and the Courts (3)
Pre-requisite(s): PSC 1387 or consent of instructor
The Supreme Court's role in the making of public policy, including its history, its justification, and its limits. Emphasis on court cases and literature covering economic, social and civil rights issues.

PSC 4344 Government and Politics of Russia (3)
Historical and cultural background, the organization and functions of government, and the theory and practice of Russian politics. Emphasis is given to Russia's relationships with associated states.

PSC 4346 Intelligence and Covert Action (3)
Pre-requisite(s): Upper level standing
The impact of intelligence, counterespionage, and covert action policies on national security policy and international relations.

PSC 4350 Political Parties (3)
Pre-requisite(s): Upper-level standing
The diverse roles of political parties in representative democracies, with emphasis on the American experience.

PSC 4351 Criticism of Contemporary Public Address (3)
Cross-listed as CSS 4351
See CSS 4351 for course information.

PSC 4354 Governments and Politics of Western Europe (3)
Pre-requisite(s): A minimum grade of C in PSC 3304; or consent of instructor
A comparative study of the forms of government organization, political processes, and major developments in Western Europe. Course emphasizes parliamentary forms of democracy.

PSC 4355 Power, Morality, and International Relations (3)
Pre-requisite(s): Upper-level standing
The influence of moral principles on international politics.

PSC 4361 American Constitutional Law (3)
Constitutional law of the United States with basic cases concerning such subjects as separation of powers, federalism, the taxing and spending powers, and interstate and foreign commerce.

PSC 4364 The Governments and Politics of the Asia-Pacific Region (3)
Cross-listed as AST 4364
Historical development of the Asia-Pacific region, with a focus on the contrasting roles played by China, Japan, and the United States. Discussion of alternative models of economic development and the impact of ASEAN and APEC on regionalism. Survey of the socio-political conditions in and among the region's states, with special attention devoted to Korean unification and cross-strait relations.

PSC 4365 International Political Economics (3)
Pre-requisite(s): Junior standing or above
The intersection of politics and economics at the domestic and international levels. Political outlooks considered include liberalism, Keynesianism, and Marxism.

PSC 4370 Politics and Religion (3)
Pre-requisite(s): Upper-level standing
The dynamic interaction between religion and politics in the United States and other countries, including the effect of political outcomes in the context of voting, legislative and executive policymaking, and the law.

PSC 4374 Governments and Politics of East Asia (3)
Cross-listed as AST 4374
Government organization and functions, political processes, and major developments in the political systems of Japan, China, and Korea since World War II.

PSC 4375 International Organization (3)
Fundamentals of international politics and international law, advancing to an intensified study of past and, particularly, present international organizations, especially the United Nations.

PSC 4379 Islam and Democracy (3)
Pre-requisite(s): Upper-level standing
Examines the evolution of political philosophy and institutions in Muslim culture.

PSC 4380 Government and Business (3)
Government in relation to the economy. Public policy with respect to such vital areas as maintenance of competition, public utilities, transportation, labor, agriculture, protection of the investor, and foreign economic policy. (Not to be taken if ECO 4317 has already been taken for credit.)

PSC 4381 American Constitutional Law (3)
Continuation of PSC 4361 but may be taken independently of that offering. Deals with those cases relating particularly to personal liberty and civil rights.

PSC 4383 Contemporary Political Thought (3)
Twentieth-century political ideas, with emphasis on contemporary democratic political theory and the challenges posed for traditional democratic ideals by major movements in contemporary psychological, existentialist, ethnic, feminist, socialist, and nationalist thought, and by problems arising from technology, mass society, and the observations of empirical political science.

PSC 4384 Principles of Political Development (3)
The development of contemporary states and nations, emphasizing war, geographic location, natural resources, and cultural and religious norms as determinants of different experiences.

PSC 4385 Diplomacy in Theory and Practice (3)
Pre-requisite(s): Upper-level standing
How states and other international actors communicate and pursue their foreign policy objectives through the use of diplomatic agents and techniques.

PSC 4395 Terrorism (3)
Pre-requisite(s): Upper-level standing
The effectiveness of terrorism as a coercive strategy for states and non-state actors as well as the threat terrorism poses to the interests of the United States.

PSC 4V94 Special Topics in Political Science (1-6)
Examination of special topics in government and politics. May be repeated once under different topic not to exceed six semester hours.

PSC 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

PSC 5310 Seminar in American Politics (3)
Examination of American politics, institutions, and behavior. Topics will vary within the subfield of American politics. May be repeated three times for graduate credit when topics differ.

PSC 5311 Readings from the Philosophers (3)
Cross-listed as PHI 5311
See PHI 5311 for course information.

PSC 5312 Social Science Data Analysis (3)
Cross-listed as SOC 5312
See SOC 5312 for course information.

PSC 5315 Development of International Relations Thought (3)
A study of major thinkers on international politics through history, with reference to contemporary international relations thought.

PSC 5320 Seminar in Comparative Public Policy (3)
Modern industrial state in Western democracies from a comparative policy perspective, with selected emphasis on such topics as economic management, re-industrialization, social welfare, environmental protection, education, health care, defense, and housing/transportation.

PSC 5321 Seminar in Public Law (3)
Role(s) of the judiciary in American politics and administration. Areas examined may include American constitutional development, constitutional and legal interpretation, judicial behavior and politics, including the role of interest groups and public opinion, and judicial recruitment. May be repeated three times for graduate credit when topics differ.

PSC 5322 Seminar in Public Administration (3)
Special topics, including organizational theory, administrative behavior, and personnel management, financial management and budgeting, program management and evaluation, and quantitative analysis. May be repeated for credit when topics differ.

PSC 5323 Research Design and Research Methods (3)
Cross-listed as ENV 5323
Introduction to the discipline of political science, focusing particularly on research methods, research design, and questions relating to the philosophy of science.

PSC 5324 Seminar in Comparative Politics (3)
Political culture, institutions, processes, and policies from a cross national perspective. Emphasis on role of political, economic, social, and cultural factors relating to political development, stability, and organization. Research topics and primary country analyses may vary.

PSC 5325 Seminar in International Relations (3)
Theories concerning relations among nations, foreign policy formation and administration, cases of cooperation and conflict within the society of nations. Research topics vary so as to cover a broad range of contemporary issues, problems, and diplomatic practice.

PSC 5330 American Political Development (3)
Cross-listed as AMS 5330
Study of the development and reform of political institutions and practices over the course of American history.

PSC 5333 Seminar in Political Philosophy (3)
Cross-listed as PHI 5333
Select topics and issues in contemporary political theory developed and explored with an emphasis on the seminal writings of original thinkers and on the contemporary debates surrounding these writings. Possible themes of this course include postmodern political thought, neo-Kantian and neo-Hegelian political theory, contemporary liberal and communitarian thought, theories of justice, contemporary relevance of ancient political philosophy.

PSC 5335 Seminar in National Security Decision Making (3)
Analysis of the components of national security strategy and those international and domestic factors that shape it. Seminar covers the process, factors, institutions, and issues in national security decision making.

PSC 5340 The American Founding (3)
Cross-listed as AMS 5340
Study of the debates on the proper structure, institutional arrangements, and purposes of government during the Founding period focusing on the creation and ratification of the American constitution.

PSC 5342 Seminar on Religion, Law, and Politics (3)
Cross-listed as PHI 5342
See PHI 5342 for course information.

PSC 5343 Classical Political Thought (3)
Cross-listed as PHI 5343
Study of selected major texts in classical (Greek and Roman) political thought, with an emphasis on the origin of political philosophy in the thought of Socrates and its development in the works of Plato and Aristotle. This course may be repeated, for a maximum of nine credit hours, when content differs.

PSC 5344 Comparative Constitutional Law (3)
Comparative analysis of constitutional theory and development, the link between democracy and constitutionalism, and the role of judicial review. Different constitutional approaches to issues such as executive-legislative relations, federalism, political participation, and civil liberties will be considered.

PSC 5345 American Foreign Policy (3)
Course examines the theory and practice of American foreign policy. Emphasis is on major issues in United States diplomacy and basic ideas governing American foreign policy.

PSC 5350 Seminar in Presidential Rhetoric (3)
Cross-listed as CSS 5350
Survey of the genres of presidential rhetoric and theories of the rhetorical presidency; critical analysis of presidential discourse in selected eras, with focus on texts in context; methods of evaluating presidential communication.

PSC 5353 Medieval Political Thought (3)
Cross-listed as PHI 5353
Study of selected major texts in medieval political thought, with an emphasis on either major thinker(s), or theme(s). Themes may include nature and grace, politics and salvation, theology and practical wisdom. This course may be repeated, for a maximum of nine credit hours, when content differs.

PSC 5355 Development of Strategic Thought (3)
This seminar will examine the ideas of strategic thinkers who lived in a variety of historical periods. Students will read works by major strategists including Thucydides, Sun Tzu, Machiavelli, and Clausewitz.

PSC 5363 Modern Political Thought (3)
Cross-listed as PHI 5363
Pre-requisite(s): Admission to graduate program at Baylor University or consent of instructor
Study of selected major texts in modern political thought, from Machiavelli to Nietzsche. Course may be repeated, for a maximum of nine credit hours, when content differs.

PSC 5373 Contemporary Democratic Theory (3)
Study of themes, issues and debates defining the contemporary conversation about democracy among political theorists. Texts will include works of major importance to recent democratic theory.

PSC 5391 Reading Course in Political Science (3)
Pre-requisite(s): Graduate standing and consent of instructor
A tutorial course designed for advanced graduate study in political science to supplement other course requirements. The nature, limits, and requirements will be established in each instance after consultation between professor and student. May be repeated under a different topic for a total of six hours credit.

PSC 5392 Professional Paper in Public Policy and Administration (3)
Satisfies the non-thesis option for the Master of Public policy and Administration degree and the Master of Arts degree in international relations. A problem or topic in either public policy or administration will be selected, and the student will write a substantial paper for submission to the faculty. May not be taken if PSC 5V12 (Internship) is required.

PSC 5393 Advanced Seminar in Political Philosophy (3)
Cross-listed as PHI 5393
Concentrated study of major thinkers or texts in the history of political philosophy. This course may be taken more than once, for a maximum of eighteen credit hours, when content differs.

PSC 5395 Professional Paper in International Relations (3)
Under the direction of a supervising professor, a problem or topic in international relations to be selected and a substantial paper to be written. This is one of the options for the master's degree in international relations.

PSC 5396 Teaching Political Science (3)
Directed readings done in conjunction with an undergraduate course for which the student serves as a teaching apprentice. Course requirements include graduate-level research paper and annotated bibliography of undergraduate course materials. May be taken three times for graduate credit, in conjunction with different undergraduate courses.

PSC 5V12 Graduate Internship (1-6)
Pre-requisite(s): Consent of Director of Graduate Studies required
Internship of a minimum of three months of supervised, full-time employment. The experience combines practical field experience and research. Completion of the course requires a written report on the work done during the internship. Students seeking the MA in International Relations must work in a public or private concern involved in international affairs. Students seeking the MA in Public Policy Administration or the JD/MPPA must work in a public sector agency. All students must secure the permission of the Director of Graduate Studies to take this course.

PSC 5V99 Thesis (1-6)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of PSC 5V99 are required.

PSC 6V10 Prospectus Research (1-6)
Pre-requisite(s): Completion of regular coursework
Supervised research for developing and writing a dissertation prospectus that will be the subject of an oral defense that will admit students to candidacy. A student may repeat this course for credit with a maximum of twelve total hours. Registration for this course is the equivalent of full-time status for graduate students.

PSC 6V99 Dissertation (1-12)
Pre-requisite(s): Consent of the student's supervisory committee and admission to candidacy
Supervised research for the doctoral dissertation with a minimum of twelve semester hours required. Three to six of these hours may be taken in a section of 6V99 designed for the purpose of discussion and criticism of dissertation chapters and journal articles. Dissertation writing group will also serve as a forum for research presentations for job interviews when appropriate.

Psychology (PSY)

PSY 4312 Behavioral Medicine (3)
Cross-listed as MH 4312, NSC 4312
See NSC 4312 for course information.

PSY 4339 Psychology of Religion (3)
Pre-requisite(s): PSY 1305 or consent of instructor
Psychological processes in religious experience and related phenomena with a focus on religious development through the life cycle and the major psychological interpretations.

PSY 5100 Psychology and Neuroscience Seminar (1)
Professional development through participation in and peer review of public presentation of contemporary research.

PSY 5128 Group Dynamics Laboratory (1)
Pre-requisite(s): Psy.D. students only
A laboratory in group dynamics for Psy.D. students emphasizing interprofessional relationships.

PSY 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

PSY 5301 Introduction to Experimental Design (3)
Pre-requisite(s): Graduate standing
Simple and complex analysis of variance and analysis of covariance designs. The general linear model approach, including full-rank and less than full-rank models, will be emphasized.

PSY 5302 Measurement in Psychology (3)
Pre-requisite(s): PSY/STA 5301 or consent of the instructor
Principles and methodology underlying scaling techniques, rating devices, psychological tests, and other forms of measurements used in psychology. Includes an introduction to psychometrics and applications to objective personality assessment.

PSY 5305 Advanced Experimental Design (3)
Pre-requisite(s): PSY 5301 or consent of instructor
The course examines a variety of complex experimental designs that are available to researchers including split-plot factorial designs, confounded factorial designs, fractional factorial designs, incomplete block designs, and analysis of covariance. The designs are examined within the framework of the general linear model. Extensive use is made of computer software.

PSY 5307 Advanced Statistics II (3)
Pre-requisite(s): PSY 5388; or consent of instructor
Selected topics from correlation, regression, path analysis, and generalized linear models.

PSY 5311 Seminar in Memory and Cognition (3)
Cross-listed as NSC 5311
See NSC 5311 for course information.

PSY 5313 Advanced Measurement in Psychology (3)
Pre-requisite(s): PSY/STA 5301
An introduction to item response theory and computerized adaptive testing. Emphasis on the three parameter logistic model. Topics include parameter and ability estimation, item bias, detection of multidimensionality, appropriateness measurement, and Owens-Bayes algorithm.

PSY 5315 Quantitative Psychology (3)
Pre-requisite(s): PSY/STA 5301
Mathematical foundations of contemporary psychology.

PSY 5316 Clinical Psychopathology (3)
Pre-requisite(s): Psy
D. (CPSY) students only. Clinical case formulation, including the assessment and diagnosis of problems, case conceptualization, and treatment planning, based on current theory and research.

PSY 5317 Psychotherapy III: Seminar in Psychotherapy (3)
Pre-requisite(s): Psy.D. students only
Advanced study of current research, theory and practice in evidence-based psychotherapy, interventions, and treatment planning.

PSY 5318 Perception (3)
Cross-listed as NSC 5318
See NSC 5318 for course information.

PSY 5319 Clinical Neuroscience - Advanced (3)
Cross-listed as NSC 5319
See NSC 5319 for course information.

PSY 5320 Learning and Behavior Theory (3)
Cross-listed as NSC 5320
See NSC 5320 for course information.

PSY 5321 Developmental Psychology (3)
Pre-requisite(s): Graduate standing in psychology
Current research and theory on normal and psychopathological development of human behavior from conception through senescence.

