

Computer Science Major, Bachelor of Science (71 credit 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.

Major Requirements:

Foundational Courses (28 credit hours):

- CPSC 2020, Fundamentals of Computational Thinking and Programming, 4 credit hours¹
- CPSC 2030, Object-Oriented Analysis and Design, 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 (17 credit hours):

- CPSC 3410, Computer Networks, 4 credit hours
- CPSC 4420, Operating Systems, 4 credit hours
- CPSC 4430, Software Engineering, 4 credit hours²
- Any 3 credit hours from the following:
 - CPSC 4480, Technical Certification, 1 credit hour
 - CPSC 4800, Software Engineering Internship, 2-4 credit hours
 - CPSC 4970, Senior Project, 2-4 credit hours
- CPSC 4950, Senior Seminar: Professional Development, 1 credit hour³
- CPSC 4960, Senior Seminar: Ethics, 1 credit hour⁴

Mathematics and Science Core (16 credit hours):

- MATH 2010, Calculus I, 4 credit hours
- MATH 2020, Calculus II, 4 credit hours
- MATH 2120, Introductory Statistics with Applications, 4 credit hours
- MATH 3010, Linear Algebra, 4 credit hours

Electives (10 credit hours):

- Any 10 credit hours from CPSC 2000+, ENGR 2000+, MATH 2000+, PHYS 2240+

NOTE: All students must complete 120 total credit hours to graduate from Anderson University.

¹This course fulfills the Quantitative Ways of Knowing requirement in the Liberal Arts Program.

²This course fulfills the Experiential Learning requirement in the Liberal Arts Program.

³This course fulfills the Speaking Intensive requirement in the Liberal Arts Program.

⁴This course fulfills one Writing Intensive requirement in the Liberal Arts Program.

Proposed Course Sequence:

Freshman: CPSC 2020, MATH 2010; CPSC 2030, MATH 2020, MATH 2200
 Sophomore: CPSC 2100, 2500, MATH 3010; CPSC 2330, 2420, 2430, MATH 2120
 Junior: CPSC 3410, 4430, Elective; CPSC 4420
 Senior: CPSC 4950, 4480/4800/4970, Elective; CPSC 4960, Elective

Computer Science BS Major: 4 Year Suggested Course Sequence

SEMESTER 1	16	SEMESTER 2	18
CPSC 2020 (Quant. Reasoning)	4 Hours	CPSC 2030	4 Hours
MATH 2010	4 Hours	MATH 2020	4 Hours
ENGL 1110	3 Hours	MATH 2200/CPSC 2550	4 Hours
LART 1050	1 Hours	COMM 1000	3 Hours
Foreign Language	4 Hours	ENGL 1120	3 Hours

SEMESTER 3	18	SEMESTER 4	15
CPSC 2100	4 Hours	CPSC 2330	4 Hours
CPSC 2500	4 Hours	CPSC 2420	2 Hours
MATH 3010	4 Hours	CPSC 2430	2 Hours
Civic Ways of Knowing	3 Hours	MATH 2120	4 Hours
BIBL 2000	3 Hours	Christian Ways of Knowing	3 Hours

SEMESTER 5	14	SEMESTER 6	14
CPSC 3410	4 Hours	CPSC 4420	4 Hours
CPSC 4430	4 Hours	Global/Intercultural Ways of Knowing	3 Hours
Major Elective	4 Hours	Social + Behavioral Ways of Knowing	3 Hours
Personal Wellness	2 Hours	Civil Discourse + C.R.	2-4 Hours

SEMESTER 7	13	SEMESTER 8	14
CPSC 4950 (SI)	1 Hour	CPSC 4960 (WI)	1 Hour
CPSC 4480/4800/4970	3 Hours	Major Elective	3 Hours
Major Elective	3 Hours	Additional Class	3 Hours
Aesthetic Ways of Knowing	3 Hours	Scientific Ways of Knowing	4 Hours
Writing Intensive Class	3 Hours	Additional Class	3 Hours

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