

COMPUTER SCIENCE (B.S.C.S.)

Required course work includes the university requirements (see regulation J-3 (<https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/>)) and:

| Code | Title | Hours |
|--|--|-------|
| Communications (two courses required) | | |
| COMM 101 | Fundamentals of Oral Communication | 3 |
| ENGL 317 | Technical Writing II | 3 |
| Computer Science First Year (three courses required) | | |
| CS 120 | Computer Science I | 4 |
| CS 121 | Computer Science II | 3 |
| CS 150 | Computer Organization and Architecture | 3 |
| Computer Science and Cybersecurity Second Year (four courses required) | | |
| CS 210 | Programming Languages | 3 |
| CS 240 | Computer Operating Systems | 3 |
| CS 270 | System Software | 3 |
| CYB 220 | Secure Coding and Analysis | 3 |
| Computer Science Third Year (four courses required) | | |
| CS 360 | Database Systems | 4 |
| CS 383 | Software Engineering | 4 |
| CS 385 | Theory of Computation | 3 |
| CS 395 | Analysis of Algorithms | 3 |
| Computer Science Fourth Year (four courses required) | | |
| CS 445 | Compiler Design | 4 |
| CS 480 | CS Senior Capstone Design I | 3 |
| CS 481 | CS Senior Capstone Design II | 3 |
| Upper-division Technical Elective Courses (four courses required, usually completed during third and fourth year) 12 | | |
| Complete any CS-300-level or CS-400-level or CYB-300-level or CYB-400-level course EXCEPT CS 398, CS 400, CS 401, CS 431, CS 499, CYB 400, CYB 401, CYB 480, CYB 481, CYB 498, CYB 499 for a total of 12 credits. | | |
| Mathematics (four courses required, usually completed during first and second year) | | |
| MATH 170 | Calculus I | 4 |
| MATH 175 | Calculus II | 4 |
| MATH 176 | Discrete Mathematics | 3 |
| MATH 330 | Linear Algebra | 3 |
| Statistics (one course required, usually completed during second or third year). Complete one of the following: 3 | | |
| STAT 251 | Statistical Methods | |
| STAT 301 | Probability and Statistics | |
| Natural Science with Lab for Science and Engineering Majors (two courses plus their respective labs required, usually completed during second, third, or fourth year). Complete two courses including their accompanying labs and from two different disciplines by choosing from the following list: 8 | | |
| <i>Biology</i> | | |
| BIOL 114 | Organisms and Environments | |

| | | |
|------------------------------|--|-----------|
| BIOL 115 & 115L | Cells and the Evolution of Life and Cells and the Evolution of Life Laboratory | |
| BIOL 227 | Anatomy and Physiology I | |
| BIOL 250 & BIOL 255 | General Microbiology and General Microbiology Lab | |
| <i>Botany</i> | | |
| PLSC 205 | General Botany | |
| REM 341 | Systematic Botany | |
| <i>Chemistry</i> | | |
| CHEM 111 & 111L | General Chemistry I and General Chemistry I Laboratory | |
| CHEM 112 & 112L | General Chemistry II and General Chemistry II Laboratory | |
| <i>Environmental Science</i> | | |
| ENVS 101 & ENVS 102 | Introduction to Environmental Science and Field Activities in Environmental Sciences | |
| <i>Geography</i> | | |
| GEOG 100 & 100L | Introduction to Planet Earth and Introduction to Planet Earth Lab | |
| <i>Geology</i> | | |
| GEOL 101 & 101L | Physical Geology and Physical Geology Lab | |
| GEOL 102 & 102L | Historical Geology and Historical Geology Lab | |
| <i>Physics</i> | | |
| PHYS 211 & 211L | Engineering Physics I and Laboratory Physics I | |
| PHYS 212 & 212L | Engineering Physics II and Laboratory Physics II | |
| <i>Soils</i> | | |
| SOIL 205 & SOIL 206 | The Soil Ecosystem and The Soil Ecosystem Lab | |
| Total Hours | | 89 |

Courses to total 120 credits for this degree, not counting ENGL 101, MATH 143, and other courses that might be required to remove deficiencies.

