

# CYBERSECURITY

## Requirements

### Prerequisites

(may already be required by degree program):

| Code      | Title   | Hours |
|-----------|---|-------|
| CSSE 220  | Object-Oriented Software Development <sup>1</sup> | 4     |
| MA 276    | Introduction to Proofs <sup>2</sup>               | 4     |
| ENGL H290 | Technical & Professional Communication            | 4     |

<sup>1</sup> (requires CSSE 120 Introduction to Software Development or exempt.)  
Degrees requiring a programming class might allow the use of CSSE 120 Introduction to Software Development as a substitute for the named course. Consult the major program's advisor for details.

<sup>2</sup> (requires MA 112 Calculus II + MA 111 Calculus I or exempt) **only if** selecting MA 479 Cryptography (see below)

One to eight credits of other cybersecurity-related classes or electives such as independent study, directed research, thesis, or capstone projects (approved by the minor advisor)

1-8

## Expected Cybersecurity Content: 20cr (Category B and C)

Degree separation requirement of 12 credits: At most 8 credits of the 20 credits of the Core/Cyber Elective course work (categories B and C above) can be used to satisfy degree requirements for any major or any other minor sought by the student. The remaining 12 credit hours can only be used to satisfy technical or free electives within the primary major.

## CATEGORY A – [4 cr] Ethics

| Code      | Title   | Hours |
|-----------|---|-------|
| PHIL H202 | Business & Engineering Ethics (or equivalent approved by the minor advisor) | 4     |

## CATEGORY B – [12 cr] Core

(take all of these):

| Code                         | Title   | Hours |
|------------------------------|---|-------|
| CSSE 140<br>& CSSE 141       | Practical Security I<br>and Practical Security II | 2     |
| CSSE 142<br>or CSSE 145      | Practical Security III<br>Cybersecurity Seminar   | 2     |
| Select one of the following: |   | 4     |
| CSSE 340                     | Foundations of Cybersecurity (CSSE majors)        | 4     |
| CSSE 240                     | Principles of Cybersecurity (non-CSSE majors)     |       |
| CSSE 343<br>or MA 479        | Cybercrime & Digital Forensics<br>Cryptography    | 4     |

## CATEGORY C – [choose 8 cr] additional Cyber Electives

A maximum 4cr may be from classes numbered below 300

| Code                  | Title   | Hours |
|-----------------------|---|-------|
| CSSE 343<br>or MA 479 | Cybercrime & Digital Forensics<br>Cryptography                                    | 4     |
| CSSE 490              | Special Topics in Computer Science (Advanced crypto)                              | 4     |
| ECE 497               | Special Topics in Electrical Engineering (Malware Analysis & Reverse Engineering) | 4     |
| CSSE 290              | Special Topics in Computer Science (CTF Competition Class or similar elective)    | 4     |
| CSSE 490              | Special Topics in Computer Science (Blockchain and Security)                      | 4     |
| CSSE 490              | Special Topics in Computer Science (Network Security)                             | 4     |