

# COMPUTER SCIENCE: SOFTWARE ENGINEERING, AAS

**Program code:** CSSE-AAS

**Location:** Gateway, Housatonic, Norwalk, Three Rivers

## Program Description

The program emphasizes the complete lifecycle of the software development process. Students learn how to design, develop, test, deploy, and maintain software using rigorous software engineering practices. They are taught how to leverage technology to create flexible and scalable applications and to address the challenges that arise during the development process. Also, the program exposes students to a range of other disciplines, such as the physical sciences, social sciences, and humanities so they gain an understanding of the real-world scenarios that make up the software engineering environment.

## Learning Outcomes

Upon successful completion of this program, graduates will be able to:

1. Demonstrate an understanding of connections between various platforms and programming languages;
2. Work with and study the underlying technologies that support the internet;
3. Demonstrate the ability to use an IDE (integrated development environment);
4. Demonstrate the use of OOP (object-oriented programming) techniques in program design and development;
5. Demonstrate writing, compiling and executing code in Object Oriented programming languages;
6. Test programs and troubleshoot simple problems;
7. Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
8. Produce logical software solutions to problems.

## Degree Requirements

Code	Title	Credits
<b>General Education Courses</b>		
ENG 1010	Composition	3
MATH 2600	Calculus I	4
Elective ARHX - Arts & Humanities Course		3-4
BIO 1210	General Biology I	4
HIST 1015	US History to 1877	3
or HIST 1016	US History from Reconstruction	
COMM 1301	Public Speaking	3
CCS 1001	College and Career Success	3
<b>Program Courses</b>		
CSC 1201	Introduction to Programming	4
CSC 2219	Introduction to Bioinformatics	3
CSC 2213	Object Oriented Programming	4
CSC 1231	Database Development and Design I	4

CSC 2218	Software Engineering Methods	4
CIS 1104	Introduction to Operating Systems	3
CSC 1271	Web Development and Design I	4
CSC 2272	Web Development and Design II	4
CSC 2276	XML for the Worldwide Web	4
Directed Elective (Any CSC or CST or MATH 2000-level or higher)		3-4

**Total Credits** **60-62**

There are four Associate degree options within Computer Science. Students may earn only one degree but can earn additional certificates.

- Computer Science: Mobile Programming, AAS
- Computer Science: Relational Database Development Certificate
- Computer Science: Smartphone Application Development
- Computer Science: Software Development
- Computer Science: Web Developer Certificate
- Computer Science: Web Development, AAS