

**Computer Science Major, Bachelor of Science (72 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<sup>1</sup>
- CPSC 2030, Object-Oriented Analysis and Design, 4 credit hours
- CPSC 2100, Database Programming, 4 credit hours
- CPSC 2330, Web Application Development, 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 2150, Technology and Society, 2 credit hours
- CPSC 3410, Computer Networks, 4 credit hours
- CPSC 4420, Operating Systems, 4 credit hours
- CPSC 4430, Software Engineering, 4 credit hours<sup>2</sup>
- Any 3 credit hours from the following:
  - CPSC 4480, Technical Certification, 1 credit hour
  - CPSC 4800, Software Engineering Internship, 2-4 credit hours

**Mathematics and Science Core (17 credit hours):**

- MATH 2010, Calculus I, 4 credit hours
- MATH 2020, Calculus II, 4 credit hours
- MATH 2120, Introductory Statistics with Applications, 3 credit hours
- MATH 3010, Linear Algebra, 4 credit hours
- POSC 2420, Applied Statistics Lab, 2 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.

<sup>1</sup> This course fulfills the Quantitative Ways of Knowing requirement in the Liberal Arts Program.

<sup>2</sup> This course fulfills the Experiential Learning requirement in the Liberal Arts Program.

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 |
| H & A Ways of Knowing        | 4 Hours | ENGL 1120           | 3 Hours |

| SEMESTER 3      | 15      | SEMESTER 4                | 15      |
|-----------------|---------|---------------------------|---------|
| CPSC 2100/2330* | 4 Hours | CPSC 2150                 | 2 Hours |
| CPSC 2500       | 4 Hours | CPSC 2430                 | 2 Hours |
| MATH 3010       | 4 Hours | MATH 2120                 | 3 Hours |
| BIBL 2000       | 3 Hours | POSC 2420                 | 2 Hours |
|                 |         | Christian Ways of Knowing | 3 Hours |
|                 |         | H & A Ways of Knowing     | 3 Hours |

| SEMESTER 5        | 15      | SEMESTER 6                           | 16      |
|-------------------|---------|--------------------------------------|---------|
| CPSC 2100/2330*   | 4 Hours | Major Elective                       | 4 Hours |
| CPSC 2420         | 2 Hours | Major Elective                       | 3 Hours |
| CPSC 3410         | 4 Hours | Social + Behavioral Ways of Knowing  | 3 Hours |
| Personal Wellness | 2 Hours | CDCT                                 | 3 Hours |
| Additional Class  | 3 Hours | Global/Intercultural Ways of Knowing | 3 Hours |

| SEMESTER 7                 | 14      | SEMESTER 8       | 14      |
|----------------------------|---------|------------------|---------|
| CPSC 4430                  | 4 Hours | CPSC 4420        | 4 Hours |
| Major Elective             | 3 Hours | Major Elective   | 4 Hours |
| Scientific Ways of Knowing | 4 Hours | CPSC 4480/4800   | 3 Hours |
| H & A Ways of Knowing      | 3 Hours | Additional Class | 3 Hours |

\*CPSC 2100 offered in the fall of odd years, CPSC 2330 in the fall of even years