Computing Technology BS

The B.S. in Computing Technology is designed for those interested in broad and deep computing education but without some traditional advanced courses. This program is designed for students who want to focus on technologies, tools, and applications and transition to fulfilling careers. Students completing this degree can also further specialize by completing one of the certificates and find in-demand careers in many related areas such as cybersecurity, networks, internet programming, software and mobile apps development, data science, AI, graphics, or pursue additional graduate studies. The program can be completed in the evening, and most courses can also be completed online.

General Education Requirements

All department majors must satisfy the university and appropriate school or college general education requirements.

Satisfactory/Unsatisfactory Restrictions

Courses required for a major program or a certificate cannot be taken on a satisfactory/unsatisfactory basis.

Computer Science Courses

Courses required for a major program or a certificate must be completed with a grade of C- or better. At least four courses numbered 3000 or above must be taken in residence for a major program. Students must have a minimum of 2.0 grade point average in the CMP SCI courses.

All prerequisite courses must be passed with a grade of C- or better unless explicitly stated otherwise.

Students who are ready to begin their program with CMP SCI 2250, Programming and Data Structures, but lack proper credit or transfer for the prerequisite CMP SCI 1250, Introduction to Computing, will be granted credit for CMP SCI 1250 once they complete CMP SCI 2250 with a grade of C- or better. Interested students must reach out to their faculty advisor.

Courses that are prerequisites for higher-level courses may not be taken for credit if the higher-level course has been satisfactorily completed.

Candidates for the B. S. Computing Technology degree must complete the following courses:

Core		
CMP SCI 1000	Computer Science Experiences	1
CMP SCI 1250	Introduction to Computing	3
CMP SCI 2250	Programming and Data Structures	3
CMP SCI 2261	Object-Oriented Programming	3
CMP SCI 2700	Computer Organization and Architecture	3
CMP SCI 2751	File Systems, Operations, and Tools	3
CMP SCI 3010	Web Full Stack Development	3
CMP SCI 3702	Introduction to Cyber Threats and Defense	3
or CMP SCI 3780	Software Security	
CMP SCI 4010	Web Development with Java	3
CMP SCI 4500	Introduction to the Software Profession	3
CMP SCI 4610	Database Management Systems	3
INFSYS 3820	Introduction to Systems Administration	3
INFSYS 3844	Developing Business Applications in .NET	3
Computer Science Electives		
Select six CMP SCI courses, numbered 2000 and above. May use up to two INFSYS courses as part of this requirement with permission of the department chair.)		18
Mathematics and Statistics		
MATH 1320	Introduction to Probability and Statistics	3
MATH 3000	Discrete Structures	3
MATH 1100	Basic Calculus	3-5
or MATH 1800	Analytic Geometry and Calculus I	
Additional Skills		
ENGL 3130	Technical Writing	3
Total Hours		**67-69**

There are no related area requirements for majors in Computing Technology.

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Apply algorithmic principles to solve a variety of computational problems
- Analyze computing problems, their size and scope, and input-output requirements
- Compare alternative solutions to computing problems
- Use multiple general-purpose programming languages for solving computational problems
- Design, implement (code) and document solutions to computational problems, especially for business applications
- Design, evaluate, and manage information technology infrastructure in an organization
- Create secure software systems that meet specified needs
- Work effectively in teams to design and implement solutions to computational problems
- Effectively communicate computing technology concepts and solutions, verbally and in writing
- Recognize and promote the professional, social, ethical and legal issues and responsibilities in the computing / software profession

Sample Four Year Plan

First Year

Fall	Hours	Spring	Hours
INTDSC 1003[1]	1	CMP SCI 1250	3
CMP SCI 1000	1	MATH 1800	5
ENGL 1100	3	CORE - American History and Government	3
MATH 1030	3	EXPLORE - Humanities and Fine Arts	3
MATH 1035	2	EXPLORE - Social Sciences	3
EXPLORE - Humanities and Fine Arts	3		

EXPLORE - Social Sciences	3		
	16		**17**

Second Year

Fall	Hours	Spring	Hours
CMP SCI 2250	3	CMP SCI 2261	3
CMP SCI 2700	3	CMP SCI 2750	3
MATH 1320	3	CMP SCI 3010	3
MATH 3000	3	CORE - Communication Proficiency	3
Cultural Diversity Requirement	3	EXPLORE - Social Sciences	3
	15		**15**

Third Year

Fall	Hours	Spring	Hours
CMP SCI 4010	3	INFSYS 3868	3
CMP SCI 3000-level course	3	CMP SCI 3702	3
INFSYS 3844	3	CMP SCI or INFSYS 3000-level course	3
ENGL 3130	3	EXPLORE - Humanities and Fine Arts	3
EXPLORE - Humanities and Fine Arts	3	Elective or minor	3
	15		**15**

Fourth Year

Fall	Hours	Spring	Hours
CMP SCI 4610	3	CMP SCI 4500	3
CMP SCI or INFSYS 3000-level course	3	CMP SCI 3000-level course	3
CMP SCI 3000-level course	3	CMP SCI 3000-level course	3
Elective or minor	3	Elective or minor	3
Elective or minor	3	Elective or minor	1
	15		**13**

Total Hours: 121

[1] INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.