

COMPUTER SCIENCE FELLOWS (BSC)

Computer Science Fellows Program

The Computer Science Fellows Program is designed for highly motivated students entering the School of Engineering & Computer Science with a wide range of interests who desire a more diverse experience across the disciplines. The program seeks to broaden Computer Science Fellows' backgrounds in their chosen area(s) of diversification while preparing them for graduate studies or for successful careers. The Computer Science Fellows is a major within the School of Engineering & Computer Science that allows Fellows to create an individualized course of study with the advice of a program Director who mentors them throughout the entire undergraduate experience. In the course of this mentoring process, the Director will in turn call upon the expertise of professors in other departments for assistance in serving the needs of the Fellow.

Admission to the Program

Admission to the Computer Science Fellows Major is competitive and is separate from and subsequent to admission to Baylor University. Although the major is designed to appeal to students with high ACT/SAT scores and class rank, or National Merit designees, admission is not based solely on scores and grades. Consideration is given to students with genuine intellectual curiosity, who have a desire to excel in computer science studies and take advantage of collaborative, cross-disciplinary undergraduate research.

For new students, after admission to the University and successful completion of their first semester (including CSI 1430 Introduction to Computer Science I with Laboratory), applicants must apply in writing to the Program Director of the Computer Science Fellows Major. The application includes three letters of recommendation from current or former teachers and an essay explaining how the applicant would benefit from the major. Acceptances are made on a rolling basis, and letters of admission are sent in the month following receipt of a complete application.

The major is open to incoming freshman or transfer students with at least three years or 90 hours remaining to complete their undergraduate degree at Baylor. Students who enter late, i.e., after their freshman year or as a transfer student with more than 36 Baylor credit hours, need to seek a special waiver to this requirement from the Program Director before they can be admitted to the program.

Maintaining Computer Science Fellow Status

Computer Science Fellows will be required to maintain a 3.5 GPA through their sophomore-level courses (including CSI 3471 Software Engineering I, CSI 3344 Introduction to Algorithms and MTH 1322 Calculus II). Once admitted to the Upper Division of the Computer Science Fellows program (courses beyond those listed above), they must have at least a 3.25 GPA to graduate. If dismissed from the program, students must then fulfill the general requirements of the University as well as requirements for a different major to graduate.

The Independent Reading List

In addition to the assigned texts in the Computer Science Fellows courses, each Fellow will, with the advice and approval of his or her Research Advisor, compose a list of computer science texts and related works. The Fellow will study the additional works independently

throughout the junior year in CSF 3101 Advanced Readings and Research I, "Independent Readings I," and CSF 3102 Advanced Readings and Research II, "Independent Readings II," in preparation for his or her Senior thesis project.

The Junior Readings Interview

Computer Science Fellows will take CSF 3001 Independent Reading Survey, an interview addressing their independent readings lists, in the spring semester of the junior year. They will meet with a committee composed of faculty members (including their Research Advisor) and a senior Computer Science Fellow to demonstrate their knowledge of the selected texts and related works. Upon approval of the Fellows Committee, the student will be permitted to proceed with work on the senior thesis.

The Senior Thesis

During their senior year, Computer Science Fellows will be approved to register for CSF 4V01 Research/Fellows Thesis I and CSF 4302 Fellows Thesis, "Senior Computer Science Fellows," preparing and submitting an extended study on a research topic based on the readings and research conducted during their junior year. The program directors, including the respective Research Advisors, will approve the topic or project and evaluate the completed thesis.

Requirements for a Major in Computer Science Fellows (B.S.C) Course Requirements¹

Code	Title	Hours
Required Courses		
REL 1310	The Christian Scriptures	3
REL 1350	The Christian Heritage	3
Two semesters of Chapel		0
MTH 1321	Calculus I	3
MTH 1322	Calculus II	3
MTH 2311	Linear Algebra	3
Eight semester hours of science courses with associated labs chosen from among Biology, Chemistry, Geology, Neuroscience, or Physics. Each course must apply to a major in its department.		8
STA 3381	Probability and Statistics	3
Computer Science Courses		
CSI 1430	Introduction to Computer Science I with Laboratory	4
CSI 1440	Introduction to Computer Science II with Laboratory	4
CSI 2334	Introduction to Computer Systems	3
CSI 2350	Discrete Structures	3
CSI 3334	Data Structures	3
CSI 3344	Introduction to Algorithms	3
CSI 3471	Software Engineering I	4
Five additional upper-level CSI courses		15
CSF 3101	Advanced Readings and Research I (junior independent readings course)	1
CSF 3102	Advanced Readings and Research II (junior independent readings course)	1

CSF 3001	Independent Reading Survey (an exit survey to summarize a student's independent readings, and ascertain readiness for the senior thesis)	0
CSF 4V01	Research/Fellows Thesis I	1-3
CSF 4302	Fellows Thesis ²	3
CSF 4001	Senior Exit Survey	0
CSI 4010	Undergraduate Research Seminar	0
Completion of 124 hours, including 36 hours of "3000" - "4000" level credits		

The requirements for advanced credit, residence, chapel, and maximum credit are the same as for the Bachelor of Science in Computer Science degree. Additional information about requirements is listed under the "General University Regulations." Computer Science Fellows are not permitted to declare additional majors. Committee approval is required for graduation.

Total Hours	71-73
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¹ Students who enter the CSF program after the fall of their freshman year should meet with the CSF Director to discuss how best to complete the required courses.

² Presentation in the annual ECS Scholar's Day is mandatory for the fulfillment of CSF 4302 Fellows Thesis.