A minimum grade of 'C' is required in the following courses in order to graduate:

| Code | Title | Hours |
|----------|--|-------|
| CS 120 | Computer Science I | 4 |
| CS 121 | Computer Science II | 3 |
| CS 150 | Computer Organization and Architecture | 3 |
| CS 210 | Programming Languages | 3 |
| CS 240 | Computer Operating Systems | 3 |
| CS 270 | System Software | 3 |
| MATH 170 | Calculus I | 4 |
| MATH 176 | Discrete Mathematics | 3 |
| MATH 175 | Calculus II | 4 |

Students majoring in computer science must earn a grade of C or better in CS 120, CS 121, and CS 150 and a C or better in MATH 176 before registration is permitted in 200 level CS courses.

Students must consult with their advisors when selecting electives within the curriculum to help ensure that their career objectives are met.

| Fall Term 1 | | Hours |
|--|--|--------------|
| COMM 101 | Fundamentals of Oral Communication | 3 |
| CS 120 | Computer Science I | 4 |
| ENGL 101 | Writing and Rhetoric I | 3 |
| MATH 143 | College Algebra | 3 |
| MATH 144 | Analytic Trigonometry | 1 |
| Humanistic and Artistic Ways of Knowing Course | | 3 |
| Hours | | 17 |
| Spring Term 1 | | |
| ENGL 102 | Writing and Rhetoric II | 3 |
| CS 121 | Computer Science II | 3 |
| CS 150 | Computer Organization and Architecture | 3 |
| MATH 170 | Calculus I | 4 |
| MATH 176 | Discrete Mathematics | 3 |
| Hours | | 16 |
| Fall Term 2 | | |
| CS 210 | Programming Languages | 3 |
| MATH 175 | Calculus II | 4 |
| Science with Lab Course (from approved list above) | | 4 |
| Elective Course(s) | | 1 |
| Hours | | 12 |
| Spring Term 2 | | |
| CS 240 | Computer Operating Systems | 3 |
| CS 270 | System Software | 3 |
| CYB 220 | Secure Coding and Analysis | 3 |
| STAT 301 or STAT 251 | Probability and Statistics or Statistical Methods | 3 |
| Science with Lab Course (from approved list above) | | 4 |
| Hours | | 16 |
| Fall Term 3 | | |
| CS 383 | Software Engineering | 4 |
| CS 385 | Theory of Computation | 3 |
| MATH 330 | Linear Algebra | 3 |
| Major Technical Elective Course (UPDV Computer Science or Cybersecurity) | | 3 |
| Social and Behavioral Ways of Knowing Course | | 3 |
| Hours | | 16 |
| Spring Term 3 | | |
| CS 360 | Database Systems | 4 |
| CS 395 | Analysis of Algorithms | 3 |
| ENGL 317 | Technical Writing II | 3 |
| Major Technical Elective Course (UPDV Computer Science or Cybersecurity) | | 3 |
| Humanistic and Artistic Ways of Knowing Course | | 3 |
| Hours | | 16 |
| Fall Term 4 | | |
| CS 445 | Compiler Design | 4 |
| CS 480 | CS Senior Capstone Design I | 3 |
| Elective Course(s) | | 1 |
| American Diversity Course | | 3 |
| Hours | | 11 |
| Spring Term 4 | | |
| CS 481 | CS Senior Capstone Design II | 3 |
| Major Technical Elective Course (UPDV Computer Science or Cybersecurity) | | 3 |
| Major Technical Elective Course (UPDV Computer Science or Cybersecurity) | | 3 |
| International Course | | 3 |
| Social and Behavioral Ways of Knowing Course | | 3 |
| Hours | | 15 |
| Total Hours | | 119 |

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

1. Graduates of the program will be able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
2. Graduates of the program will be able to communicate effectively in a variety of professional contexts.
3. Graduates of the program will be able to analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
4. Graduates of the program will be able to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Graduates of the program will be able to function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Graduates of the program will be able to apply computer science theory and software development fundamentals to produce computing-based solutions.