COMPUTER SCIENCE, B.S. TO SOFTWARE ENGINEERING, M.S. ACCELERATED PROGRAM

Saint Louis University's computer science B.S. to software engineering M.S. accelerated program allows a student to complete both the Bachelor of Science in Computer Science and the Master of Science in Software Engineering in a shorter time period than if the two degrees were pursued independently.

For additional information, see the catalog entries for the following programs:

Computer Science, B.S. (https://catalog.slu.edu/colleges-schools/science-engineering/computer-science/computer-science-bs/)

Software Engineering, M.S. (https://catalog.slu.edu/colleges-schools/science-engineering/computer-science/software-engineering-ms/)

Requirements

Students who wish to apply to this accelerated program should have completed all 2000-level coursework required of the computer science bachelor's program and have completed at least 75 credits at the time of application. At the time of application, students must have a cumulative GPA of at least 3.00 and a GPA of at least 3.00 in their computer science coursework.

Contact the graduate coordinator for more details.

Non-Course Requirements

All Science and Engineering B.A. and B.S. students must complete an exit interview/survey near the end of their bachelor's program.

Continuation Standards

Students must maintain a cumulative GPA of at least 3.00 and a GPA of at least 3.00 in their computer science coursework.

Students who drop below that GPA while in the accelerated program will be placed on a one-semester probationary period before being dismissed from the accelerated program.

Only grades of B or better in the graduate courses taken while an undergraduate can be applied to the master's degree.

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
CSCI 10xx (p. 2)	Introduction to Computer Science	3
MATH 1510	Calculus I	4
University Core and/or General Electives		9
	Credits	**16**
Spring		
CSCI 1300	Introduction to Object-Oriented Programming	4
MATH 1520	Calculus II	4
University Core and/or General Electives		6
	Credits	**14**
Year Two		
Fall		
CSCI 2100	Data Structures	4
CSCI 2500	Computer Organization and Systems	3
MATH 1660	Discrete Mathematics	3
Science I with lab		4
PHIL 3050X	Computer Ethics	3
	Credits	**17**
Spring		
CSCI 2300	Object-Oriented Software Design	3
CSCI 2510	Principles of Computing Systems	3
STAT 3850	Foundation of Statistics	3
Science II with lab		4
University Core and/or General Electives		3
	Credits	**16**
Year Three		
Fall		
CSCI 3100	Algorithms	3
Additional Mathematics/Statistics (2000+)		3
Science or engineering		3-4
University Core and/or General Electives		6
	Credits	**15-16**
Spring		
CSCI 3200	Programming Languages	3
CSCI 3300	Software Engineering	3
5000-level version of CSCI Systems Elective		3
Additional Mathematics/Statistics (2000+)		3
University Core and/or General Electives		3
	Credits	**15**
Year Four		
Fall		
CSCI 4961	Capstone Project I	2
CSCI 5030	Principles of Software Development	3
University Core and/or General Electives		9
	Credits	**14**
Spring		
CSCI 4962	Capstone Project II	2
CSCI 5300	Software Engineering	3

University Core and/or General Electives		9
	Credits	**14**
Year Five		
Fall		
CSCI 53xx	Software Engineering Elective	3
CSCI 53xx	Software Engineering Elective	3
CSCI 5xxx	General Elective	3
CSCI 5xxx	General Elective	3
	Credits	**12**
Spring		
CSCI 5960	Software Engineering Capstone Project	3
CSCI 53xx	Software Engineering Elective	3
CSCI 5xxx	General Elective [a]	3
	Credits	**9**
	Total Credits	**142-143**

a Waiver replacement for CSCI 5050: Computing and Society

Introduction to Computer Science

Code	Title	Credits
CSCI 1010	Introduction to Computer Science: Principles	
CSCI 1020	Introduction to Computer Science: Bioinformatics	
CSCI 1025	Introduction to Computer Science: Cybersecurity	
CSCI 1030	Introduction to Computer Science: Game Design	
CSCI 1040	Introduction to Computer Science: Mobile Computing	
CSCI 1050	Introduction to Computer Science: Multimedia	
CSCI 1060	Introduction to Computer Science: Scientific Programming	
CSCI 1070	Introduction to Computer Science: Taming Big Data	
CSCI 1080	Introduction to Computer Science: World Wide Web	
CSCI 1090	Introduction to Computer Science: Special Topics	
With permission, a computing-intensive course from another discipline may be substituted. Examples of such courses include:		
BME 2000	Biomedical Engineering Computing	
CVNG 1500	Civil Engineering Computing	
STAT 3850	Foundation of Statistics	

Systems Courses

Code	Title	Credits
CSCI 4500	Advanced Operating Systems	
CSCI 4530	Computer Security	
CSCI 4550	Computer Networks	
CSCI 4610	Concurrent and Parallel Programming	
CSCI 4620	Distributed Computing	

Program Notes

Internship with Industry

Students may apply at most three credits of Internship with Industry (CSCI 5910) toward the degree requirements.