

Computer Science Major, Bachelor of Science (80 credit hours)

2018-2019

Major Requirements:

Foundational Courses (28 credit hours):

- CPSC 1400, Computer Science I, 4 credit hours¹
- CPSC 1500, Computer Science II, 4 credit hours
- CPSC 2100, Database Programming, 4 credit hours
- CPSC 2330, Introduction to Web Applications, 4 credit hours
- CPSC 2420, Computer Architecture, 2 credit hours
- CPSC 2430, Programming Languages and Compilers, 2 credit hours
- CPSC 2500, Data Structures and Algorithms, 4 credit hours
- MATH 2200/CPSC 2250, Discrete Mathematical Structure, 4 credit hours

Professional Core (20 hours):

- CPSC/ENGR 3310, Cybersecurity, 3 credit hours
- CPSC/ENGR 3320, Cybersecurity Laboratory, 1 credit hour
- CPSC 3410, Computer Networks, 3 credit hours
- CPSC/ENGR 4310, Software Security, 3 credit hours
- CPSC 4420, Operating Systems, 3 credit hours
- CPSC 4430, Software Engineering, 3 credit hours
- CPSC 4950, Senior Design Capstone 1, 2 credit hours
- CPSC 4960, Senior Design Capstone 2, 2 credit hours

Mathematics and Science Core (20 hours):

- MATH 2010, Calculus I, 4 credit hours
- MATH 2020, Calculus II, 4 credit hours
- MATH 3010, Linear Algebra, 4 credit hours
- MATH 4010, Statistics, 4 credit hours
- PHYS 2240, Physics I, 4 credit hours

Computer Science Elective (6 hours):

- Any 6 credit hours from CPSC 2000 and above.

Mathematics and Science Electives (6-8 hours):

- An additional 6 credit hours is required in combination from:
 - MATH 3020 and above, and/or
 - CHEM 2110 and above, and/or
 - PHYS 2250 and above

Proposed Course Sequence:

Freshman: CPSC 1400, MATH 2010; CPSC 1500, MATH 2020, PHYS 2240
Sophomore: CPSC 2100, 2500, MATH 3010; CPSC 2420, 2430, 2330, MATH 2200/CPSC 2250
Junior: CPSC 3310 and CPSC 3320, CPSC 4430, MATH 4010; CPSC 4420, Computer Science Elective
Senior: CPSC 4950, Computer Science Elective, MATH/Science Elective; CPSC 4960, CPSC/ENGR 4310, MATH/Science Elective, CPSC 3410

¹ This course fulfills the Quantitative Ways of Knowing requirement in the Liberal Arts Program. Questions? Please contact the [Department of Computer Science](#).

Computer Science Major, Bachelor of Science Suggested Course Sequence

2018-2019

SEMESTER 1		SEMESTER 2	
CPSC 1400	4 Hours	CPSC 1500	4 Hours
MATH 2010	4 Hours	MATH 2020	4 Hours
ENGL 1100/ENGL 1110	3-4 Hours	PHYS 2240	4 Hours
LART 1050	1 Hour	ENGL 1120	3 Hours
Foreign Language	4 Hours	LART 1100	2 Hours

SEMESTER 3		SEMESTER 4	
CPSC 2100	4 Hours	CPSC 2420	2 Hours
CPSC 2500	4 Hours	CPSC 2430	2 Hours
MATH 3010	4 Hours	CPSC 2330	4 Hours
BIBL 2000	3 Hours	MATH 2200/CPSC 2250	4 Hours
Personal Wellness	2-Hours	COMM 1000	3 Hours

SEMESTER 5		SEMESTER 6	
CPSC 3310 and CPSC 3320	3+1 Hours	CPSC 4420 (Spring 2017-18)	3 Hours
CPSC 4430 (Fall 2017-18)	3 Hours	Computer Science Elective	3 Hours
Math 4010	4 Hours	Social/Behavioral	3 Hours
Christian Ways of Knowing	3 Hours	Global/Intercultural	3 Hours
Writing Intensive Course	3 Hours	Civic Ways of Knowing	3 Hours

SEMESTER 7		SEMESTER 8	
CPSC 4950	2 Hours	CPSC 4960	2 Hours
Computer Science Elective	2-3 Hours	CPSC/ENGR 4310	4 Hours
MATH/Science Elective	3-4 Hours	MATH/Science Elective	3-4 Hours
Aesthetic Ways of Knowing	3 Hours	CPSC 3410 (Spring 2018-19)	3 Hours
Writing Intensive	3 Hours	Speaking Intensive	3 Hours

The Bachelor of Science in Computer Science program prepares students for graduate school in computer science and also for careers in industry involving complex computations using advanced computer science topics including algorithm analysis and software security. The B.S. in Computer Science provides the foundational scientific and math courses needed for graduate studies, which are also beneficial for understanding the complex problems that arise in advanced areas of computer science.

Questions? Please contact the [Department of Computer Science](#).