

# INFORMATION TECHNOLOGY: SOFTWARE DEVELOPMENT (B.S.)

The major in 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.

Students will have the opportunity to:

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

## Degree Requirements

Minimum Credit Requirement: 120 credits

Minimum Residency Requirement: 30 credits must be taken at Granite State College

A minimum GPA of 2.0 is required for conferral

Requirements	Credit Hours
General Education Requirements (p. 1)	40
Major Requirements (p. 1)	60
Electives	20
Total	120

## General Education Requirements

A minimum grade of C 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 (4 s.h.) and IDIS 601 Interdisciplinary Seminar (4 s.h.), must be taken prior to the capstone.

Code	Title	Credits
ENG 500	The Writing Process	4
COMM 542	Interpersonal Communication and Group Dynamics	4
COMM 543	Visual Communication	4
CRIT 501	Introduction to Critical Inquiry	4
Select one of the following:		4
MATH 502	Math for Our World	

MATH 504	Statistics	
MATH 510	Pre-Calculus	
Knowledge of Human Behavior & Social Systems ( <a href="https://catalog.granite.edu/undergraduate/degrees-programs-study/general-education-requirements/#human-behavior">https://catalog.granite.edu/undergraduate/degrees-programs-study/general-education-requirements/#human-behavior</a> )		4
Knowledge of the Physical & Natural World ( <a href="https://catalog.granite.edu/undergraduate/degrees-programs-study/general-education-requirements/#physical-natural-world">https://catalog.granite.edu/undergraduate/degrees-programs-study/general-education-requirements/#physical-natural-world</a> )		4
Knowledge of Human Thought & Expression ( <a href="https://catalog.granite.edu/undergraduate/degrees-programs-study/general-education-requirements/#human-thought">https://catalog.granite.edu/undergraduate/degrees-programs-study/general-education-requirements/#human-thought</a> )		4
CRIT 602	Advanced Critical Analysis and Strategic Thinking	4
IDIS 601	Interdisciplinary Seminar	4
<b>Total Credits</b>		<b>40</b>

## Major Requirements

A minimum grade of C is required in all Major and Concentration coursework. Students are allowed a maximum of two course overlaps. Overlaps can be used between Major/Concentration, Minor and General Education requirements with only one overlap being utilized between the Major and Minor.

CRIT 602 Advanced Critical Analysis and Strategic Thinking (4 s.h.), IDIS 601 Interdisciplinary Seminar (4 s.h.) and all major requirements must be completed prior to enrollment in the integrative Capstone. Academic Advisor approval is required for registration to be processed.

A minimum grade of C is required in all Concentration coursework. Students are allowed a maximum of one course overlap between Major/Concentration and Minor Areas.

Code	Title	Credits
<b>Major in Information Technology</b>		
<i>Foundation Courses</i>		
CMPL 515	Programming Fundamentals	4
CMPL 525	Foundations of Cybersecurity	4
CMPL 612	Advanced Software Tools	4
<i>Intermediate Courses</i>		
CMPL 614	Computer and Network Systems	4
CMPL 622	Human Computer Interaction	4
MATH 504	Statistics	4
<i>Advanced Courses</i>		
CMPL 620	Virtualization and Cloud Computing	4
MGMT 622	Database Management Systems	4
MGMT 623	Systems Analysis and Design	4
<i>Concentration in Software Development</i>		
CMPL 530	Introduction to Programming with Python	4
CMPL 537	Intermediate Programming with Python	4
CMPL 625	Advanced Programming with Python	4
CMPL 633	Mobile Application Development	4
CMPL 638	Web Application Development	4
<i>Integrative Capstone:</i>		

CMPL 650	Best Practices in Information Technology	4
<b>Total Credits</b>		<b>60</b>

## 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, concentration or minor. Students will need 120 credits total to graduate with a bachelor's degree.