COMPUTER INFORMATION TECHNOLOGY MAJOR: SOFTWARE DEVELOPMENT OPTION (B.S.)

https://cps.unh.edu/online/program/bs/computer-information-technology-software-development-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. Students are allowed a maximum of two course overlaps. Overlaps can be used between Major, Minor, and General Education requirements with only one overlap being utilized 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 one overlap being utilized between the Major and Minor.

All General Education requirements, including CRIT 602 Advanced Critical Analysis and Strategic Thinking and IDIS 601 Interdisciplinary Seminar, 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	Interdisciplinary Seminar	4
Total Credits		**40**

Major Requirements

Prior to capstone enrollment, students are expected to complete the majority of their required major courses along with CRIT 602 Advanced Critical Analysis and Strategic Thinking and IDIS 601 Interdisciplinary Seminar. Students should consult with their advisor regarding specific major courses that may be completed with their capstone. Academic Advisor approval is required for registration to be processed.

Code	Title	Credits
Major in Computer Information Technology		
Foundation Courses		
CMPL 415	Programming Fundamentals	4
CMPL 512	Advanced Software Tools	4
CMPL 525	Foundations of Cybersecurity	4
Intermediate Courses		
CMPL 614	Computer and Network Systems	4
CMPL 622	Human Computer Interaction	4
MTH 504	Statistics	4
Advanced Courses		
CMPL 620	Virtualization and Cloud Computing	4
CMPL 641	Database Management Systems	4
CMPL 642	Systems Analysis and Design	4
Option in Software Development		
CMPL 530	Introduction to Programming with Python	4
CMPL 637	Intermediate Programming with Python	4
CMPL 660	Mobile Application Development	4
CMPL 665	Web Application Development	4
CMPL 725	Advanced Programming with Python	4
Integrative Capstone:		
CMPL 795	Integrative Capstone: Internship in Computer Information Tech and Tech Management	4
or CMPL 797	Integrative Capstone: Best Practices in Information Technology	
Total Credits		**60**

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
	Credits	**16**
Spring		
CMPL 512	Advanced Software Tools	4
COM 460	Interpersonal Communication and Group Dynamics	4
CRIT 501	Introduction to Critical Inquiry	4
MTH 402 or MTH 504 or MTH 510	Math for Our World or Statistics or Pre-Calculus	4
	Credits	**16**
Second Year		
Fall		
CMPL 614	Computer and Network Systems	4
COM 480	Visual Communication	4
General Education Course		4
Elective		4
	Credits	**16**
Spring		
CMPL 622	Human Computer Interaction	4
MTH 504	Statistics	4
General Education Course		4
Elective		4
	Credits	**16**
Third Year		
Fall		
CMPL 530	Introduction to Programming with Python	4
CMPL 620	Virtualization and Cloud Computing	4
CMPL 637	Intermediate Programming with Python	4
Elective		4
	Credits	**16**
Spring		
CMPL 641	Database Management Systems	4
CMPL 660	Mobile Application Development	4
CMPL 665	Web Application Development	4
CRIT 602	Advanced Critical Analysis and Strategic Thinking	4
	Credits	**16**
Fourth Year		
Fall		
CMPL 642	Systems Analysis and Design	4
CMPL 725	Advanced Programming with Python	4
IDIS 601	Interdisciplinary Seminar	4
Elective		4
	Credits	**16**
Spring		
CMPL 797 or CMPL 795	Integrative Capstone: Best Practices in Information Technology or Integrative Capstone: Internship in Computer Information Tech and Tech Management	4
Elective		4
	Credits	**8**
	Total Credits	**120**

Student Learning Outcomes

- Possess proficiency in information technology, including programming fundamentals, software, network systems, and databases, as well as their relevant web interfaces and applications.
- Demonstrate both practical skills and theoretical knowledge of information technology, enabling graduates to make a professional contribution to organizations across sectors.
- Engage in effective critical thinking and problem-solving in the field of information technology.
- Assess the needs of technology users and articulate appropriate strategies for meeting those needs through hardware and software.