Computer Science Major, Bachelor of Science (82 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 hours[1]
- 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 (22 hours):
- CPSC 3380, Applied Cryptography and Security, 4 credit hours
- CPSC 3410, Computer Networks, 4 credit hours
- CPSC 4420, Operating Systems, 4 credit hours
- CPSC 4430, Software Engineering, 4 credit hours[2]
- Any 4 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 hour[3]
- CPSC 4960, Senior Seminar: Ethics, 1 credit hour[4]

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):
- Either CPSC 3500 Design & Analysis of Algorithms, 4 credit hours OR
  CPSC 3520 Introduction to Artificial Intelligence, 4 credit hours
- And remaining 2-3 credit hours from courses numbered CPSC/ENGR 2000 and above.

Mathematics and Science Electives (6 hours):
- An additional 6 credit hours is required in combination from:
    - MATH 3020 and above
    - CHEM 2110 and above

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[1] This course fulfills the Quantitative Ways of Knowing requirement in the Liberal Arts Program.
[2] This course fulfills the Experiential Learning requirement in the Liberal Arts Program.
[3] This course fulfills the Speaking Intensive requirement in the Liberal Arts Program.
[4] This course fulfills one Writing Intensive requirement in the Liberal Arts Program.

Questions? Please contact the Department of Computer Science.

• PHYS 2250 and above

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

Proposed Course Sequence:
    Freshman: CPSC 2020, MATH 2010; CPSC 2030, MATH 2020, PHYS 2240
    Sophomore: CPSC 2100, 2500, MATH 3010; CPSC 2420, 2430, 2330, MATH 2200/CPSC 2250
    Junior: CPSC 3380, 3410, MATH 4010; CPSC 4420, CPSC 3500/3520, CPSC Elective
    Senior: CPSC 4430, 4950, Math/Science Elective; CPSC 4960, 4480/4800/4970, Math/Science Elective

Computer Science Major, Bachelor of Science Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
CPSC 2020 (Quant. Reason.)	4 Hours	CPSC 2030	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		

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

SEMESTER 5		SEMESTER 6	
CPSC 3380	4 Hours	CPSC 4420	4 Hours
CPSC 3410 (Exp. WoK)	4 Hours	CPSC 3500/3520	4 Hours
MATH 4010	4 Hours	CPSC Elective	3 Hours
Personal Wellness	2 Hours	Social & Behavioral Ways of Knowing	3 Hours
Civil Discourse & C.R.	2-4 Hours	Global/Intercultural Ways of Knowing	3 Hours

SEMESTER 7		SEMESTER 8	
CPSC 4950 (SI)	2 Hours	CPSC 4960 (WI)	1 Hours
CPSC 4430	4 Hours	CPSC 4480/4800/4970	4 Hours
Math/Science Elective	3-4 Hours	Math/Science Elective	3-4 Hours
Christian Ways of Knowing	3 Hours	Civic Ways of Knowing	3 Hours
Aesthetic Ways of Knowing	3 Hours	Writing Intensive	3 Hours

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