PSY 5322 Human Engineering (3)
Pre-requisite(s): Consent of instructor
Application of the methods and techniques of psychology to the problems of designing equipment for efficient human use and the design of man-machine systems.

PSY 5323 Biological Foundations of Behavior (3)
Pre-requisite(s): Psychology Ph
D or Psy.D. students only, or consent of instructor. An introduction to the biological mechanisms underlying behavior. A review of basic neuroanatomy, neuron function, neurotransmitters, emotional process, language, learning and memory function. Will also review biological correlates of targeted mental disorders such as mood and anxiety disorders, schizophrenia, and developmental and cognitive disorders.

PSY 5325 Ethics and Professional Issues in Clinical Psychology (3)
Pre-requisite(s): Psy.D. students only
The application of current ethical and professional standards to professional practice.

PSY 5327 Family and Marital Psychotherapy (3)
Pre-requisite(s): Psy.D. students only
Practice, theory, and research of psychological consultation with couples and families. Emphasis upon systems and interpersonal orientations.

PSY 5330 Neuropharmacology (3)
Cross-listed as NSC 5330
See NSC 5330 for course information.

PSY 5333 Psychological Assessment III (3)
Pre-requisite(s): Psy
D. students only. Advanced study of integrated assessment, focusing on special populations including gerontology, infant assessment, health-related assessments and additional disorder-based assessments.

PSY 5334 Clinical Health Psychology (3)
Pre-requisite(s): Psy.D. students only
Foundations of clinical health psychology, applications of behavioral medicine, and the promotion and maintenance of health.

PSY 5335 Multicultural Issues (3)
Pre-requisite(s): Psy.D. students only
An exploration of multicultural issues in the delivery of psychological services.

PSY 5339 Social Psychology (3)
Review of advanced theory and contemporary research in social psychology.

PSY 5340 Doctoral Project in Professional Psychology I (3)
Pre-requisite(s): Psy.D. students only
Arrangements are made for Psy.D. candidates to undertake individual scholarly projects under the direction of a clinical psychology professor. Work includes individual study and preparation of a detailed proposal for a project in clinical psychology.

PSY 5341 Doctoral Project in Professional Psychology II (3)
Pre-requisite(s): Psy.D. students only
A continuation of PSY 5340, including the execution and completion of the doctoral project.

PSY 5342 Advanced Topics in Social Psychology (3)
Advanced study of theory and research in social psychology.

PSY 5344 History of Psychology, Racism, and the United States (3)
Pre-requisite(s): Psy
D. students only. The history of psychology, medicine, science, racism, and culture in the United States, with an emphasis on how these components are interconnected, how psychology was born into a racist academic world, and how power systems have served to benefit some and oppress many.

PSY 5350 Advanced Personality Psychology (3)
A review of classic personality theory and contemporary personality psychology research.

PSY 5360 Neurophysiology (3)
Cross-listed as NSC 5360
See NSC 5360 for course information.

PSY 5370 Administration and Supervision (3)
Pre-requisite(s): Psy.D. students only
Training in health care administration, supervision, consultation, program development, and evaluation.

PSY 5371 Clinical and Research Practicum I (3)
Pre-requisite(s): Psy.D. students only
Supervision, development, and evaluation of Psy.D. students in all aspects of their work. Introduction to clinical interviewing skills, therapeutic relationship, theories of psychotherapy, and common factors in psychotherapy and clinical assessment.

PSY 5372 Clinical and Research Practicum II (3)
Pre-requisite(s): Nine hours of PSY 5371
Intermediate level practicum experience of supervision, development, and evaluation of Psy.D. students in all aspects of their work.

PSY 5373 Clinical and Research Practicum III (3)
Pre-requisite(s): Nine hours of PSY 5372
Advanced practicum experience. Supervision, development, and evaluation of Psy.D. students in all aspects of their work.

PSY 5374 Clinical Practicum and Professional Development (3)
Pre-requisite(s): Nine hours of PSY 5373
Practicum focusing on refining clinical and research skills. Supervision, development, and evaluation of the Psy.D. student in all aspects of her or his work.

PSY 5380 Multidimensional Scaling (3)
Pre-requisite(s): PSY/STA 5301
Basic scaling theory with emphasis on metric, non-metric, and individual-differences multidimensional scaling models and methodology. Applications of scaling methods to measurement problems in the behavioral and health sciences, education, and business.

PSY 5384 Multivariate Statistical Methods (3)
Pre-requisite(s): PSY/STA 5301
Discriminant analysis, canonical correlation analysis, and multivariate analysis of variance.

PSY 5386 Exploratory Factor Analysis (3)
Pre-requisite(s): PSY/STA 5384 and 5301
Exploratory factor analysis with emphasis on applications in the behavioral and health sciences, education, business, including the description and use of available software.

PSY 5388 Advanced Statistical Methods (3)
Selected issues in applied statistics.

PSY 5389 Mathematical Models in Psychology (3)
Pre-requisite(s): PSY/STA 5301
Introduction to mathematical formulations in a wide range of psychological research including learning theory, decision and choice, reaction time, theory of signal detection, and other selected topics.

PSY 5390 Confirmatory Factor Analysis and Structural Equations Models (3)
Pre-requisite(s): PSY/STA 5301
Confirmatory factor analysis, path analysis and structural equations models, analysis of covariance structures, least squares and maximum likelihood estimation, and application to psychological processes.

PSY 5391 Multilevel Modeling (3)
Pre-requisite(s): PSY 5301
An introduction to multilevel modeling and hierarchical linear modeling in the behavioral sciences. Content includes both the theory behind and the application of multilevel modeling, including the analysis of unconditional models, estimation of effect size, conditional effects, growth curve models, and the analysis of dyadic data.

PSY 5394 Introduction to Systematic Reviews and Meta-Analysis (3)
Pre-requisite(s): PSY 5388 or consent of instructor
Intermediate course focusing on qualitative and quantitative integration of research.

PSY 5410 Psychopathology and Assessment in Children (4)
Pre-requisite(s): Psy
D. students only. This course is designed to provide an overview of emotional and behavioral disorders of children and adolescents and theoretical foundations and applications of psychological assessment with this population.

PSY 5423 Psychotherapy II: Advanced Cognitive Behavior Therapy (4)
Pre-requisite(s): Psy.D. students only
Continued study of cognitive-behavioral psychotherapy. Introduction to third wave cognitive-behavioral psychotherapies including dialectical behavior therapy, acceptance and commitment therapy, motivational interviewing, mindfulness, theory, and applications. Lab required.

PSY 5426 Clinical Intervention with Children (4)
Pre-requisite(s): Psy.D. students only
Theory and research of clinical intervention procedures including family therapy used with children and adolescents with psychological disorders.

PSY 5428 Group and Systems Approaches to Psychotherapy (4)
Pre-requisite(s): Psy.D. students only
Theory, research, and practice of systems approaches to group, couples, and family psychotherapy. Experiential practice in refining psychotherapy skills.

PSY 5429 Psychotherapy I: Cognitive-Behavior Therapy (4)
Pre-requisite(s): Psy
D. students only. Current research and theory on cognitive-behavioral therapy approaches to clinical problems.

PSY 5430 Neuroanatomy (4)
Cross-listed as NSC 5430
See NSC 5430 for course information.

PSY 5431 Psychological Assessment I (4)
Pre-requisite(s): Psy
D. students only. Introduction to assessment principles and approaches. Administration, scoring, and interpretation of intellectual, cognitive, and neuropsychological measures. Introduction to integrated report writing.

PSY 5432 Psychological Assessment II (4)
Pre-requisite(s): Psy.D. students only
Continued study of assessment. Introduction to objective and projective personality measures and disorder-based assessments and integration of the tests with various cognitive, intellectual, or neuropsychological measures. Lab required

PSY 5V04 Graduate Research (1-3)
For research credit prior to admission to candidacy for an advanced degree. May be repeated for credit.

PSY 5V06 Individual Studies in Psychology (1-3)
hrs.

PSY 5V24 Individualized Professional Development and Research (1-6)
Pre-requisite(s): Psy.D. students only
Opportunity for clinical psychology doctoral students to develop further their clinical research skills. Course may be repeated.

PSY 5V51 Supervised Teaching (1-3)
Cross-listed as NSC 5V51
See NSC 5V51 for course information.

PSY 5V71 Selected Topics in Psychology (1-3)
Advanced study in an area of psychology not covered by formal courses. Course may be repeated with a different topic of study.

PSY 5V85 Consulting, Research and Teaching in Statistics (1-3)
Statistics program. Supervised experience in statistical research, consulting, and teaching. Course may be repeated each semester.

PSY 5V96 Research Methods in Experimental Psychology (1-3)
Selected laboratory methods and techniques in Experimental Psychology. May be repeated with change in content. Maximum of 3 credit hours per semester with an overall maximum of 12 credit hours.

PSY 5V99 Thesis (1-3)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least three hours are required.

PSY 6V01 Clinical Internship (1-6)
Course open only to fourth-year clinical psychology doctoral students who are off campus on internship. Must be taken for three semesters.

PSY 6V10 Prospectus Research (1-6)
Pre-requisite(s): Completion of required course work for PhD degree
Supervised research for developing and writing a Dissertation Prospectus Proposal that will be subject to review and approval by the Supervisory Committee.

PSY 6V99 Dissertation (1-12)
Supervised research for the doctoral dissertation. These hours may be distributed over more than one semester.

Public Health (PUBH)

PUBH 4320 Men's Health and Wellness (3)
Pre-requisite(s): Upper-level standing
Focuses on issues specific to men's overall health and wellness, concepts of multiple masculinities, men's body image and the portrayal of men in media. This course is available to men and women.

PUBH 4321 Human Sexuality (3)
Pre-requisite(s): Upper-level standing
A health education course in which basic concepts of human sexuality are analyzed and discussed. The course is designed to help students better understand the influences that affect the complex nature of human interaction and to provide accurate information needed to help develop responsible decision making skills.

PUBH 4327 Dying and Death Education (3)
Pre-requisite(s): Upper-level standing
A course of death education designed to help students develop constructive attitudes, values, and practices. This experience will nurture an appreciation of the connection between life and death.

PUBH 4331 Intervention Design in Public and Community Health (3)
Pre-requisite(s): Public Health major, minor or consent of instructor
PUBH 2331 and 3331. Theories and methods used in designing culturally appropriate intervention in public and community health. A special emphasis is focused on social marketing techniques used to promote healthy behaviors and lifestyle changes.

PUBH 4340 Global Health (3)
Overviews global health issues and the role of health education and public health worldwide.

PUBH 4341 Cross-Cultural Health Communication (3)
Overviews cross-cultural communication concepts/strategies used in health education to assess health needs and communicate health information. Designed for field-based international or local culture-specific settings.

PUBH 4355 Human Diseases (3)
Pre-requisite(s): A minimum grade of C in PUBH 3350
Basic principles of pathophysiology and mechanism of diseases affecting the human body, including basic principles of epidemiology with emphasis on the causation and effects of disease on human populations.

PUBH 5001 Professional Seminars in Public Health (0)
Orients students in the Baylor Master of Public Health program to the degree program purpose, requirements, and opportunities. Includes concepts and practical guides for developing professional skills and preparing to enter the public health workforce.

PUBH 5121 Public Health Immersion I (1)
Pre-requisite(s): PUBH 5315, 5334, 5337, and 5350
Interprofessional experience with graduate students and professionals from diverse sectors to assess community needs and assets in order to generate collaborative and interdisciplinary approaches to community health.

PUBH 5122 Public Health Immersion II (1)
Pre-requisite(s): PUBH 5121, 5315, 5334, 5337, and 5350
Students engage in literature reviews and data collection to facilitate the development of a graduate project proposal for field-based practice.

PUBH 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

PUBH 5220 Public Health Immersion Experience (2)
Interprofessional experience with graduate students and professionals from diverse sectors to assess community needs and assets in order to generate collaborative and interdisciplinary approaches to community health. Literature reviews and data collection facilitate the development of a graduate project proposal for field-based practice.

PUBH 5302 Foundations of Environmental Health Science (3)
Cross-listed as ENV 5302
See ENV 5302 for course information.

PUBH 5315 Theoretical Foundations of Public Health (3)
Theoretical models and concepts of social and behavioral health. Theory-based approaches to public health education and health promotion.

PUBH 5329 Current Topics in Public Health (3)
Current health issues and directed study to provide appropriate graduate-level experience in health-content areas.

PUBH 5334 Foundations of Public Health (3)
Foundational concepts, principles, and practices of public health and population health.

PUBH 5337 Public Health Concepts in Epidemiology (3)
A foundational course in study designs and descriptive and analytic epidemiologic methods.

PUBH 5338 Methods in Epidemiology (3)
Pre-requisite(s): PUBH 5337
This course provides an in-depth study of common methods used by epidemiologists to obtain valid measures of associations of exposures and outcomes. Basic principles of causal inference, the identification and control of confounding and effect measure modification, and regression-based methods will be covered. In addition, the course covers survival analysis and an overview of methods to handle missing data.

PUBH 5347 Global Health Epidemiology (3)
An in-depth study of the application of epidemiology to improve global health through a multidisciplinary approach. Topics include utilizing epidemiological tools to help generate evidence on interventions; determining how social and economic factors influence the spread/distribution of diseases, particularly in low-income settings; estimating disease burden; and translating epidemiologic evidence to policy.

PUBH 5348 Applied Data Analysis for Epidemiology and Population Health (3)
Pre-requisite(s): PUBH 5337 and PUBH 5300 or equivalent
An applied computer analytic course designed to provide a foundational background in health-related data management and analysis using SAS software. Topics include primary data collection, importing and managing data sets, creating and modifying variables, univariate analysis, bivariate analysis, and introduction to linear and logistic regression models.

PUBH 5350 Assessment and Planning in Public and Community Health (3)
Principles, models, and methods of assessment and program planning in public health.

PUBH 5358 Global Public Health (3)
Pre-requisite(s): PUBH 5315, 5334, 5337, 5350, 5379 and STA 5300
Global Public Health is an introductory course for graduate students in community/public health and allied health fields to provide a foundation in key global health concepts. Topics include global health determinants and trends, global health economics and system, culture, grassroots community development, and specific global health issues. Class lectures are interspersed with active learning exercises and in-class practice problems.

PUBH 5360 Evaluation in Public and Community Health (3)
Pre-requisite(s): PUBH 5350
Program evaluation and measurement concepts and practical applications in public health.

PUBH 5370 Physical Activity and Public Health (3)
This course introduces and explores the social and behavioral epidemiology of physical activity in public health, including outcomes, influences, and promotion for individuals, various settings, communities, and the population at large. In addition, this course will develop an understanding of policy and advocacy as it pertains to physical activity promotion.

PUBH 5377 Principles and Philosophy in Health, Human Performance and Recreation (3)
Bases of principles, the evolution of principles and philosophies, and the interpretation and application of principles to program development and conduct.

PUBH 5378 Administration and Leadership in Public Health (3)
Public health policy and systems thinking. Administrative and leadership approaches to developing and managing fiscal and human resources in public health programs.

PUBH 5379 Research Methods in Public Health (3)
Developmental theory, investigation and gathering of data, statistical analysis and evaluation, and research reporting as these relate to research in public health.

