

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

This program allows a student to complete, in an accelerated fashion, both the Bachelor in Arts (B.A.) in Computer Science and the Master of Science (M.S.) in Software Engineering at Saint Louis University.

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

Computer Science, B.A. (<http://catalog.slu.edu/colleges-schools/arts-sciences/computer-science/computer-science-ba/>)

Software Engineering, M.S. (<http://catalog.slu.edu/colleges-schools/arts-sciences/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.

To apply, students must submit a personal statement and arrange for two letters of recommendation from computer science faculty members.

## 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.

## 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
<b>Year One</b>		
<b>Fall</b>		
! CSCI 10xx (p. 2)	Introduction to Computer Science	3
MATH 1660	Discrete Mathematics	3
! Core	Science	3-4

ENGL 1900 or ENGL 1940	Advanced Strategies of Rhetoric and Research or Advanced Writing	3
THEO 1000	Theological Foundations	3
Credits		15-16

### Spring

!CSCI 1300	Introduction to Object-Oriented Programming	4
!MATH 1510	Calculus I	4
Core	Science	3-4
Core	Foreign Language 1020	3
Credits		14-15

### Year Two

#### Fall

!CSCI 2100	Data Structures	4
!MATH 1520	Calculus II	4
Core	Foreign Language 1020	3
Core	Fine and Performing Arts	3
HIST 1110	Origins of the Modern World to 1500	3
Credits		17

#### Spring

!CSCI 2300	Object-Oriented Software Design	3
!CSCI 2400	Computer Architecture	3
Core	Foreign Language 2010	3
PHIL 1050	Introduction to Philosophy: Self and Reality	3
HIST 1120	Origins of the Modern World (1500 to Present)	3
Credits		15

### Year Three

#### Fall

!CSCI 3500	Operating Systems	3
Additional Mathematics (2000+)		3
PHIL 2050	Ethics	3
Core	Theology 2xxx	3
Core	Social Science	3
Credits		15

#### Spring

! Application Course (p. 2)		3
! Theory Course (p. 2)		3
PHIL 3410	Computer Ethics	3
Core	Literature	3
Core	Social Science	3
Credits		15

### Year Four

#### Fall

CSCI 4961	Capstone Project I	2
CSCI 5030	Principles of Software Development	3
CSCI 51###	CSCI 5100+ Elective	3
! Core	Theology 3xxx	3
Core	Cultural Diversity in the U.S.	3
General Elective		3
Credits		17

<b>Spring</b>		
!CSCI 4962	Capstone Project II	2
CSCI 51##	CSCI 5100+ Elective	3
Core	Literature	3
Core	Global Citizenship	3
General Elective		3
Credits		14

**Year Five**

<b>Fall</b>		
!CSCI 5050	Computing and Society	3
!CSCI 5300	Software Engineering	3
Software Engineering Elective	Software Engineering courses numbered CSCI5300-5399	3
CSCI Graduate Elective	The general electives may include additional selections from the Software Engineering category	3
Credits		12

<b>Spring</b>		
CSCI 5960	Software Engineering Capstone Project	3
! Software Engineering Elective	Software Engineering courses numbered CSCI5300-5399	3
! Software Engineering Elective	Software Engineering courses numbered CSCI5300-5399	3
Credits		9
Total Credits		143-145

**Introduction to Computer Science**

Code	Title	Credits
CSCI 1010	Introduction to Computer Science: Principles	
CSCI 1020	Introduction to Computer Science: Bioinformatics	
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

**Applied Systems Courses**

Code	Title	Credits
CSCI 3550	Computer Networks	
CSCI 3710	Databases	

CSCI 4650	Computer Security
CSCI 4850	High-Performance Computing

**Theory Courses**

Code	Title	Credits
CSCI 3100	Algorithms	
CSCI 3200	Programming Languages	

**Program Notes****Internship with Industry**

Students may apply at most 3 credits of Internship with Industry (CSCI 5910) toward the degree requirements.