

# BIOCHEMISTRY, B.S.

This program is appropriate for students who are planning to attend graduate school in biochemistry or a related area, and are interested in health-related professions (pre-medicine, pre-dentistry, pre-pharmacy, or pre-veterinary science), or who plan careers in medical research or in industrial fields related to biotechnology.

Motion and Innervation and BIO 2402 Human Anatomy and Physiology of Metabolism and Processing cannot be used to complete this requirement.

## Requirements for a Major in Biochemistry

**Code Title Hours**

Thirty-nine semester hours including the following:

Required Courses		
CHE 1301 & CHE 1101	Basic Principles of Modern Chemistry I and General Chemistry Laboratory I	4
CHE 1302 & CHE 1102	Basic Principles of Modern Chemistry II and General Chemistry Laboratory II	4
CHE 2416	Laboratory Measurements and Techniques	4
CHE 3331	Organic Chemistry I	3
CHE 3332	Organic Chemistry II	3
CHE 3238	Organic Chemistry Laboratory	2
CHE 4001	Exit Examination	0
CHE 4225	Biophysical Chemistry Laboratory	2
CHE 4141	Modern Biochemistry Laboratory	1
CHE 4142	Advanced Biochemistry Laboratory	1
CHE 4151	Undergraduate Seminar I	1
CHE 4327	Physical Chemistry for the Life Sciences	3
CHE 4341	General Biochemistry	3
CHE 4342	Topics in Human Biochemistry	3
Five semester hours of 4000-level CHE <sup>1</sup>		5
<b>Subtotal</b>		<b>39</b>

### Required Courses in Other Fields

BIO 1305 & BIO 1105	Modern Concepts of Bioscience and Modern Concepts of Bioscience Laboratory	4
or BIO 1405	Investigations of Modern Biology Concepts I	
BIO 1306 & BIO 1106	Modern Concepts of Bioscience, continued and Modern Concepts of Bioscience Laboratory	4
or BIO 1406	Investigations of Modern Biology Concepts II	
Two 2000-4000 level, 3-4 hr BIO courses <sup>2</sup>		6
MTH 1321	Calculus I	3
MTH 1322	Calculus II	3
PHY 1420	General Physics I	4
PHY 1430	General Physics II	4

**Total Hours 67**

<sup>1</sup> Excluding CHE 4321 Physical Chemistry I and CHE 4151 Undergraduate Seminar I. It is recommended that CHE 4316 Instrumental Analysis be included in the five hour total. A maximum of three semester hours of CHE 4V98 Senior Research Problems may count toward this requirement. Undergraduate research in chemistry is strongly encouraged.

<sup>2</sup> It is recommended that BIO 4306 Molecular Genetics and Genomics - BIO 4106 Molecular Genetics and Genomics Laboratory be taken as one of the two courses. BIO 2401 Human Anatomy and Physiology of