PUBH 5380 Determinants of Health & Health Equity (3)
Pre-requisite(s): PUBH 5315, 5334, 5337, 5350, 5379, and STA 5300
This course provides an overview of health disparities and inequities in the U.S., based on the social determinants of health, and prepares students to be effective practitioners by approaching public health practice with a focus on equity and the root causes of health outcomes. Factors such as race/ethnicity, socioeconomic status, health communication, urban and rural contexts, the built environment, and cultural competency are also examined.

PUBH 5390 Public Health Policy and Practice (3)
Pre-requisite(s): PUBH 5315, 5334, 5337, 5350, 5379 and STA 5300
This course introduces students to health care policymaking and the impact of decision-making processes on health care delivery in the United States. Students utilize a health in all policies framework to examine current health care policies and understand the significance of equity to advance public health policy and practice.

PUBH 5399 Epidemiology Capstone (3)
Pre-requisite(s): PUBH 5001, 5315, 5334, 5337, 5338, 5347, 5348, 5379 and STA 5300
This course pursues the integration of epidemiology competencies through an independent research investigation and publication of findings. Students conduct independent data analyses, make written and oral presentations of findings, and practice peer review to simulate a professional research and practice experience.

PUBH 5699 Community Health Capstone (6)
Pre-requisite(s): PUBH 5001, 5315, 5334, 5337, 5350, 5360, 5379, 5V94, and STA 5300
Students integrate public health and community health competencies into a culminating experiential learning project.

PUBH 5V40 Community Health Capstone - MPH@Baylor (1-4)
Pre-requisite(s): PUBH 5121, PUBH 5122, PUBH 5315, PUBH 5334, PUBH 5337, PUBH 5350, PUBH 5360, PUBH 5378, PUBH 5379, and STA 5300
Students in the online MPH in Community Health program (MPH@Baylor) complete a combination of a 150-hour (minimum) applied practice experience (i.e., internship) and an integrated learning experience (i.e., culminating experience) as an end-of-program capstone where they apply knowledge gained to a real-world setting, while continuing to gain practical experience and develop professional competencies in a public or community-based setting.

PUBH 5V70 Special Topics in Public Health (1-6)
Opportunities for intensive, in-depth study of areas of public health of special professional interest and need to the student. Supervision and support is given by selected resource persons.

PUBH 5V74 Professional Literature Seminar in Public Health (1-6)
Supervised readings in public health. May be repeated once.

PUBH 5V75 Seminar in Public Health (1-3)
Seminar topics in Public Health.

PUBH 5V90 Public Health Internship (6-7)
Full-time experience in an agency, corporation, or hospital for on the job training in a professional field.

PUBH 5V94 Public Health Practicum (3-4)
Part-time experience in an agency, corporation, or hospital for exposure to various professional areas of employment.

PUBH 5V99 Thesis (1-6)
Credit received when thesis approved. A total of six hours will be required

PUBH 6101 Mentored Teaching in Public Health I (1)
Doctoral students in public health are assigned to an experienced public health instructor as a teaching mentor and a course taught by the mentor. They observe the mentor in each class period, assist with various teaching aspects, develop and teach some course lectures and class activities, and obtain feedback from the mentor.

PUBH 6102 Mentored Teaching in Public Health II (1)
Pre-requisite(s): PUBH 6101
Doctoral students in public health are assigned to an experienced public health instructor as a teaching mentor and a course taught by the mentor. They co-teach the course and assist with various teaching aspects, lecture and lead class activities and projects, and help revise course materials for future use.

PUBH 6300 Mentored Public Health Research (3)
Doctoral students in public health work with their faculty mentors on various aspects of research (e.g., literature review, study design/instrument development, study implementation, data analysis/interpretation, manuscript development, grant and report writing). Projects are specific to the student's research interests and needed skills. Students enroll in this 3-hour course in each of 3 semesters for a total of 9 credit hours.

PUBH 6321 Advanced Theory & Practice in Behavioral Health I (3)
Advanced study of sociobehavioral theories and applications in public health research. Focus on societal-level influences, social structures, sociocultural factors, and individual attitudes and beliefs. Procedures for developing and validating quantitative and qualitative instruments that assess health behaviors and related theoretical constructs examined. Adapting measurement approaches to address cultural and sociodemographic factors included.

PUBH 6322 Advanced Theory & Practice in Behavioral Health II (3)
Pre-requisite(s): PUBH 6321 Advanced skill development for the examination and construction of measurements related to behavior change constructs and theories
Building upon PUBH 6321 Advanced Theory & Practice in Behavioral Health I, content focuses on additional methods of theory testing, assessment design, scale validation for different populations, and application to community based participatory research (CBPR).

PUBH 6331 Advanced Epidemiologic Methods (3)
Study of methodologic issues and epidemiologic applications in public health and medicine. Includes causation and causal inference, measures of occurrence, measures of effect and measures of association, concepts of interaction, validity and precision in epidemiologic studies, design strategies to improve study accuracy, applications of stratified analysis methods, social epidemiology, meta-analysis, and emerging ethical issues in research.

PUBH 6332 Advanced Epidemiologic Data Analysis (3)
Pre-requisite(s): PUBH 6331
Study of advanced epidemiologic data analysis: underlying principles and assumptions, practical application, and correct interpretation of epidemiologic multivariable models. Includes exploratory and descriptive statistical methods, linear regression, logistic regression, survival analysis, repeated measures and longitudinal data analysis, generalized linear models, causal inference, predictor selection, missing data, and complex surveys.

PUBH 6370 Grant Writing and Research Ethics in Public Health (3)
Focus on grant writing process, seeking and securing funding, and grant management. Students apply advanced methods from their respective public health concentrations to write external grant proposals appropriate for their proposed lines of public health research and participate in the peer-review of proposals drafted by other students. Ethics, principles, and regulations applicable to prevention and public health research are also addressed.

PUBH 6380 Seminar on Professional Writing in Public Health (3)
Development of technical writing skills among students pursuing a Public Health doctorate. Students learn writing and manuscript development basics and work with their faculty mentors to write literature review/research-focused manuscripts designed for publication.

PUBH 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

PUBH 6V99 Doctoral Dissertation in Public Health (1-12)
Pre-requisite(s): Instructor consent
Must have completed all required courses and passed qualifying exam. Doctoral students in public health gain approval of a written dissertation and research, analyze, write, and defend their dissertation. A total of 12 credit hours of dissertation work is required and counts toward the degree. These credits are commonly divided across multiple semesters and only begin after students have successfully completed all course work and passed their doctoral qualifying examinations.

Quantitative Business Analysis (QBA)

QBA 5131 Quantitative Methods for Decision Making: Part I (1)
Pre-requisite(s): Admission to MBA program
Today's managers operate within the constraints of highly competitive markets. To plan effectively under these circumstances requires both rigorous analytical tools and a sophisticated sense of how to balance the demands of oft-times conflicting constituencies. QBA 5131, using a mix of theory and case studies, enables students to develop a rich portfolio of tools to assist them in the planning process. The course seeks to develop students' technical skills in sampling, data analysis, and risk management tools essential to effective planning.

QBA 5132 Quantitative Methods for Decision Making: Part II (1)
Pre-requisite(s): QBA 5131
In today's highly competitive markets, implementing decisions effectively requires both rigorous analytical tools and a sophisticated sense of how to balance the demands of oft-times conflicting constituencies. QBA 5132, using a mix of theory and case studies, enables students to develop tools essential to effective implementation. The course seeks to prepare students to use analytical tools including correlation analysis, regression analysis, and time series analysis.

QBA 5133 Quantitative Methods for Decision Making: Part III (1)
Pre-requisite(s): QBA 5132
To effectively adapt to today's ever changing competitive environment requires both rigorous analytical tools and a sophisticated sense of how to balance the demands of conflicting constituencies. QBA 5133, using a mix of theory and case studies, enables students to develop a set of tools to help them adapt to an organization's changing needs. The course seeks to develop students' technical skills in linear programming, quality control and improvement, and experimental design.

QBA 5215 Statistical Analysis (2)
Pre-requisite(s): Acceptance into the executive MBA program
Application of statistical reasoning and methods to business-oriented problems. Topics include descriptive statistics, sampling distributions, confidence intervals, hypothesis testing, simple and multiple regression, quality control, and nonparametric methods.

QBA 5302 Business Foundations - Statistics (3)
This course is required for MBA and MSIS students who do not have an undergraduate degree in business from an AACSB accredited institution. The course will provide students with the business foundation in statistics which is expected of all business graduate students.

QBA 5330 Business Analytics for Decision Making (3)
An introduction to analytical techniques in the three areas of business analytics – descriptive, prescriptive, and predictive – and their application to business decision making.

QBA 5435 Business Statistics (4)
Statistical theories and techniques are applied to business situations. The use of theory and case studies enables students to develop technical skills in planning, analysis, and assessment of data to adapt to an organization's changing needs.

QBA 5V98 Special Studies In QBA (1-6)

QBA 5V99 Thesis (1-9)

Recreation & Leisure Services (RLS)

RLS 4331 Meanings, Culture, and Philosophy of American Landscapes (3)
A critical approach to understanding the meanings, culture, and philosophies Americans ascribe to natural landscapes. Traditional perspectives including colonial American, romantic, and science-based conservation are characterized, as well as revisionist themes aligned with gender, cultural pluralism, and societal meanings of natural resource based protected areas.

RLS 4395 Principles of Church Recreation (3)
History, philosophy, objectives, and administration of recreation in the church and how it relates to the total ministry of the church. It will include an overview of various areas of church recreation and an investigation of leisure and its value in a church setting.

RLS 5301 Leadership and Supervision of Outdoor Adventure Activities (3)
Leadership of outdoor adventure activities in a variety of leisure settings with focus on liability, supervision, and management standards.

RLS 5379 Research Methods in Health, Human Performance, and Recreation (3)
Cross-listed as HED 5379, HP 5379, RED 5379
See HP 5379 for course information.

RLS 5V70 Special Topics in Health, Human Performance, and Recreation (1-6)
Cross-listed as HED 5V70, HP 5V70, RED 5V70
See HP 5V70 for course information.

RLS 5V74 Professional Literature Seminar in Health, Human Performance and Recreation (1-6)
Cross-listed as HED 5V74, HP 5V74
See HP 5V74 for course information.

RLS 5V90 Internship (1-6)
Cross-listed as HED 5V90, HP 5V90, RED 5V90
See HP 5V90 for course information.

RLS 5V94 Practicum in HHPR (1-3)
Cross-listed as HED 5V94, HP 5V94, RED 5V94
See HP 5V94 for course information.

RLS 5V99 Thesis (1-6)
Cross-listed as HP 5V99
See HP 5V99 for course information.

Religion (REL)

REL 4303 Aramaic (3)
Cross-listed as ARA 4303
See ARA 4303 for course information.

REL 4304 Syriac (3)
Cross-listed as SYR 4304
Pre-requisite(s): REL 1310, 1350 and Upper-level standing
Introduction to ancient Syriac with selected readings from Syriac manuscripts of biblical books as well as early Christian literature.

REL 4388 Christian Literary Classics (3)
Cross-listed as ENG 4388
Pre-requisite(s): REL 1310 and 1350; and upper level standing
A study of the various ways in which theological and imaginative excellence is displayed in such classic Christian authors as Augustine, Dante, Herbert, Bunyan, and Hopkins.

REL 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

REL 5301 Contemporary Issues in Old Testament Study (3)
A selected major issue in contemporary Old Testament scholarship. The course may be taken up to three times when content differs.

REL 5302 Seminar in the Torah (3)
A designated portion of the Old Testament scriptures chosen from the Torah. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5303 Seminar in the Former Prophets (3)
A designated portion of the Old Testament scriptures chosen from the Former Prophets. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5304 Seminar in the Latter Prophets (3)
A designated portion of the Old Testament scriptures chosen from the Latter Prophets. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5305 Seminar in the Writings (3)
A designated portion of the Old Testament scriptures chosen from the Writings. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5308 Old Testament Theology (3)
The history and nature of the discipline Old Testament Theology focusing on methodology, personalities, major works, and central themes.

REL 5309 Selected Documents from the Hebrew Scriptures (3)
Cross-listed as HEB 5309
See HEB 5309 for course information.

REL 5311 Contemporary Issues in New Testament Study (3)
A selected major issue in contemporary New Testament scholarship. The course may be taken up to three times when content differs.

REL 5312 Seminar in the Pauline Epistles (3)
A designated portion of the New Testament scriptures chosen from the Pauline Epistles. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5313 Seminar in the Synoptic Gospels (3)
A designated portion of the New Testament scriptures chosen from the Synoptic Gospels. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5314 Seminar in the Johannine Literature (3)
A designated portion of the New Testament scriptures chosen from the Johannine Literature. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5315 Seminar in Acts, Hebrews, and the General Epistles (3)
A designated portion of the New Testament scriptures chosen from Acts, Hebrews, or the General Epistles. Attention will be given to critical and theological problems, relevant bibliography, contributions of significant scholars, and contemporary issues in interpretation. The course may be taken up to three times when content differs.

REL 5317 Seminar in New Testament Greek (3)
Cross-listed as GRK 5317
Hellenistic Greek based upon the translation and exegesis of selected portions of the New Testament and other early Christian literature. Attention will be given to grammar, lexicography, and textual criticism. The course may be taken up to three times when content differs.

REL 5318 New Testament Theology (3)
The history and nature of the discipline New Testament Theology, focusing on methodology, personalities, and major works.

REL 5321 New Testament in Its Jewish Context (3)
A graduate seminar focusing on aspects of the Jewish milieu in which early Christianity emerged. The course may be taken up to two times when content differs.

REL 5322 New Testament in Its Greco-Roman Context (3)
A graduate seminar focusing on some aspects of the Greco-Roman milieu in which early Christianity emerged. The course may be taken up to two times when content differs.

REL 5323 The History of Ancient Israel (3)
Pre-requisite(s): M.A. or Ph.D. standing in the department
A graduate seminar focusing on ancient Israelite history and historiography. The course will involve a thorough overview of the history of Syria-Palestine and a rigorous examination of the interests and intentions of the ancient writers. While archaeological and geographic evidence will to some extent inform the subject matter of the course, the primary emphasis will be on information gained from the written sources, both biblical and epigraphic.

REL 5324 Syro-Palestinian Archaeology (3)
Pre-requisite(s): M.A. or Ph.D. standing
A graduate seminar focusing upon the archaeology of Syria and Palestine from the Early Bronze Age through the Persian Period (ca. 3300-334 B.C.E). Emphasis will be given to the use and interpretation of archaeological data with special reference to the Old Testament.

REL 5325 Ugaritic Grammar and Lexicography (3)
Cross-listed as UGA 5306
See UGA 5306 for course description.

REL 5326 Akkadian (3)
Cross-listed as AKK 5307
See AKK 5307 for course information.

REL 5330 The Pentecostal Tradition (3)
A study of the Pentecostal tradition in Christianity, with particular attention to roots in the Holiness movement of the nineteenth century, origins and developments, and subsequent growth in Charismatic expressions of faith. The course may be taken up to two times if the content differs.

