

# CYBERSECURITY (B.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 |
|-------------|--|-------|
| COMM 101    | Fundamentals of Oral Communication         | 3     |
| CYB 110     | Cybersecurity and Privacy                  | 3     |
| CYB 210     | Cybersecurity Architectures and Management | 3     |
| CYB 220     | Secure Coding and Analysis                 | 3     |
| CYB 310     | Cybersecurity Technical Foundations        | 3     |
| CYB 330     | Networking and Control Systems             | 3     |
| CYB 340     | Network Defense                            | 3     |
| CYB 350     | Operating System Defense                   | 3     |
| CYB 380     | Cybersecurity Lab I                        | 3     |
| CYB 381     | Cybersecurity Lab II                       | 3     |
| CYB 401     | Cybersecurity as a Profession              | 1     |
| CYB 420     | Digital Forensics                          | 3     |
| CYB 440     | Software Vulnerability Analysis            | 3     |
| CYB 480     | Cybersecurity Senior Capstone Design I     | 3     |
| CYB 481     | Cybersecurity Senior Capstone Design II    | 3     |
| CS 112      | Computational Thinking and Problem Solving | 3     |
| CS 120      | Computer Science I                         | 4     |
| CS 121      | Computer Science II                        | 3     |
| CS 150      | Computer Organization and Architecture     | 3     |
| CS 240      | Computer Operating Systems                 | 3     |
| CS 270      | System Software                            | 3     |
| CS 383      | Software Engineering                       | 4     |
| ENGL 317    | Technical Writing II                       | 3     |
| MATH 160    | Survey of Calculus                         | 4     |
| or MATH 170 | Calculus I                                 |       |
| MATH 176    | Discrete Mathematics                       | 3     |
| PHIL 103    | Introduction to Ethics                     | 3     |
| STAT 251    | Statistical Methods                        | 3     |
| or STAT 301 | Probability and Statistics                 |       |

**Total Hours 82**

## Courses to total 120 credits for this degree

| Fall Term 1                       |  | Hours     |
|-----------------------------------|--|-----------|
| CYB 110                           | Cybersecurity and Privacy                  | 3         |
| CS 112                            | Computational Thinking and Problem Solving | 3         |
| MATH 143                          | College Algebra                            | 3         |
| ENGL 101                          | Writing and Rhetoric I                     | 3         |
| PHIL 103                          | Introduction to Ethics                     | 3         |
| <b>Hours</b>                      |  | <b>15</b> |
| Spring Term 1                     |  | Hours     |
| CS 120                            | Computer Science I                         | 4         |
| MATH 176                          | Discrete Mathematics                       | 3         |
| COMM 101                          | Fundamentals of Oral Communication         | 3         |
| ENGL 102                          | Writing and Rhetoric II                    | 3         |
| Scientific Ways of Knowing Course |  | 4         |
| <b>Hours</b>                      |  | <b>17</b> |

| Fall Term 2                                    |  | Hours |
|--|--|-------|
| CS 121   | Computer Science II                        | 3     |
| CS 150   | Computer Organization and Architecture     | 3     |
| CYB 210  | Cybersecurity Architectures and Management | 3     |
| Humanistic and Artistic Ways of Knowing Course |  | 3     |
| MATH 160 OR MATH 170                           |  | 3     |

**Hours 15**

| Spring Term 2                     |                            | Hours |
|-----------------------------------|----------------------------|-------|
| CS 240                            | Computer Operating Systems | 3     |
| CS 270                            | System Software            | 3     |
| CYB 220                           | Secure Coding and Analysis | 3     |
| Scientific Ways of Knowing Course |                            | 4     |
| STAT 251 OR STAT 301              |                            | 3     |

**Hours 16**

| Fall Term 3                                  |                                     | Hours |
|--|-------------------------------------|-------|
| CYB 310                                      | Cybersecurity Technical Foundations | 3     |
| CYB 330                                      | Networking and Control Systems      | 3     |
| CYB 380                                      | Cybersecurity Lab I                 | 3     |
| ENGL 317                                     | Technical Writing II                | 3     |
| Social and Behavioral Ways of Knowing Course |                                     | 3     |

**Hours 15**

| Spring Term 3             |                          | Hours |
|---------------------------|--------------------------|-------|
| CS 383                    | Software Engineering     | 4     |
| CYB 340                   | Network Defense          | 3     |
| CYB 350                   | Operating System Defense | 3     |
| CYB 381                   | Cybersecurity Lab II     | 3     |
| American Diversity Course |                          | 3     |

**Hours 16**

| Fall Term 4                                  |  | Hours |
|--|--|-------|
| CYB 401                                      | Cybersecurity as a Profession          | 1     |
| CYB 420                                      | Digital Forensics                      | 3     |
| CYB 480                                      | Cybersecurity Senior Capstone Design I | 3     |
| Social and Behavioral Ways of Knowing Course |  | 3     |
| Elective Course                              |  | 3     |

**Hours 13**

| Spring Term 4        |   | Hours |
|----------------------|---|-------|
| CYB 440              | Software Vulnerability Analysis         | 3     |
| CYB 481              | Cybersecurity Senior Capstone Design II | 3     |
| International Course |   | 3     |
| Elective Course      |   | 3     |
| Elective Course      |   | 1     |

**Hours 13**

**Total Hours 120**

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.

Graduates of the program will have an ability to:

1. Analyze a complex computing and information management problems and to apply principles of cybersecurity, and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of cyber security.
3. Communicate effectively in a variety of professional contexts.

4. Recognize professional responsibilities and make informed judgments in cybersecurity practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to cybersecurity.
6. Apply security principles and practices to maintain operations in the presence of risks and threats.