

Computer Science

Degree Type

Associate in Science

The Computer Science Curriculum provides a strong foundation for students interested in transferring to a bachelor's degree in computer science or other computer-related fields or entering the workforce. The combination of theoretical and applied courses provides the student with the concepts and reinforces them with hands-on experience. The curriculum has been strongly influenced by the Association of Computing Machinery's (ACM) guidelines for associate degrees in software. Students completing this curriculum will have knowledge in the following areas:

- Programming language such as C++ and Java
- Data Structures such as stacks, queues, and linked lists
- Object oriented programming
- Systems Analysis based on UML
- Database design and management

Technical Standards: Please refer to Technical Standards for details regarding this program.

At the completion of the degree in Software Development, graduates will be able to:

1. Apply critical-thinking skills to identify, analyze and solve problems.
2. Communicate software development related information effectively to a diverse audience using visual and written modes.
3. Demonstrate the ability to apply all facets of the software development life cycle during a project.
4. Demonstrate the ability to follow a systematic progression of software development and refinement when designing and developing software for a project.
5. Participate effectively as a member of a software development team.
6. Articulate an understanding of the need for lifelong learning.
7. Develop software programs with up-to-date tools and techniques of the discipline.

In addition, the graduate will be able to demonstrate competency in the general education outcomes.

First Year - Fall Semester

Item #	Title	Class Hours	Lab Hours	Credits
ENGL101N	College Composition	4	0	4
CSCI106N	Introduction to Computer Science	3	0	3
CSCI161N	Introduction to Programming	2	2	3
	MATH110N or MATH120N or MATH210N			4
	Humanities/Fine Arts/Philosophy or Global Awareness			3

First Year - Spring Semester

Item #	Title	Class Hours	Lab Hours	Credits
CSCI140N	Essentials of System Analysis & Design	2	2	3
CSCI170N	Linux Essentials	2	2	3
CSCI175N	Programming Using C++	2	2	3
	MATH120N or MATH210N or MATH211N			4
	English/Communications Core and Elective Requirements			3

Second Year - Fall Semester

Recommended Lab Science courses are Calculus-Based Physics I and Physics II for Associate in Science Degree in Computer Science and Mathematics

Item #	Title	Class Hours	Lab Hours	Credits
	CSCI109N or CSCI120N			3
CSCI207N	Database Design & Management	2	2	3
CSCI230N	Object Oriented Programming Using: C++	2	2	3
MATH170N	Discrete Mathematics	4	0	4
	Science Core Requirement			4

Second Year - Spring Semester

For Computer Science Degree, Includes CSCI, CSCN, ELET, MATH, or BCPT courses or [PHYS130N](#), [PHYS131N](#), [PHYS230N](#) or [PHYS231N](#).

Item #	Title	Class Hours	Lab Hours	Credits
CSCI278N	Data Structures Using C++	2	2	3
	Elective in Major			3
	CSCI290N or CSCI285N			3
	Behavioral Social Science Core Requirement			3
Total Credits				64