REL 5331 History of Ancient Christianity (3)
Patristic literature up to 500 CE. Selections for study will be made from apocryphal, apologetic, polemical, doctrinal and biographical types of literature. Careful attention will be given to at least one of the following ecclesiastical histories: Eusebius of Caesarea, Socrates, Sozomen, and Theodoret. The course may be taken up to three times when content differs.

REL 5332 History of Medieval Christianity (3)
Eastern and western medieval Christianity from the fall of Rome to the fall of Constantinople, with particular emphasis on such topics as the papacy, monasticism, the Carolingian Renaissance, the separation of eastern and Western Catholicism, scholasticism, and medieval sectarianism. The course may be taken up to three times when content differs.

REL 5333 History of the Continental Reformation (3)
Lutheran, Reformed, and the Roman Catholic aspects of the sixteenth-century Reformation in Europe. This course may be taken up to three times when content changes.

REL 5334 History of the English Reformation (3)
The Reformation as it developed in England with particular attention to the background of the English church in the late Middle Ages; the influence of Wycliffe, Tyndale, and the English Bible; the progress of reform under the Tudors and the Stuarts; the rise of Puritanism and nonconformity; the Civil Wars; and toleration. The course may be taken up to three times when content differs.

REL 5335 Modern European Christianity (3)
History of European Christianity since the Reformation. The course may be taken up to three times when content differs.

REL 5336 History of American Christianity (3)
Cross-listed as AMS 5336
History of American Christianity from pre-Columbian Christian settlements to the present, with particular emphasis on major movements and problems such as Puritanism, religious liberty, revivalism, westward expansion, the rise and growth of denominations, and post-Civil War trends. The course may be taken up to three times when content differs.

REL 5337 Baptist History (3)
Source materials of Baptist history and polity with particular attention devoted to Baptist origins, development, theological positions, leaders, and current trends. The seminar approach will be followed, and the course may be taken up to three times when content differs.

REL 5340 Seminar on Religion, Law, and Politics (3)
See PHI 5342 for course information.

REL 5349 The Radical Reformation (3)
An in-depth look at the Radical Reformation, also called the Believers' Church movement and the Anabaptist tradition. Examination of key primary texts to illustrate the diverse and developing theology of these reformers and their offspring, plus their institutional manifestations. Research essays and bibliographic work required.

REL 5350 Issues and Themes Within Patristic Thought (3)
Knowledge of French or German required. Formulation of a Christian doctrine of God came to a crisis in the fourth century when a series of conflicts over the relation of the Father and Son erupted and absorbed the intellectual energies of the Church for almost a century. As a result of the so-called "Arian controversy," various points of Trinitarian and Christological doctrine became canonized for defining orthodoxy. These have functioned as norms for all subsequent doctrinal and exegetical development, profoundly shaping the theological identity of the Church. Moreover, in the last thirty years, scholarship has been greatly altered by a number of changes in the interpretation of major figures and doctrinal development in the fourth century such that a significant amount of re-writing of historical theology is currently taking place. It is clear that the Nicene-"Arian" conflicts went through distinct stages, and were more complicated and less compartmentalized than presented in many histories of the period. Course may be taken up to three times when content changes.

REL 5351 Medieval Theology (3)
The thought and practice of Christianity in the Middle Ages. Select major texts will be read, either in a format that examines the works of various writers, or with a focus on one major theologian (e.g.,Anselm, Aquinas) or theme (e.g., monasticism, scholasticism). A reading knowledge of Latin is preferable, and either French or German is required. Course may be taken up to three times when content differs.

REL 5352 The Nicene-'Arian' Controversies of the Fourth Century (3)
Investigation of the development of Trinitarian theology in the first four decades of the fourth century leading up to the council of Nicaea and its immediate aftermath. After touching on antecedent works by Origen and Eusebius, the course focuses upon the writings of Athanasius and Arius of Alexandria, Eusebius of Caesarea, Eusebius of Nicomedia, and Marcellus of Ancyra, concluding with the council of Serdica (342/3). Course may be taken up to three times when the content differs.

REL 5353 Nineteenth-Century Theology (3)
Major developments of nineteenth-century theology and their continuing relevance. One or more selected major theologians or movements will be examined. The course may be taken up to three times when the content differs.

REL 5354 Twentieth-Century Theology (3)
Major developments of twentieth-century theology and their continuing relevance. One or more selected major theologians or movements will be examined. Course may be taken up to three times when content differs.

REL 5356 Contemporary Systematic Theologies (3)
Systematic theology as a genre of theology within the Christian tradition. Emphasis will be placed on systematic theologies written after Barth and Tillich. Analysis of these works will focus on questions of method as well as content. Special attention will be paid to issues related such developments as liberation and feminist theology and postmodern thought. Course may be taken up to three times when the content differs.

REL 5357 The 20th Century Catholic Renaissance (3)
The resurgence of Roman Catholic theology and literature in the previous century, as well as its continuing relevance for our time.

REL 5358 Seminar on Liberation Theology (3)
Various liberation theologies that have emerged over the last decades in Latin America, Africa, Asia, and North America. Included will be the pioneering work of James Cone, Gustavo Gutierrez, Rosemary Ruether and the theological and political schools of thought that have followed and extended their analyses. Course may be taken up to three times when the content differs.

REL 5360 Contemporary Theological Problems (3)
Important theological problems which confront the theologian and the Christian community today. Problems such as faith and science, theological language, evil, theology and history, and Christian selfhood and modern psychology studied. Both historical and contemporary attempts to deal with the problems will be considered. The course may be taken up to three times when content differs.

REL 5362 Christian Anthropology (3)
Meaning and relevance of the Christian understanding of humanity for contemporary existence in the light of Biblical, classical, ancient, and modern interpretations. Course may be taken up to three times when the content differs.

REL 5363 Christology (3)
Historical development and theoretical systematization of major Christological themes, giving special attention to interrelation of materials from Biblical studies, history of dogma, and systematic theology. Course may be taken up to three times when the content differs.

REL 5364 Global Ethics (3)
The interrelationships among the major theoretical and applied debates in the field of global ethics (ethics in global context, approached using a variety of methodologies, including but not limited to traditional Christian ethical approaches).

REL 5365 Global Bioethics (3)
This course introduces students to the ethical dimensions of healthcare from the global perspective. The course offers students the basic language and methodology with which to critically engage bioethical issues relevant to our contemporary global context.

REL 5366 Environmental Ethics (3)
This course evaluates environmental challenges and prominent philosophical and religious convictions that inform, support, and specify ethics in global context.

REL 5367 Global Ethics Capstone (3)
Research project that demonstrates the integration of knowledge and experiences acquired through the MA in Global Ethics program.

REL 5368 Bioethics (3)
This course is an introduction to bioethics from a Christian theological perspective. It discusses the context and history of bioethics, the meaning of the body, the end of life, the beginning of life, and the treatment of human subjects.

REL 5372 Church and State During the Reformation Era (3)
Church-state relations were among many cultural relationships that were redefined during the Protestant Reformation period; however, scholars differ as to the reformers' influence in this transformation and in the development of liberal social orders throughout Europe. Martin Luther, John Calvin, Ulrich Zwingli, Anabaptist leaders, Anglican scholars, Catholic officials, and many others contributed unique and often conflicting views of the "appropriate" relationship between church and state. This course examines the broad contours of church-state thought during the Reformation period beginning with the conciliar movement in the 14th and 15th centuries, and ending with the Peace of Westphalia in 1648 and its influence in constructing the modern nation-states of Europe.

REL 5373 Contemporary Issues in Historical Studies (3)
A selected major issue in contemporary Historical Studies scholarship. The course may be taken up to three times when content differs.

REL 5380 History of the Christian Movement (3)
This course examines the world Christian movement in its ecclesial and para-ecclesial cross-cultural, inter-religious processes, including transatlantic, postcolonial, and decolonial interpretations from the global south, particularly Africa, Asia, and Latin America.

REL 5381 Christianity in Latin America & the Caribbean (3)
Examines Christianity in South/Central America and the Spanish Caribbean with transatlantic, postcolonial, and decolonial methodological frameworks, including intra and inter Christian dynamics with Amerindian and Afro-Latin American religions, geopolitical history, and migratory movements.

REL 5382 Christianity in Africa and in Africa-Diaspora Regions (3)
Examines Christianity on the continent of Africa, with particular interest in Early African Christianity, the interaction with traditional religions and Islam, and Western African transatlantic history.

REL 5393 Contemporary Problems in Christian Ethics (3)
A research seminar focusing on ethical problems in the contemporary society and the resources available in the Judeo-Christian traditions for analyzing these problems. Students will work on a specific problem or problems Emphasis will be placed on developing technique and discovering the resources available for ethical analysis. The course may be taken up to three times when content differs.

REL 5398 Theories of Religion (3)
This course examines the ways in which scholars have asked – and answered – different questions about religion, religions, religious expressions, and traditions.

REL 5399 Religion Colloquy (3)
Pre-requisite(s): Twenty-four semester hours of graduate course work Required as a co-requisite for participation in the Teaching Fellows Program. The colloquy will address a broad range of institutional and pedagogical issues related to the teaching of religious traditions and especially the Christian tradition in an academic context.

REL 5V00 Special Studies in Religion (1-3)
Special research projects that are needed in the students' graduate programs, but that are unavailable in the regular curriculum. The course may be for up to three hours credit, with preference given to those in their final year of study.

REL 5V99 Thesis (1-3)
Students register for the thesis and receive credit when the thesis is finally approved.

REL 6V00 Dissertation Proposal and Prospectus (1-3)
Research for doctoral students studying for preliminary examinations, preparing their topic proposal, or writing their prospectus in anticipation of candidacy. The course may be repeated.

REL 6V99 Dissertation (1-9)
Supervised research for the doctoral dissertation. A total of at least nine semester hours is required for the completion of the dissertation.

Russian (RUS)

RUS 5370 Russian for Reading Knowledge I (3)
Co-requisite(s): RUS 5371
Reading of intermediate-level Russian texts. No previous language experience required. Limited to graduate students or undergraduate students by petition. Does not count towards foreign language requirement for undergraduate students.

RUS 5371 Russian for Reading Knowledge II (3)
Co-requisite(s): RUS 5370
Continuation of RUS 5370. Reading of more advanced Russian texts. Limited to graduate students or undergraduate students by petition. Does not count towards foreign language requirement for undergraduate students.

Social Innov. Collaborative (SIC)

SIC 5V98 Special Topics in Social Innovation (1-4)
Pre-requisite(s): Graduate standing or permission of the instructor
Study of advanced topics in social innovation, with attention to a particular "wicked" problem. This course may be repeated three times when topics differ, not to exceed nine semester hours.

Social Work (SWO)

SWO 4315 Foundations for Social Justice (3)
Examines theories and practices of social justice as related to oppressed groups in a multicultural society utilizing religious and nonreligious perspectives. Addresses issues of power, inequality, and privilege, and the diverse experiences of oppressed groups in framing strategies to promote social justice.

SWO 4316 Trauma, Loss, and Mourning (3)
Cross-listed as PAST 7340
Pre-requisite(s): Upper-level standing or graduate student
Specialized knowledge and skills for loss and grief and therapeutic interventions for the bereaved, including bereaved children. Preparation for work with loss of relationship and health across the lifespan. Emphasis on religious faith and grief, and the response of faith communities and religiously affiliated providers to suicide, divorce, loss of parental rights, and other disenfranchised grief.

SWO 4317 Human Trafficking (3)
Pre-requisite(s): Upper-level standing or graduate student
This course is designed to help students gain a better understanding of contemporary human trafficking and modern day slavery. The roles that entities such as government, the media, faith-based organizations, organized crime, and culture play in this complex human rights and social (in)justice issue will also be explored.

SWO 4393 Sociology of Aging (3)
Cross-listed as GRT 4393, SOC 4393
Pre-requisite(s): Upper-level standing
Impact of aging upon individuals and society, as well as the reactions of individuals and society to aging. Social gerontology is the principal focus of attention of the course.

SWO 4395 Aging and Mental Health (3)
Cross-listed as GRT 4395, SOC 4395
Pre-requisite(s): Upper-level standing
Mental health needs and related problems of aging individuals with considerable discussion of approved mental health treatments for such persons.

SWO 4V80 Special Topics (1-3)
Pre-requisite(s): Upper-level standing or graduate student
Provides instruction in areas of social work knowledge, values, and/or skills that are not available in the standard social work baccalaureate or graduate curricula. Course may be repeated up to six times with different topic of study, not to exceed a maximum of six semester hours.

SWO 5190 Introduction to Advanced Internship (1)
Pre-requisite(s): SWO 5301, or a grade of B or better in SWO 5492, or a grade of B or better in SWO 4492; and credit or concurrent enrollment in SWO 5337 and 5379; and credit or concurrent enrollment in SWO 5376 or 5377
Introduction to the advanced internship in a specialization

SWO 5213 Cross Cultural Interactive Seminar IV (2)
Pre-requisite(s): Consent of instructor
Through this course, students have the opportunity to synthesize learning from the explicit and implicit social work curriculum of the MSW program, identify major learning gleaned through the program, and prepare for reentry into their social work practice in international context.

SWO 5282 Evaluation of Practice I (2)
Pre-requisite(s): Admission to the Advanced Standing Program or credit for 5381 and 5492
Selection and implementation of outcome-based evaluation of practice protocols to inform intervention decisions by advanced practice social workers.

SWO 5283 Evaluation of Practice II (2)
Pre-requisite(s): SWO 5282
Selection and implementation of outcome-based program evaluation protocols to inform intervention decisions by advanced practice social workers.

SWO 5298 Capstone (2)
Pre-requisite(s): Credit or concurrent enrollment in SWO 5490 or 5790, and credit or concurrent enrollment in SWO 5283
Integrative seminar to demonstrate readiness to practice social work at an advanced level in the student's area of specialization.

SWO 5301 Advanced Practice Readiness I (3)
Pre-requisite(s): Admission into the Master of Social Work program
This course prepares students for entrance into Baylor's Advanced standing MSW Program. Introduces the mission of the program with an emphasis on integrated faith and social work practice, the strengths perspective, and building communities. Overviews the professional foundation to include human behavior and the social environment and social work practice with individuals, families, groups, communities, and organizations.

SWO 5310 International Social Work (3)
This course provides students the opportunity to conceptualize international social work practice in domestic contexts and abroad. Through four seminars and an experiential learning weekend, students explore social work within a human rights framework; develop cultural competency; grasp specific international social issues, strengths, and intervention strategies; and contextualize social work skills with international client systems.

SWO 5311 International Research and Strategic Planning (3)
In this course, students identify and analyze a global social issue of their choice, research systemic causality of the issue, explore best practice models, and create a strategic approach for addressing the issue utilizing accumulated research and governmental, non-governmental, and congregational resources. This multidisciplinary course explores community interventions informed by engineering, nursing, business, and public health.

SWO 5320 Human Diversity & Social Justice (3)
Pre-requisite(s): Admission to the Master of Social Work Program
Provides foundational content to understand better how diversity and difference shape the human experience and are critical to forming identity. Dimensions of intersectionality are explored and examined considering privilege and marginalization. Students learn to identify structural mechanisms of oppression and strategies for interrupting systems of power to create equity and inclusion in professional and community contexts.

