

# COMPUTER INFORMATION TECHNOLOGY MAJOR: CYBERSECURITY OPTION (B.S.)

<https://cps.unh.edu/online/program/bs/computer-information-technology-cybersecurity-option>

## Description

The major in Computer Information Technology focuses on information, its management and processing within an organization, and the application of technology to create, exchange, store, and use information in that context. The focus is on the business use of information and the application of computing technology. Graduates will typically follow career paths as applications development programmers, planners and designers of information systems, and information systems managers within organizations. The degree provides versatility through a best practices approach to the core areas of Information Technology.

## Requirements

### Degree Requirements

**Minimum Credit Requirement:** 120 credits

**Minimum Residency Requirement:** 30 credits must be taken at UNH

**Minimum Cumulative GPA:** 2.0 is required for conferral\*

**Core Curriculum Required:** General Education Program

Major, Option and Elective Requirements as indicated.

*\*GPA: Major and any state certification GPA requirements may be higher and are indicated in program details.*

A minimum grade of C- is required in all Major coursework. Some programs may have higher grade requirements for Major coursework as noted in the Major requirements section below. Students are allowed a maximum of two course overlaps. Overlaps can be used between Major, Minor, and General Education requirements with only 8 credits overlapped between the Major and Minor. Please note that Option requirements are considered part of the Major. Students must complete 16 upper-level credits in majors within the College of Professional Studies, Online.

### General Education Program Requirements

A minimum grade of D- is required in all General Education coursework. Students are allowed a maximum of two course overlaps. Overlaps can be used between Major, Minor and General Education requirements with only 8 credits overlapped between the Major and Minor.

All General Education requirements must be taken prior to the capstone.

Code	Title	Credits
ENG 420	The Writing Process	4
COM 460	Interpersonal Communication and Group Dynamics	4
COM 480	Visual Communication	4
CRIT 501	Introduction to Critical Inquiry	4

Select one of the following:		4
MTH 402	Math for Our World	
MTH 504	Statistics	
MTH 510	Pre-Calculus	
Knowledge of Human Behavior & Social Systems		4
Knowledge of the Physical & Natural World		4
Knowledge of Human Thought & Expression		4
CRIT 602	Advanced Critical Analysis and Strategic Thinking	4
IDIS 601 A	Interdisciplinary Seminar: Being Happy	4
or IDIS 601 B	Interdisciplinary Seminar: Business of Beer	
or IDIS 601 C	Interdisciplinary Seminar: Paranormal Activities	
<b>Total Credits</b>		<b>40</b>

## Writing Program Requirements

All bachelor's degree candidates are required to complete four writing intensive courses as part of the University [Writing Program Requirements](#) as follows:

Code	Title	Credits
ENG 420	The Writing Process	
One Writing Intensive course in the Major		
One Writing Intensive course at the 600-level or above		
One Additional Writing Intensive Course		

*Writing Intensive courses are identified with the label "Writing Intensive Course" in the "Attributes" section of the course description and/or a W following the course number.*

## Major Requirements

Code	Title	Credits
<b>Major in Computer Information Technology</b>		
<i>Foundation Courses</i>		
CMPL 415	Programming Fundamentals	4
CMPL 512	Advanced Software Tools	4
CMPL 525	Foundations of Cybersecurity	4
<i>Intermediate Courses</i>		
CMPL 614	Computer and Network Systems	4
CMPL 622	Human Computer Interaction	4
MTH 504	Statistics	4
<i>Advanced Courses</i>		
CMPL 620	Virtualization and Cloud Computing	4
CMPL 641	Database Management Systems	4
CMPL 642	Systems Analysis and Design	4
<i>Option in Cybersecurity</i>		
CMPL 564	Introduction to Cryptography	4
CMPL 566	Security Risk Assessment	4
CMPL 640	Digital Forensics	4
CMPL 645	Ethical Hacking	4
CMPL 744	Cybersecurity Law	4
<i>Integrative Capstone</i>		
CMPL 795	Integrative Capstone: Internship in Computer Information Tech and Tech Management	4
or CMPL 797	Integrative Capstone: Best Practices in Information Technology	

## Electives

Open electives are courses students will need to take in addition to their general education and major requirements in order to satisfy the remaining credit totals for their programs. Open electives are defined as any credit course offered by the College not already included in the student's general education, major, option or minor. Students will need 120 credits total to graduate with a bachelor's degree from the Online Division of the College of Professional Studies.

## Degree Plan

This degree plan is a sample and does not reflect the impact of transfer credit or current course offerings. UNH CPS Online undergraduate students should develop individual academic plans with their academic advisor during their first year at UNH.

## Sample Course Sequence

### First Year

Fall		Credits
CMPL 415	Programming Fundamentals	4
CMPL 525	Foundations of Cybersecurity	4
ENG 420	The Writing Process	4
General Education Course		4
<b>Credits</b>		<b>16</b>
Spring		
CMPL 512	Advanced Software Tools	4
COM 460	Interpersonal Communication and Group Dynamics	4
CRIT 501	Introduction to Critical Inquiry	4
MTH 402	Math for Our World	4
or MTH 504	or Statistics	
or MTH 510	or Pre-Calculus	
<b>Credits</b>		<b>16</b>

### Second Year

Fall		
CMPL 614	Computer and Network Systems	4
COM 480	Visual Communication	4
General Education Course		4
Elective		4
<b>Credits</b>		<b>16</b>
Spring		
CMPL 622	Human Computer Interaction	4
MTH 504	Statistics	4
General Education Course		4
Elective		4
<b>Credits</b>		<b>16</b>

### Third Year

Fall		
CMPL 564	Introduction to Cryptography	4
CMPL 566	Security Risk Assessment	4
CMPL 637	Python Programming II	4
Elective		4
<b>Credits</b>		<b>16</b>
Spring		
CMPL 641	Database Management Systems	4
CMPL 640	Digital Forensics	4
CMPL 645	Ethical Hacking	4
CRIT 602	Advanced Critical Analysis and Strategic Thinking	4
<b>Credits</b>		<b>16</b>

### Fourth Year

Fall		
CMPL 642	Systems Analysis and Design	4
CMPL 744	Cybersecurity Law	4
IDIS 601A	Interdisciplinary Seminar: Being Happy	4
or IDIS 601B	or Interdisciplinary Seminar: Business of Beer	
or IDIS 601C	or Interdisciplinary Seminar: Paranormal Activities	
Elective		4
<b>Credits</b>		<b>16</b>
Spring		
CMPL 795	Integrative Capstone: Internship in	4
or CMPL 797	Computer Information Tech and Tech Management	
	or Integrative Capstone: Best Practices in Information Technology	
Elective		4
<b>Credits</b>		<b>8</b>
<b>Total Credits</b>		<b>120</b>

## Student Learning Outcomes

## Program Learning Outcomes

- Analyze and resolve security issues in networks and computer systems to secure an IT infrastructure.
- Develop policies and procedures to manage enterprise security risks.
- Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities, and training.
- Interpret and forensically investigate security incidents.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal principles.