SWO 5322 Social Policy For Social Work Practice (3)
Pre-requisite(s): Credit with a C or better in SWO 5320 or SWO 5221
Introduces the historical context of social policy and services in the United States, the analysis of current developments, and how social workers influence social welfare policy and provide social services.

SWO 5323 Organizational Leadership & Management (3)
Pre-requisite(s): Admission to the Advanced Standing Program or credit in SWO 5322 and SWO 5363 or SWO 5463
Credit or concurrent enrollment in SWO 5491. Prepares students to perform managerial functions in public, nonprofit, and faith-based human service organizations. Specific attention is given to the topics of leadership, human resources, fundraising, grant writing, organizational development, resource management, structure and governance, and efforts to link human service organizations in an integrated community-wide service delivery system.

SWO 5335 Theoretical Frameworks for Community Social Work Practice (3)
Pre-requisite(s): Admission to the Advanced Standing Program, or a minimum grade of a B in SWO 5492
Guides advanced practice social workers in the evaluation and selection of frameworks for community change. Emphasizes values, professional role, and cultural influences on how change is envisioned, enacted, and evaluated.

SWO 5337 Advanced Clinical Theories and Models (3)
Pre-requisite(s): Prerequisite(s): Admission to the Advanced Standing program or credit in SWO 5492
Prepares students to learn and apply developmental, sociological, psychological, and therapeutic theories to the needs of individuals, families, groups, and communities. The course explores advanced clinical theories and empirically informed and emerging models for practice.

SWO 5338 Clinical Diagnosis in Social Work (3)
Pre-requisite(s): Admission to the Advanced Standing program or a minimum grade of a B in SWO 5492
This course utilizes a strengths-based social work perspective to examine common diagnoses of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, associated assessment tools, and areas for professional, ethical, and cultural consideration in the diagnostic process.

SWO 5351 Human Behavior Theory: Person & Environment (3)
Pre-requisite(s): Admission to the MSW Program
This course prepares students to understand the foundational theoretical base of social work that drives and informs practice. Students gain applicable knowledge of the complex experiences of individuals, families, and informal and formal social networks and communities.

SWO 5361 Social Work Practice with Individuals and Families (3)
Pre-requisite(s): A minimum grade of C or concurrent enrollment in SWO 5351
In this course, students practice skill development by applying the steps of the generalist intervention model (engagement, assessment, planning, intervention, evaluation, and termination/transition) to create diversitysensitive care management plans for individuals and families. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5362 Social Work Practice with Groups (3)
Pre-requisite(s): A minimum grade of B or concurrent enrollment in SWO 5361 or SWO 5561
Knowledge, values, and skills needed for working with groups. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5363 Social Work Practice with Communities & Organizations (3)
Pre-requisite(s): A minimum grade of B in SWO 5361 or SWO 5561
A minimum grade of B or concurrent enrollment in SWO 5362. This course prepares students for ethical and effective social work practice with communities and organizations. Students will learn models and skills that relate to macro social work practice. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5370 Clinical Social Work Practice I (3)
Pre-requisite(s): A minimum grade of a C or concurrent enrollment in SWO 5337 or SWO 5338
Prepares students with specialized knowledge of theories and practice models and skills for advanced clinical practice within a broad array of practice contexts. Students learn to assess and intervene at the levels of individual, family, and group with some discussion of organizational and community practice. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5375 Community Social Work Practice I (3)
Pre-requisite(s): A minimum grade of C or concurrent enrollment in SWO 5335
Prepares advanced-practice social workers to promote community problem-solving and development. Emphasizes community assets; leadership development; and change strategy selection, enactment, and evaluation. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5376 Health Practice & Policy (3)
Pre-requisite(s): Admission to the Advanced Standing Program or credit in SWO 5322 and credit or concurrent enrollment in SWO 5491; and credit in SWO 5363 or SWO 5463
Prepares students for practice within health contexts. Uses social work knowledge, skills, and values to prepare students to assess and intervene at individual, family, and group levels in healthcare settings. Discusses policy, justice, and equity issues related to health and healthcare access.

SWO 5377 Social Work Practice & Advocacy with Children & Families (3)
Pre-requisite(s): Admission to the Advanced Standing Program or credit in SWO 5322 and credit in SWO 5363 or SWO 5463
Credit or concurrent enrollment in SWO 5491. Emphasizes the application of theory, models, and skills in practice contexts with children and families. Includes instruction on models and theories and the impact of crisis and trauma on the family. Exposes students to various themes in child and family practice, such as grief, levels of need, strengths, and collaborative work.

SWO 5378 Community Social Work Practice II (3)
Pre-requisite(s): A minimum grade of a B in SWO 5375
Continuation of 5375. Prepares advanced practice social workers to promote community problem-solving and development. Emphasizes community assets; leadership development; and change strategy selection, enactment, and evaluation. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5379 Advanced Clinical Practice: Individuals, Families, and Groups (3)
Pre-requisite(s): Prerequisite(s): Credit or concurrent enrollment in SWO 5337
A grade of B or better must be received in this course in order to complete the requirements for the master's degree. Prepares students with specialized knowledge and skills for advanced clinical practice within a broad array of practice contexts. Uses social work knowledge, skills, and values to prepare students to assess and intervene at the levels of individual, family, and group with some discussion of organizational and community practice. The course provides an overview of major theoretical clinical practice models.

SWO 5380 Clinical Social Work Practice II (3)
Pre-requisite(s): A minimum grade of a B in SWO 5370
Students learn transdiagnostic clinical treatment models and skills. Emphasis is given to students demonstrating clinical skills that address a wide range of client contexts and goals. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5381 Research for Social Work Practice (3)
Pre-requisite(s): Credit with a C or better in SWO 5320 or SWO 5221
Critical evaluation and use of research and conducting research in one's own professional practice.

SWO 5382 Clinical Evaluation for Practice Improvement (3)
Pre-requisite(s): Admission to the Advanced Standing Program; or credit in SWO 5381 and a minimum grade of a B in SWO 5492
Emphasizes the importance of systematic, consistent monitoring of client outcomes as a critical part of effective clinical social work practice. Building upon skills of thorough, accurate assessment and effective client rapport, this course focuses on the next steps of collaborating with the client system (individual, family, group) to monitor feasible clinical outcomes that inform the treatment process and the continuous improvement of practice.

SWO 5384 Program Evaluation for Practice Improvement (3)
Pre-requisite(s): Admission to the Advanced Standing program; or credit in SWO 5381 and a minimum grade of a B in SWO 5492
Apply systematically derived, culturally responsive, and evidence-informed decisions for continuous quality improvement of human service systems, programs, and congregations.

SWO 5395 Capstone Seminar (3)
Pre-requisite(s): A minimum grade of a B or concurrent enrollment in SWO 5490
Integrative seminar at the end of the MSW process to provide students the opportunity to demonstrate key social work competencies at an advanced level in their area of specialization. Students develop a presentation that reflects competency in the goals and objectives of the social work program. Students create professional development plans to demonstrate readiness to enter, contribute to, and develop within the social work profession.

SWO 5463 Professional Practice with Communities and Organizations (4)
Pre-requisite(s): A minimum grade of B or better in SWO 5561 and credit or concurrent enrollment in SWO 5362
A grade of B or better must be received in this course in order to complete the requirements for the master's degree. Knowledge, values, and skills needed for working with communities and organizations.

SWO 5490 Part II Advanced Internship (4)
Pre-requisite(s): Credit in SWO 5335, SWO 5337 or SWO 5338; a minimum grade of a B in SWO 5494; a minimum grade of a B in SWO 5375, SWO 5370 or SWO 5379; a minimum grade of a B or concurrent enrollment in SWO 5380 or SWO 5378; and credit or concurrent enrollment in SWO 5323, SWO 5376 or SWO 5377
Second of two terms of the advanced internship in a specified area of specialization. This is the second part of SWO 5494.

SWO 5491 Foundation Internship I (4)
Pre-requisite(s): Credit of a C or better or concurrent enrollment in SWO 5320 or SWO 5221 and a grade of B or concurrent enrollment in SWO 5361 or SWO 5561
Orientation and introduction to internship, at least 240 hours of applied learning, and an integrative seminar. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5492 Foundation Internship II (4)
Pre-requisite(s): A minimum grade of a B in SWO 5491; a minimum grade of a B in SWO 5361 or 5561; a minimum grade of B or concurrent enrollment in SWO 5362; a minimum grade of a C or concurrent enrollment in SWO 5381 and SWO 5322; and a minimum grade of B or concurrent enrollment in SWO 5463 or SWO 5363
Social Work Internship, including at least 240 hours of applied learning and an integrative seminar. This is the second part of SWO 5491 with the addition of more sophisticated social work practice opportunities and expectations. A grade of B or better must be received in this course to complete the requirements for the master's degree.

SWO 5494 Part I Advanced Internship (4)
Pre-requisite(s): A minimum grade of a C or concurrent enrollment in SWO 5337, SWO 5338, or SWO 5335; and a minimum grade of a B or concurrent enrollment in SWO 5370, SWO 5379, or SWO 5375
Introduction and first of two semesters of the advanced internship in a specified area of specialization.

SWO 5561 Professional Practice with Individuals and Families (5)
Pre-requisite(s): A minimum grade of C or concurrent enrollment in SWO 5221
A grade of B or better must be received in this course in order to complete the requirements for the master's degree. Knowledge, values, and skills needed for working with individuals and families.

SWO 5790 Advanced Internship (7)
Pre-requisite(s): SWO 5323 and 5337; and a grade of B or better in SWO 5190 or 5494; and a grade of B or better in SWO 5376 or 5377; and a grade of B or better in SWO 5379
Advanced internship in specialization area

SWO 5V70 Independent Study in Social Work (1-3)
Pre-requisite(s): Consent of instructor
Independent study in Social Work course may be repeated up to six times with different topics of study, not to exceed a maximum of six semester hours to fulfill elective credit.

SWO 5V80 Advanced Special Topics (1-3)
Pre-requisite(s): Graduate student
Provides advanced instruction in areas of social work knowledge, values, and/or skills that are not available in the standard social work graduate curriculum. Special topics in social work. Course may be repeated up to six times with different topic of study, not to exceed a maximum of six semester hours.

SWO 6331 Christianity, Ethics, and Social Work (3)
Pre-requisite(s): Admission to PhD program; SWO major
Explores research, theory, and practices related to religion and spirituality as they can inform social work practice. Specific emphasis is placed on the role of religion in contemplating the meaning of well-being and social justice.

SWO 6332 Social Policy and the Religious Sector (3)
Pre-requisite(s): Admission to PhD program; SWO major
Through current research, congregations and religiously affiliated organizations are examined, specifically through the lens of history, social work practice, social capital, and organizational theories, behaviors, and identities.

SWO 6333 Religious and Cultural Diversity (3)
Pre-requisite(s): Admission to PhD program; SWO major
Draws on the world religions to reflect on divergent cultural, ethical, and helping systems for believers. Offers the foundations for helping by looking within a wide variety of religious traditions for support and understanding.

SWO 6342 Academic Leadership and Administration in Social Work Education (3)
Pre-requisite(s): Admission to PhD program; SWO major
Explores research, theory, and practices of leadership in social service organizations, social work education, and communities.

SWO 6343 Program Evaluation (3)
Pre-requisite(s): Admission to PhD program; SWO major
This course focuses on planning evaluation research for human service and educational programs and will prepare students to develop program evaluations to help agencies document their outcomes.

SWO 6351 Theory and Model Development for Social Work Practice (3)
Pre-requisite(s): Admission to PhD program; SWO major
Students will critically examine historic, philosophical, aesthetic, and social science foundations for classic and current social work intervention theories and models.

SWO 6352 Higher Educational Teaching and Learning in Social Work (3)
Pre-requisite(s): SWO 6351
This interactive course prepares students for teaching in higher education. Exploration of learning styles, content delivery, teaching methods, curriculum and lesson plan development, and critical thinking stimulation prepares the student to develop and deliver courses in social work higher education venues. The course uses theory and practical skill development, including demonstration of teaching methods and student learning.

SWO 6353 Teaching Practicum (3)
Pre-requisite(s): SWO 6351 and 6352
Students work with their peers and the instructor as they navigate all aspects of planning and executing a successful course of instruction for social work students.

SWO 6380 Quantitative Research for Social Work (3)
Pre-requisite(s): Admission to PhD program; SWO major
Focuses on quantitative research methodology as applied to research in the human services and social work. Emphasizes the epistemological basis of different research methods, forming appropriate research questions and hypotheses, conducting literature reviews, developing research designs, and selecting and applying preliminary data analysis techniques.

SWO 6381 Statistical Analysis for Social Work (3)
Pre-requisite(s): Admission to PhD program; SWO major
An overview of statistical tests used to analyze data in social work. Emphasizes critical-thinking skills needed to evaluate others' use of statistical tests as well as to conduct one's own analyses, choose a statistical test, check that assumptions have been met, and interpret SPSS output. The course covers: correlation, Student's t-test, the ANOVA family, linear regression, and logistic regression.

SWO 6382 Qualitative Research for Social Work (3)
Pre-requisite(s): Admission to PhD program; SWO major
Study of the philosophical underpinnings of qualitative methods. Students explore the similarities and differences between post-positivism and constructivism as they develop qualitative proposals for social work research.

SWO 6384 Introduction to Doctoral Research (3)
Pre-requisite(s): Admission to PhD program; SWO major
This course assists students in articulating a broad research agenda as a solid foundation for developing a dissertation topic, becoming familiar with and articulating the state of the current literature within their research agenda, and becoming socialized to scholarly and first phase of dissertation proposal writing, the publication process, and ways in which a strong empirically-informed argument can strengthen a research grant proposal.

SWO 6385 Measurement in Social Work (3)
Pre-requisite(s): SWO 6381
Content prepares students for questionnaire construction and sample selection in conjunction with measurement development.

SWO 6386 Advanced Qualitative Research (3)
Pre-requisite(s): SWO 6382
Focus is on the theoretical, methodological, and practical aspects of collecting, managing, and analyzing data from different qualitative traditions. Specific content is tailored to topics relevant for dissertation research.

SWO 6387 Research Practicum (3)
Pre-requisite(s): SWO 6381 and 6382
Students refine proposals from the quantitative and qualitative courses, submit them for review, and carry out the studies from problem formulation to submission of two manuscripts suitable for peer-reviewed journal publications.

SWO 6V00 Dissertation Proposal and Prospectus (1-3)
Prerequisites(s): SWO 6381, SWO 6382, SWO 6583, SWO 6284, SWO 6385, SWO 6386. Research for doctoral students studying for preliminary examinations, preparing a topic proposal, or writing a prospectus in anticipation of candidacy. The course may be repeated.

SWO 6V76 Special Topics in Social Work Practice and Research (3-6)
Pre-requisite(s): SWO 6351, SWO 6380, SWO 6382, and SWO 6384
Special topics in social work practice and research. May be repeated for credit, provided that the topic is not duplicated, for a maximum of 6 credit hours.

SWO 6V99 Dissertation (1-12)
Pre-requisite(s): Admission to PhD program; SWO major
Research, data analysis, and writing and oral/written defense of an approved doctoral dissertation. At least nine hours of SWO 6V99 are required. Students may not enroll for dissertation hours until they have been officially accepted into candidacy for the Ph.D. degree.

Sociology (SOC)

SOC 5303 Social Measurement and Causal Modeling (3)
Advanced multivariate statistical techniques; causal modeling; problems of research design, validity, and reliability. The course also involves the utilization of social science computer programs in the analysis of large-scale survey data.

SOC 5310 Social Demography (3)
A survey of demographic change, issues, and methods as they impact our social world. Emphasis is on the social and cultural aspects of demography, as well as the impact of the changing population in society.

SOC 5312 Social Science Data Analysis (3)
Cross-listed as PSC 5312
This is a data-intensive course designed to acquaint students with the wide variety of available data types and sources for social science research. Students learn to access, analyze, and critique these various data types. In analyzing these data, we begin with simple univariate distributional statistics and progress through bivariate regression and correlation.

SOC 5314 Regression Analysis for the Social Sciences (3)
Pre-requisite(s): SOC 5312
Regression analysis with continuous, categorical, and count outcomes, including ordinary least squares (OLS), logistic, ordered logistic, multinomial logistic, Poisson, and negative binomial regression.

SOC 5320 Seminar on the Community (3)
Theories of community structure and dynamics, methods community analysis, and techniques for community change.

SOC 5330 Evaluative Research (3)
Cross-listed as GRT 5330
Conceptual, methodological, and administrative aspects of program evaluation. Problems of translating research findings into policies and programs are explored.

SOC 5332 The Sociology of Health: Health Delivery Systems (3)
Cross-listed as GRT 5332
Special health problems of the aged person, with particular stress on related social factors and the strengths and weaknesses of existing health care systems. Alternate models for meeting the health needs of the aged are considered.

SOC 5336 The Family in Later Life (3)
Cross-listed as GRT 5336, SOC 5334, SWO 5336
See SWO 5336 for course information.

SOC 5341 Introduction to Sociology of Religion (3)
Acceptance into the graduate program. Introduction to the main theories and empirical studies in the sociology of religion.

SOC 5342 Data Sources and Publishing in Sociology (3)
Introduction to various data sources, accompanied by training in how to publish research.

SOC 5343 Theory in the Sociology of Religion (3)
Pre-requisite(s): SOC 5341; or consent of instructor
In depth analysis of the major social theories of religion.

SOC 5345 Sociology of Power (3)
Overview of the concepts, theories, and methods for studying power in human social life. Topics include power, oppression, inequality, the state, protest, and social change. Students read original texts, engage in critical thinking exercises, and write research papers.

SOC 5354 Seminar in Family Sociology (3)
Review of theoretical frameworks used in the study of family sciences. Emphasis is on classical and emerging approaches and the use of theory in research and program development.

SOC 5357 Seminar in Comparative Sociology (3)
Pre-requisite(s): SOC 6307 and 6314
This in-depth introduction to comparative sociology begins with a philosophical discussion of what constitutes comparative research and the criteria for social causation. Next, it examines the strengths and weaknesses of various theoretical approaches to comparative sociology. Third, it analyzes important contemporary comparative studies.

SOC 5374 Sport in the Social Context (3)
Cross-listed as HP 5374
See HP 5374 for course information.

SOC 5379 Graduate Research Methods (3)
An introduction to the logic and application of sociological research methods. Students learn key methodological principles as well as prominent quantitative and qualitative research designs.

SOC 5381 Advanced Research Methods (3)
Research projects under direct supervision of a faculty member. Although specific methodological areas will vary by project, content analysis, controlled experimental design, sampling, survey analysis, computer skills, and statistical techniques, will be emphasized.

SOC 5386 Community Based Research (3)
In this course students acquire first-hand experience in operationalizing a community-driven research project which includes the design, execution, and delivery of a final report to the community stakeholders.

SOC 5390 Summer Writing Practicum in Sociology (3)
Students spend the summer working with a faculty supervisor to improve their scholarly writing in the areas of framing a testable hypothesis, operationalizing and measuring concepts, and writing to the broader discipline. A publishable research article is the goal of the course.

SOC 5391 Advanced Sociological Theory (3)
Seminar on recent developments in sociological theory. Discussions will include critical evaluation of major theoretical systems, the development and use of paradigms, and the process of theory construction.

SOC 5392 Leisure Well-Being in Later Life (3)
Focus on how to create leisure opportunities to contribute to well-being of individuals in later years. Students will be involved in developing innovative approaches to leisure experiences for senior adults. Lab experience required.

SOC 5395 Sociopsychological Aspects of Counseling Adults (3)
Cross-listed as GRT 5395
Pre-requisite(s): SOC 4393 or PSY 4355 and SOC 4395; or consent of instructor
Adult development and socialization from the perspective of counseling interventions. Opportunities to develop counseling skills with middle-age and older persons will be provided along with appropriate supervision.

SOC 5397 Methods in Aging Research (3)
Cross-listed as GRT 5397, SWO 5397
See SWO 5397 for course information.

SOC 5398 Advanced Sociological Theory II: Detailed Investigations of Contemporary Theory (3)
Pre-requisite(s): SOC 5391
This seminar builds on Advanced Sociology Theory with detailed investigations of contemporary theory. In particular, discussion focuses on how to utilize social theory in research.

SOC 5V71 Special Topics in Sociology (1-6)
Pre-requisite(s): Consent of instructor
Designed for students who wish to study with a professor in an area of sociology not covered by a formal course. Students will contract with professor regarding study and number of semester hours.

SOC 5V97 Seminar in Teaching (1-6)
Supervised teaching experience. The student will teach SOC 1305 under the supervision of a graduate faculty member. Lesson plans, syllabi, handouts, lecture examples, etc., will be discussed before and after classes. Videotaping of selected classes will provide media for critique and growth.

SOC 5V99 Thesis (1-6)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of SOC 5V99 are required.

SOC 6083 Proseminar in Sociology (0)
Pre-requisite(s): Enrolled in Department of Sociology's Ph.D
Program. This seminar aids students in professional development. Weekly speakers discuss current research, publishing, teaching, and important topics/events in the sociology of religion. The course is pass/fail and required of all students pursuing a Ph.D. with an emphasis in sociology of religion. Course may be repeated 12 times.

SOC 6301 Focus Group Research (3)
Pre-requisite(s): Consent of instructor
Students will apply information gathered from a review of the current literature to conduct a focus group research project under the supervision of the instructor. Students will conduct all phases of a focus group research project including design, sampling, administration and analysis.

SOC 6303 Telephone Surveys (3)
Pre-requisite(s): Consent of instructor
Students will acquire knowledge of telephone survey techniques and use this information to conduct a telephone survey under the supervision of the instructor. Special emphasis will be given to issues of non-contact, refusals, demographic and behavioral screens, and random digit versus add a digit techniques.

SOC 6307 Statistical Methods for Survey Research (3)
Pre-requisite(s): Consent of instructor
An introduction to several multivariate statistical techniques appropriate for the analysis of discrete qualitative social science survey data measured at the nominal level of measurement. Emphasis in the course is on logic regression, log linear analysis and latent class/latent structure analysis. Application to major social science data sets will be made.

SOC 6310 Mail Surveys (3)
Pre-requisite(s): Consent of instructor
Students will design, conduct, and analyze a mail survey in this course. Special emphasis will focus on questionnaire construction, question design, sampling techniques, cover letters and research identity, and other special problems unique to self-administered surveys.

SOC 6314 Advanced Quantitative Analysis for Sociology (3)
Pre-requisite(s): SOC 5312 and 6307; or equivalent
This course covers cutting-edge data analysis techniques used in the top-tier sociology journals.

SOC 6317 Community Spatial Analysis (3)
Pre-requisite(s): SOC 5312
Geographic information systems (GIS) and spatial modeling techniques are applied to contemporary community issues and social problems such as inequality, poverty, housing, employment, economic development, demographics, and transportation. Particular emphasis is placed on government and other sources of current data for community analysis.

SOC 6318 Sampling Techniques (3)
Pre-requisite(s): Three hours of statistical methods
Planning, execution, and analysis of sampling from finite populations. Simple random, stratified random, ratio, systematic, cluster, sub sampling, regression estimates, and multi-frame techniques are covered.

SOC 6320 Sociological Covariance Modeling (3)
Pre-requisite(s): SOC 5314
Introduction to sociological applications of covariance structure analysis, including reciprocal effects and correlated equations involving personal and social factors. Recursive and nonrecursive models with and without latent variables are taught and implemented.

SOC 6323 Qualitative Methods (3)
Training in qualitative research methods, including interviewing, content analysis, participant observation, and case studies. Students gain experience conducting, analyzing, and reporting qualitative research.

SOC 6325 Needs Assessment (3)
Pre-requisite(s): Consent of instructor
An introduction to community needs assessment in which available data (e.g. crime rates, poverty levels) and newly created data (e.g. elite surveys, program inventories) are combined to estimate various levels and types of community needs. Emphasis is on all facets of needs assessment including need definition, data selection, data creation, analysis, interpretation and presentation.

SOC 6331 The Sociology of Religiosity (3)
Pre-requisite(s): SOC 5341 or consent of instructor
Introduction to the measurement and definition of religiosity.

SOC 6332 The Sociology of Religious Organizations (3)
Pre-requisite(s): SOC 5341; or consent of instructor
Analysis of how religious organizations change, including membership dynamics, authority systems, and congregational cultures.

SOC 6333 Religion, Politics, and Society (3)
Analysis of religious change at the societal level with an emphasis on church-state relationships.

SOC 6334 The Sociology of Religious Deviance (3)
Pre-requisite(s): SOC 5341; or consent of instructor
Analysis of deviant religious groups with an emphasis on defining religious deviance and explaining group membership.

SOC 6335 Religion, Morality and Social Change (3)
Pre-requisite(s): SOC 5341; or consent of instructor
Analysis of the role of religion in creating, sustaining and challenging the moral order of societies, and how cultural change can affect religion's moral impact.

SOC 6336 Religion, Race and Gender (3)
Pre-requisite(s): SOC 5341; or consent of instructor
Analysis of the interconnections of religion with race and gender with an emphasis on how race, ethnicity and gender have shaped religion and been shaped by religion.

SOC 6340 Face to Face Surveys (3)
Pre-requisite(s): Consent of instructor
Students will develop and conduct a face-to-face survey under the direction of the instructor. In this process, students will train interviewers in the interpersonal dynamics of interviewing which comply with current federal guidelines concerning the protection of human subjects. In addition, the issues of dialects, illiteracy, and multicultural awareness will be addressed.

SOC 6345 Sociology of Regional Processes (3)
Pre-requisite(s): SOC 5391; or equivalent; or consent of instructor
This course examines in detail sociological theories of regional growth and development. Students will gain a working knowledge of the core assumptions of each perspective along the structure-agency continuum. In addition, students will do significant readings of empirical research in this field, and conduct an original empirical study.

SOC 6350 Seminar in Human Resource Management (3)
Cross-listed as MGT 5336
See MGT 5336 for course information.

SOC 6351 Seminar in Population Health (3)
An examination of individual differences in health and well-being in the United States. Focuses on (1) health disparities by socioeconomic status, gender, race/ethnicity, and age; and (2) biological and sociological theories of illness and disease. Risk factors for poor health and coping resources that enhance mental and physical well-being are identified.

SOC 6357 Health Inequalities in America (3)
Pre-requisite(s): SOC 5314
A seminar focused on critiquing a wide selection of recent scientific articles on health and society. Chosen articles will deal with social inequalities in health observed in the United States and other advanced nations.

SOC 6360 Demographic Techniques (3)
Pre-requisite(s): Consent of instructor
An introduction to the various models of demographic projection and modeling including linear regression, ratio techniques and cohort component. Emphasis is on mastery of base data acquisition and model construction to determine demographic trends and predict population levels, crime rates and disease patterns.

SOC 6363 Directed Readings in Sociology (3)
Students spend the summer working with a faculty supervisor to prepare for the PhD Preliminary Exam. Students review major sociological theories, research methods, and dominant research in one substance area.

SOC 6384 Religion and Family Life (3)
Focuses on the ways religion influences family life in the context of significant family change in the United States. Specific topics include how religious institutions have responded to changes in family life, sexual behavior, marriage and fertility timing, cohabitation, gender roles, parenting, marital quality, and divorce. Also examines how family life influences religious commitment.

SOC 6391 Grant Writing and Proposal Development (3)
Provides intensive exposure to the technical and political aspects of grant writing and proposal development. Emphasis is placed on defining proposal ideas to match funding sources, researching private foundations, corporations and government funding agencies, and developing successful proposals. Participants will prepare a grant proposal during the course, which will be submitted to an appropriate private or public agency.

SOC 6V37 Special Topics in the Sociology of Religion (1-3)
Pre-requisite(s): Consent of instructor
Analysis of special topics in the sociology of religion. The course may be repeated once when the content varies.

SOC 6V71 Special Topics (1-3)
Pre-requisite(s): Consent of instructor
A social research project in selected areas of sociology. The project must be approved by the members of the graduate faculty supervising the student. A final journal-quality paper summarizing the research effort and findings must be submitted to the instructor. This course may be repeated up to six times for credit up to a total of eighteen semester hours provided the research area is different.

SOC 6V99 Dissertation (1-6)
Supervised research for the doctoral dissertation. A total of at least twelve semester hours is required for completion of the dissertation.

Spanish (SPA)

SPA 4303 Spanish Phonology and Morphophonology (3)
Pre-requisite(s): SPA 3309
The sounds of Spanish and the formation of its words, and the relationship between these two, morphophonology. It includes pronunciation and transcription of Spanish.

SPA 4304 Spanish Syntax (3)
Pre-requisite(s): SPA 3309
Spanish word order and sentence formation, phrasal structures and constructions that are different from English.

SPA 4305 Spanish Semantics and Pragmatics (3)
Pre-requisite(s): SPA 3309
The study of the meaning of words, sentences, and discourse and elements of conversation including context, usage and appropriateness.

SPA 4321 Advanced Spanish for Health Professions (3)
Pre-requisite(s): SPA 2321; 3001; 3302 or 3304; and consent of instructor
In-depth experience with Spanish in medical contexts, including a community service-learning component, with emphasis on oral and aural proficiency. Must be taken in residence at Baylor in order to count toward the Certificate in Spanish for Health Professions.

SPA 4330 Advanced Grammar, Composition and Conversation (3)
Pre-requisite(s): SPA 3302; and consent of instructor
A review of grammar applied to the writing of compositions and conversational practice. Emphasis on writing style, practical and cultural topics, dialogues, and interviews.

SPA 4340 Professional and Literary Translation (3)
Pre-requisite(s): SPA 4330 or equivalent or consent of instructor
The theory and practice of translation, including poetry, short stories, and technical documents.

SPA 4362 Spanish Drama of the Golden Age (3)
Pre-requisite(s): SPA 3305 or consent of division director
Representative playwrights of seventeenth-century Spain; extensive study of selected works. Lectures, reports, class discussion, and term papers.

SPA 4363 Cervantes (3)
Pre-requisite(s): SPA 3305 or consent of division director
Study of the major works of Cervantes with emphasis on Don Quixote, the cultural milieu of sixteenth and seventeenth century Spain, and the views of present-day literary critics. Lectures, class discussions, oral reports, and term papers.

SPA 4364 Nineteenth Century Spanish Literature (3)
Pre-requisite(s): SPA 3305 or consent of division director
Representative plays, poems, essays, and novels from nineteenth century Spanish literature, emphasizing in-depth analysis of texts.

SPA 4366 Twentieth Century Spanish Literature (3)
Pre-requisite(s): SPA 3305
Study of representative poets, playwrights, and novelists of this century. Lectures, student reports, class discussions, and term papers.

SPA 4372 Latin American Short Story (3)
Pre-requisite(s): SPA 3305
An in-depth study of outstanding eighteenth, nineteenth and twentieth century Latin American short stories in light of current practice and trends in literary analysis.

SPA 4375 Contemporary Spanish American Theater (3)
Pre-requisite(s): SPA 3305 or consent of division director
Major trends of Spanish American theater as reflected in the works of major contemporary playwrights. Readings, lectures, and reports.

SPA 4376 The Spanish-American Novel (3)
Pre-requisite(s): SPA 3305 or consent of division director
A study of the origins and development of the Spanish-American novel (from 1816 to 1915). A study of the main literary movements as reflected or found in the novel, in an approved paper or project.

SPA 4378 Latin American Poetry (3)
Pre-requisite(s): SPA 3305
An overview of poetic trends in Latin American literature from pre-Hispanic times to the twentieth century.

SPA 4388 Topics in Hispanic Language and Literature (3)
Pre-requisite(s): SPA 3305; or consent of division director
A study of an author, work, period, genre, or current Hispanic literature or of an aspect of the Spanish language. Topic changes from semester to semester. May be repeated for credit if topic is different.

SPA 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

SPA 5302 Literary Theory, Research and Writing (3)
Pre-requisite(s): Graduate standing
Theories and models of literary criticism, as well as library resources and their use applied to the analysis of texts in Spanish to produce scholarly papers.

SPA 5303 Phonology and Morphology (3)
The course intends to examine the phonological and morphological structures of Spanish as they relate to English.

SPA 5304 Spanish Syntax and Semantics (3)
The course intends to examine the grammatical structures of Spanish and English for students who are intermediate to advanced learners of Spanish.

SPA 5305 Spanish Semantics and Pragmatics (3)
The study of the meaning of words, sentences, and discourse and elements of conversation including context, usage, and appropriateness.

SPA 5310 Medieval Spanish Literature (3)
Pre-requisite(s): SPA 5351
A study of Spanish literature from the end of the first millennium through the consolidation of the various Spanish kingdoms under Ferdinand and Isabella.

SPA 5315 Spanish Literature of the 16th and 17th Century (3)
Pre-requisite(s): SPA 5302; or consent of graduate adviser
Representative works of poetry, prose narrative, and drama from Boscan to Calderon. Close reading of texts with special attention to major historical, artistic, and literary trends of the sixteenth and seventeenth centuries.

SPA 5324 Spanish Poetry and Drama: 19th and 20th Centuries (3)
Pre-requisite(s): SPA 5302; or consent of graduate adviser
Major historical and literary movements and major historical, literary, and artistic figures of nineteenth-and twentieth-century Spain. Analysis of texts through close reading.

SPA 5326 Nineteenth and Twentieth Century Spanish Narrative (3)
This course is an introduction to the major movements and writers of prose fiction in Spain in the last two hundred years.

SPA 5331 Latin American Colonial Literature (3)
This course is designed to give an overview of literary trends in Hispanic-American literature from pre-Hispanic times to the eighteenth century.

SPA 5334 Latin American Romanticism to Modernism (3)
This course is designed as a survey of the Latin American novel, short story, poetry and theatre from the nineteenth century to the first half of the twentieth century.

SPA 5335 Latin American Literary Trends: Early to Mid 20th Century (3)
Pre-requisite(s): Graduate standing
This course is designed as a survey of the Latin American novel, short-story, poetry and theatre of the first half of twentieth century.

SPA 5337 Latin American Literary Trends: Mid Twentieth Century to Present (3)
This course is designed as a survey of the Latin American novel, short-story, poetry, and the theatre from the second half of the twentieth century to the present.

SPA 5350 Introduction to Romance Linguistics (3)
An introductory course for the field of linguistics and its components: phonology, morphology, syntax, semantics, and language change.

SPA 5351 History of the Spanish Language (3)
Historical developments of the language from Latin to modern Spanish.

SPA 5356 The Acquisition of Spanish as a First and Second Language (3)
Pre-requisite(s): SPA 5350; or consent of instructor
An examination of studies on the acquisition of Spanish as a first and second language; language acquisition in both formal and informal environments is studied.

SPA 5359 Seminar in Language Acquisition and Applied Linguistics (3)
Theory, review of literature, and practice in language acquisition and applied linguistics for graduate students who will be teaching Spanish as a second language.

SPA 5370 Spanish for Graduate Students I (3)
Reading of intermediate-level Spanish texts. No previous language experience required. Limited to graduate students or to undergraduates by petition. Does not count toward foreign language requirement for undergraduate students.

SPA 5371 Spanish for Graduate Students II (3)
Pre-requisite(s): SPA 5370; or consent of instructor
Continuation of SPA 5370. Reading of intermediate-level Spanish texts. No previous language experience required. Limited to graduate students or to undergraduates by petition. Does not count toward foreign language requirement for undergraduate students.

SPA 5388 Topics in Hispanic Language and Literature (3)
Pre-requisite(s): Graduate standing
A study of an author, work, period, genre, or trend of Hispanic literature or of an aspect of the Spanish language. May be taken more than once as topic changes from semester to semester.

SPA 5V90 Independent Study (1-3)
Pre-requisite(s): Consent of division director

SPA 5V99 Thesis (3-6)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of SPA 5V99 are required.

Sports Management (SPM)

SPM 5327 Financial Management in Sport (3)
Income sources available to sport organizations such as tax support, municipal and corporate bonds, ticket sales, concessions, fund raising, sponsorship, licensing, and PSLs.

SPM 5328 Athletic Fundraising and Development (3)
Introduces the fundamental principles and best practice in sports fundraising. Focuses on the particular challenges of fundraising and development in intercollegiate and interscholastic athletics, youth sport organizations, and non-profit sport organizations.

SPM 5336 Sport Marketing (3)
A study of sport marketing plans utilizing the concepts of product, price, public relations, promotion, sales and advertising.

SPM 5338 Public Relations in Sport (3)
Aspects of external and internal communication in sport pertaining to community, customer, employee, and media relations.

SPM 5341 NCAA Policies & Procedures (3)
Provides an in-depth and hands-on approach in understanding, applying, and conveying NCAA regulations. Designed to emphasize career preparation for leadership in college athletics by developing the necessary philosophical perspective and practical knowledge for compliance with NCAA standards.

SPM 5372 Legal Issues in Sport (3)
This course examines the legal aspects of sport. Areas of study include, but are not limited to, administrative rules and regulations, constitutional law, legislative enactments, negligence, and case law related to professional, intercollegiate, interscholastic and recreational sport.

SPM 5373 Sport Management (3)
The general objectives of this course are to understand the role of management in sport programs, to develop a philosophy of management, to understand various management theories, and to acquire knowledge and skills to make decisions and solve problems in sport management. These general objectives will be applied to such specific areas as human resource management, marketing, legal liability, facility management, finance, economics, and ethics.

SPM 5374 Sport in the Social Context (3)
A course that investigates sport function from an economic, political, sociological and educational perspective and studies the interaction of various social influences such as the mass media, race, gender, and group behavior on sport.

SPM 5375 Governance in Sport (3)
Various governing agencies in sport emphasizing investigation of the legal ramifications, organizational structure, authority, membership, and influence of sport governing bodies.

SPM 5376 Facility and Event Management (3)
Practical background in all facets of managing a sports event and facility. The content includes organizational structure and staffing, financial management, risk management, operations and maintenance, crowd control and security, marketing an event, and measuring the economic impact of an event.

SPM 5398 Contemporary Ethical Issues in Sport (3)
A research seminar focusing on ethical problems in the contemporary sport industry and the theoretical models available for analyzing these problems.

SPM 5V90 Internship in Sports Mgt. (1-6)
Pre-requisite(s): Consent of instructor
Provides full-time supervised experience in a sport organization or agency for job-based professional training including a project jointly developed by the sponsoring organization and faculty. Students will complete 400 clock hours.

SPM 5V94 Practicum in Sports Mgt. (1-3)
Pre-requisite(s): Consent of instructor Provides part-time supervised experience in a sport organization or agency for job-based professional training including a project jointly developed by the sponsoring organization and faculty
Students will complete 200 clock hours.

Statistics (STA)

STA 4374 Statistical Process Control (3)
Pre-requisite(s): STA 3381 or equivalent
Development of statistical concepts and theory underlying procedures used in statistical process control applications and reliability.

STA 4382 Intermediate Statistical Methods (3)
Pre-requisite(s): A minimum grade of C in either STA 2381 or STA 3381; or consent of instructor
Development and application of two-sample inferences, analysis of variance, multiple comparison procedures, and nonparametric methods.

STA 4385 Mathematical Statistics I (3)
Pre-requisite(s): MTH 2321 with minimum grade of C
Introductions to the fundamentals of probability theory, random variables and their distributions, expectations, transformations of random variables, moment generating functions, special discrete and continuous distributions, multivariate distributions, order statistics, and sampling distributions.

STA 4386 Mathematical Statistics II (3)
Pre-requisite(s): STA 4385 with minimum grade of C
Theory of statistical estimation and hypothesis testing. Topics include point and interval estimation, properties of estimators, properties of test of hypotheses including most powerful and likelihood ratios tests, and decision theory including Bayes and minimax criteria.

STA 5300 Statistical Methods (3)
Introduction to descriptive and inferential statistics. Topics may be selected from the following: descriptive statistics and graphs, probability, regression, correlation, tests of hypotheses, interval estimation, measurement, reliability, experimental design, analysis of variance, nonparametric methods, and multivariate methods.

STA 5301 Introduction to Experimental Design (3)
Pre-requisite(s): Graduate standing
Simple and complex analysis of variance and analysis of covariance designs. The general linear model approach, including full-rank and less than full-rank models, will be emphasized.

STA 5303 Applied Regression Analysis (3)
Pre-requisite(s): STA 5300 or equivalent Regression modeling, estimation, and diagnostics with emphasis on applications
Topics include simple linear regression, multiple regression, logistic regression, and Poisson regression. The statistical programming language R is used.

STA 5304 SAS and SAS Programming for Statistical Analysis (3)
Pre-requisite(s): STA 2381 or STA 5300 or equivalent; STA 3381 or equivalent
Concepts in SAS programming, including methods to establish and transform SAS data sets, perform statistical analyses, and create general customized reports. Methods from both BASE SAS and SAS SQL are considered. Successful completion of the course prepares students to take the SAS certification exam.

STA 5305 Advanced Experimental Design (3)
Pre-requisite(s): STA 5353 and 5381
The course examines a variety of complex experimental designs that are available to researchers including split-plot factorial designs, confounded factorial designs, fractional factorial designs, incomplete block designs, and analysis of covariance. The designs are examined within the framework of the general linear model. Extensive use is made of computer software.

STA 5320 Predictive Analytics (3)
Pre-requisite(s): STA 5303 Concepts, methods, and tools used for predictive modeling and data analytics with applications are considered The focus of this course is on advanced tools using various multivariate regression techniques, statistical modeling, machine learning, and simulation for forecasting. Practical applications are emphasized.

STA 5350 Statistical Machine Learning (3)
Pre-requisite(s): STA 5303
Fundamental topics of machine learning including supervised/unsupervised learning, cost function optimization, feature selection and engineering, and bias/variance trade-off. Learning algorithms including classification methods, support vector machines, decision trees, neural networks, and deep learning are covered.

STA 5351 Introduction to Theory of Statistics (3)
Pre-requisite(s): MTH 2321 or equivalent or consent of instructor
Introduction to mathematics of statistics. Fundamentals of probability theory, convergence concepts, sampling distributions, and matrix algebra.

STA 5352 Theory of Statistics I (3)
Co-requisite(s): STA 5380, STA 6375
Pre-requisite(s): MTH 2321 or STA 5351 or consent of instructor
Theory of random variables, distribution and density functions, statistical estimation, and hypothesis testing. Topics include probability, probability distributions, expectation, point and interval estimation, and sufficiency.

STA 5353 Theory of Statistics II (3)
Co-requisite(s): STA 5381
Pre-requisite(s): STA 5352
Topics include sampling distributions, likelihood and sufficiency principles, point and interval estimation, loss functions, Bayesian analysis, asymptotic convergence, and test of hypothesis.

STA 5360 Introduction to Bayesian Data Analysis (3)
Pre-requisite(s): STA 3381 or equivalent or consent of instructor
Overview of analytic and computational methods in Bayesian inference beginning with two-sample t-inference procedures, and extending through regression, focusing on state-of-the-art software for Bayesian computation.

STA 5361 Methods in Time Series Analysis (3)
Co-requisite(s):
Pre-requisite(s): STA 3386 or STA 5303 or equivalent or concurrent enrollment or consent of instructor
Statistical methods of analyzing time series including autocorrelation, model identification, estimation, forecasting, and spectral analysis. Applications in a variety of areas including economics and environmental science will be considered. Credit cannot be earned for both this course and STA 5362.

STA 5362 Time Series Analysis (3)
Pre-requisite(s): STA 5352
Statistical methods for analyzing time series. Topics include autocorrelation function and spectrum, stationary and non-stationary time series, linear filtering, trend elimination, forecasting, general models, and autoregressive integrated moving average models with applications in economics and engineering. Students cannot receive credit for this course and for STA 5361.

STA 5363 Advanced Data-Driven Methods (3)
Pre-requisite(s): STA 5381, 5383, and 6376
Advanced topics and theoretical underpinnings of modern data-driven methods are presented, including supervised and unsupervised methods from both statistical and machine learning perspectives; uncertainty analysis, model selection and development; and both nonlinear and linear methods.

STA 5364 Survival and Reliability Theory (3)
Pre-requisite(s): STA 5352
Basic concepts of lifetime distributions. Topics include types of censoring, inference procedures for exponential, Weibull, extreme value distributions, parametric and nonparametric estimation of survival function and accelerated life testing.

STA 5365 Design of Experiments and Clinical Trials (3)
Pre-requisite(s): STA 5381
Traditional designs of experiments are presented within the framework of the general linear model. Also included are the latest designs and analyses for clinical trials and longitudinal studies. Credit cannot be received for this course and STA 5375.

STA 5367 Managerial Epidemiology (3)
Cross-listed as HPA 5367
See HPA 5367 for course information.

STA 5371 Methods in Data Mining and Management (3)
Pre-requisite(s): STA 3386 or STA 5303 or equivalent course or consent of instructor
An introduction to the methods and practices of data mining and management. Concepts, principles, methods, implementation techniques, and applications of data mining, with a focus on modeling, pattern discovery, and cluster analysis.

STA 5372 Statistical Process Control (3)
Pre-requisite(s): STA 3381 or equivalent; STA 2381 or equivalent
Development of statistical concepts and theory underlying procedures used in statistical process control applications. Topics include sampling inspection procedures, continuous sampling procedures, theory of process control procedures, and experimental design and response surface analysis to design and analyze process experiments.

STA 5373 Computational Statistical Methods (3)
Pre-requisite(s): STA 2381 or STA 5300 or an equivalent course in statistical methods
Methods, programming, and algorithms used in computational statistics; topics include, but are not limited to, Monte Carlo simulation, bootstrap, cross-validation, and MCMC. Programming in R and to write R functions.

STA 5374 Applied Sampling Techniques (3)
Pre-requisite(s): A grade of C or better in any one of STA 2381 or STA 5300 or an equivalent course in statistical methods
Planning, execution, and analysis of sampling from finite populations. Simple random, stratified random, ratio, systematic, cluster, subsampling, regression estimates, and multi-frame techniques are covered. Use of computer software for analyzing data collected from designs covered in class.

STA 5376 Methods in Biostatistics (3)
Pre-requisite(s): STA 2381 or STA 5300, or an equivalent course in statistical methods
A survey of methods of data analysis for biostatisticians in the biomedical and pharmaceutical fields. Regression analysis, experimental design, categorical data analysis, clinical trials, longitudinal data, and survival analysis.

STA 5377 Spatial Statistics (3)
Pre-requisite(s): STA 5353; or consent of instructor
Exploratory spatial data analysis using both graphical and quantitative descriptions of spatial data including the empirical variogram. Topics include several theoretical isotropic and anisotropic variogram models and various methods for fitting variogram models such as maximum likelihood, restricted maximum likelihood, and weighted least squares. Techniques for prediction of spatial processes will include simple, ordinary, universal and Bayesian kriging. Spatial sampling procedures, lattice data, and spatial point processes will also be considered. Existing software and case studies involving data from the environment, geological and social sciences will be discussed.

STA 5380 Methods in Statistics I (3)
Co-requisite(s): STA 5352, STA 6375
Pre-requisite(s): MTH 2311 and MTH 2321, or consent of instructor
Descriptive parametric and nonparametric inferential methods for qualitative and quantitative data from a single population. Parametric and nonparametric inferential methods for qualitative and quantitative data from two populations. Linear regression using matrix notation, including topics in multiple regression, modeling diagnostic procedures, and model selection.

STA 5381 Methods in Statistics II (3)
Co-requisite(s): STA 5353
Pre-requisite(s): STA 5380 or consent of instructor
A continuation of STA 5380 with robust regression, quantile regression, and regression trees. K population descriptive and inferential methods. A matrix approach to one-way analysis of variance and least squares in balanced designs with fixed and random effects. Multiple comparison procedures, power, and sample size. A brief introduction to generalized linear models.

STA 5383 Introduction to Multivariate Analysis (3)
Pre-requisite(s): STA 5353 and STA 5381 or equivalent
Statistical models and procedures for describing and analyzing random vector response data. Supporting theoretical topics include matrix algebra, vector geometry, the multivariate normal distribution and inference on multivariate parameters. Various procedures are used to analyze multivariate data sets.

STA 5384 Multivariate Statistical Methods (3)
Discriminant analysis, canonical correlation analysis, and multivariate analysis of variance.

STA 5385 High-Dimensional Data Analysis (3)
Pre-requisite(s): STA 5383
Methods for analyzing high-dimensional multivariate data. Topics include matrix computation of summary statistics, graphical techniques using linear dimension reduction, statistical inference of high-dimensional multivariate parameters, high-dimensional principal components analysis and singular value decompositions, and supervised classification methods for high-dimensional sparse data.

STA 5387 Stochastic Processes (3)
Pre-requisite(s): STA 5353
The study of probability theory as motivated by applications from a variety of subject matters. Topics include: Markov chains, branching processes, Poisson processes, continuous time Markov chains with applications to queuing systems, and renewal theory.

STA 5388 Seminar in Statistics (3)
Pre-requisite(s): Consent of instructor
Selected topics in Statistics. May be repeated once with change of topic.

STA 5V85 Practice in Statistics (1-3)
Consulting, research, and teaching in statistics.

STA 5V95 Topics in Statistics (1-3)
Pre-requisite(s): Consent of instructor
Selected topics in statistics. May involve texts, current literature, or an applied data model analysis. This course may be repeated up to four times with change of topic.

STA 5V99 Thesis (1-3)
Supervised research for the master's thesis. A maximum of three semester hours to count for the degree.

STA 6351 Large Sample Theory (3)
Pre-requisite(s): STA 5353
Large sample theory, including convergence concepts, laws of large numbers, central limit theorems, and asymptotic concepts in inference.

STA 6352 Bayesian Theory (3)
Pre-requisite(s): STA 5353 or equivalent
Bayesian statistical inference, including foundations, decision theory, prior construction, Bayesian point and interval estimation, and other inference topics. Comparisons between Bayesian and non-Bayesian methods are emphasized throughout.

STA 6353 Semiparametric Regression Models (3)
Pre-requisite(s): STA 5353
Semiparametric inference, with an emphasis on regression models applicable to a wider class of problems than can be addressed with parametric regression models. Topics include scatterplot smoothing, mixed models, additive models, interaction models, and generalized regression. Models are implemented using various statistical computing packages.

STA 6360 Bayesian Methods for Data Analysis (3)
Pre-requisite(s): STA 5353 or equivalent
Bayesian methods for data analysis. Includes an overview of the Bayesian approach to statistical inference, performance of Bayesian procedures, Bayesian computational issues, model criticism, and model selection. Case studies from a variety of fields are incorporated into the study. Implementation of models using Markov chain Monte Carlo methods is emphasized.

STA 6363 Functional Data Analysis (3)
Pre-requisite(s): MATH 2311, STA 5300, STA 5383, or consent of instructor
Introduction to the analysis of data that may be considered to be realizations from smooth functions. Visualization and data exploration, nonparametric smoothing, functional linear models, functional principle components analysis, analysis involving derivatives, registration, and nonlinear smoothing.

STA 6366 Statistical Bioinformatics (3)
Pre-requisite(s): STA 5353 and 5383; or consent of instructor
Critical evaluation of current statistical methodology used for the analysis of genomic and proteomic data.

STA 6375 Computational Statistics I (3)
Co-requisite(s): STA 5352, STA 5380
Pre-requisite(s): MTH 2311 and 2321
A comprehensive introduction to computing for statisticians. Topics range from information technology and fundamentals of scientific computing to computing environments and workflows, statistical document preparation for reproducible research, and programming languages. Students cannot receive credit for this and for STA 5373.

STA 6376 Computational Statistics II (3)
Pre-requisite(s): STA 6375
A continuation of STA 6374 with an emphasis on computational and applied mathematics, pseudo-random variate generation, and Monte Carlo methods. Credit cannot be received for this course and for STA 5373.

STA 6380 Modern Trends in Data Science Computing (3)
Pre-requisite(s): STA 6375 and 6376
A hands-on survey of practical data science technologies and tools used in industry. Topics vary and may include version control systems and collaborative software development; distributed computing; data storage and access; cloud computing; web technologies, applications, and dashboards; and workflow and pipelining tools.

STA 6382 Theory of Linear Models (3)
Pre-requisite(s): STA 5353 and 5381; and knowledge of matrix theory
Theory of general linear models including regression models, experimental design models, and variance component models. Least squares estimation. Gauss-Markov theorem and less than full rank hypotheses.

STA 6383 Advanced Multivariate Analysis (3)
Pre-requisite(s): STA 5383
Multivariate normal and related distributions. Topics include generalizations of classical test statistics including Wilk's Lambda and Hotelling's T2, discriminant analysis, canonical variate analysis, and principal component analysis.

STA 6384 Analysis of Categorical Responses (3)
Pre-requisite(s): STA 5353 and STA 5381 or equivalent
Theory of generalized linear models including logistic, probit, and log linear models with special application to categorical and ordinal categorical data analysis.

STA 6V00 Graduate Research (1-10)
Pre-requisite(s): Graduate standing
For research credit prior to admission to candidacy for an advanced degree. Credit will be given for the amount of work done. May be repeated for credit through 45 hours.

STA 6V99 Dissertation (1-6)
Supervised research for the doctoral dissertation. maximum of nine semester hours will count for the degree. A student may register for one to six semester hours in one semester.

Theater Arts (THEA)

THEA 4321 History of Costume (3)
Pre-requisite(s): Upper-level standing or consent of instructor
A study of dress from Egyptian times to the twentieth century.

THEA 4322 History of Decor in the Western World (3)
Pre-requisite(s): Upper-level standing
Major historical movements and periods in architecture and decorative arts in the West, with special attention to how these trends relate to theatrical design.

THEA 4326 Advanced Costume Design (3)
Pre-requisite(s): THEA 3326
Advanced principles and practices of costume design, with an emphasis on the design team/director collaboration.

THEA 4335 Creative Dramatics (3)
Pre-requisite(s): Consent of instructor
Education, theory, and philosophy that will cultivate the techniques of creative dramatics and develop the skills needed for human interaction in dramatic play. Lab required.

THEA 4365 Advanced Directing I (3)
Pre-requisite(s): THEA 3324
Directing techniques for departures from realism, with an emphasis on postmodern theatre, musical theatre, and verse drama. Workshop required.

THEA 4366 Advanced Directing II (3)
Pre-requisite(s): THEA 4365
Continuation of THEA 4365. Workshop required.

THEA 4376 Theater History III (3)
Pre-requisite(s): THEA 2374 and 2375; and upper-level standing
Historical investigation of theatre practice, performance, and dramatic literature from the early twentieth century to the present.

THEA 4377 The Theatre and Christianity (3)
Pre-requisite(s): Upper-level standing or consent of instructor
An exploration of biblical perspectives concerning creativity and the arts with a special emphasis on theatre and the performing arts.

THEA 4378 Dramaturgy: Theory and Practice (3)
Pre-requisite(s): THEA 4376 and consent of instructor
Investigation of the functions and methods of the dramaturg such as choosing a season, audience enrichment, new play development, researching production history, and understanding dramatic structure and theory.

THEA 4379 Advanced Studies in Contemporary Theatre and Drama (3)
Pre-requisite(s): THEA 2374 and 2375
Topics related to leading contemporary playwrights, current issues of dramatic style, and emerging trends in theatrical practice. May be repeated once for credit with different content.

THEA 4380 Performing Arts Management (3)
Pre-requisite(s): Upper-level standing
Organizational structure, fundraising techniques, and board development for non-profit professional and commercial performing arts organizations. Includes contracting with professional unions, budgeting, and season planning. Technical crew lab included.

THEA 4390 Advanced Stage Management (3)
Pre-requisite(s): THEA 2390
Role and responsibilities of the stage manager using the Regional Theatre or LORT Stage Manager model. Explores budgeting, seasonal planning and responsibilities in touring and non-theatrical situations.

THEA 4398 Technical Direction for Theater (3)
Pre-requisite(s): THEA 1312, 1316, 1383, and 2371
Four basic areas of technical direction: creating technical drawings, estimating a set, choosing materials used in the theater, and scheduling the building of sets for the theater. This course may be repeated once with a different topic.

THEA 5101 Introduction to Graduate Theatre Studies (1)
A two week introductory intensive designed to prepare students for graduate level theatre research, analysis, and teaching.

THEA 5199 Non-Thesis Degree Completion (1)
To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

THEA 5301 Contemporary Directing Styles (3)
Analysis of contemporary directing styles.

THEA 5304 History and Theory of Directing (3)
An historical and theoretical study of the development of the director, with emphasis on the late nineteenth century to the present.

THEA 5306 Play Analysis for Directors (3)
Advanced study of several methodologies for analyzing dramatic structure and composition; approaches to the direct application of analysis to play production.

THEA 5307 Contemporary Performance Theory (3)
Development of twentieth-century performance theory.

THEA 5308 Dramatic Theory and Criticism (3)
Dramatic theory and criticism from Aristotle to the twentieth century.

THEA 5310 Seminar in Classical Drama (3)
An historical and theoretical study of selected classical masterworks in performance.

THEA 5311 Directing Modern Plays (3)
A study of theories and techniques used in directing selected European and American masterworks with emphasis on script analysis and interpretation, staging practices, and particular concept and style.

THEA 5312 Directing Classical Plays (3)
Directing theories and concepts of tragedy and comedy from the Greeks through the nineteenth century.

THEA 5313 Production Design (3)
Research, analysis, and practical experience in designing scenery, lighting, sound, costumes, and makeup for a realized production.

THEA 5315 Seminar in Modern Drama (3)
This seminar course offers advanced study of modern American and British and European drama specifically for graduate students of theatre.

THEA 5335 Director's Workshop (3)
Practical experience in all areas of theatre production for the public presentation of a full-length play.

THEA 5351 Theatre Scholarship and Research Methods (3)
Seminar study of practical issues in advanced theatre scholarship, research methods, application of theory, academic writing, and scholarly publication.

THEA 5370 Seminar in Dramatic Production (3)
Research and critical analysis of plays and their productions.

THEA 5372 Independent Study (3)
Guided study of pre-approved topic(s).

THEA 5373 Dramaturgy (3)
Application of directorial script analysis and dramaturgical tools in production planning, development of the production script, and rehearsal.

THEA 5374 Collaborative Theater Process (3)
An investigation through research and discussion of the elements of design, the relationship between the director and designers, and the process of unifying various elements of theatre production. Students will submit proposals for designs of both classic and modern plays and justify their ideas through literary and pictorial research.

THEA 5375 Actor-Director Collaboration (3)
Through scene work and acting exercises, directors explore the theories, common vocabularies, and basic skills and techniques needed to work with actors from differing backgrounds. Attention will also be given to auditioning, casting and rehearsal strategies as well as the major directorial performance styles of the twentieth century.

THEA 5376 Playwriting (3)
A study of the art and craft of playwriting, emphasizing analytic approaches to writing, developing a personal voice, narrative, characters, and point of view. Workshop required.

THEA 5398 Thesis Production and Research (3)
Master of Fine Arts students only. Research, design, and direction of the thesis production.

THEA 5V99 Thesis (1-9)
Research, data analysis, writing, and oral defense of an approved master's thesis. At least six hours of THEA 5V99 are required.

Ugaritic (UGA)

UGA 5306 Ugaritic Grammar and Lexicography (3)
Cross-listed as REL 5325
Pre-requisite(s): HEB 2301; or equivalent
Fundamentals of the language of Ugarit with special attention to the relationship of Ugaritic with Hebrew grammar and lexicography.

Graduate School Faculty

Graduate Faculty

Members of the Graduate Committee Faculty and their program affiliations are listed on the Graduate School website: www.baylor.edu/graduate/index.php?id=959408 (https://www.baylor.edu/graduate/?id=959408). The procedures for appointment of faculty to membership in the Graduate Faculty, as approved by the Graduate Council, are available on the Graduate School website.

The following rights and responsibilities are reserved to members of the Graduate Faculty:

1. to serve on standing committees of the Graduate School,
2. to chair dissertation or thesis committees, and
3. to serve as an official member of a dissertation or thesis committee.

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