

Software Development Technology (A.A.S.)

Division of Mathematics, Engineering Technologies and Computer Sciences — Curriculum Code: 2316

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

The Bureau of Labor Statistics forecasts that the employment of software developers is projected to grow 22% from 2012 to 2022, much faster than the average for all other occupations. The main reason for the rapid growth is a large increase in the demand for computer software. The Software Development Technology program introduces students to the fundamental concepts of programming with an emphasis on the whole of the software development process. Large software systems used in a wide variety of scientific, engineering, and business industries demand a disciplined and structured approach in the development of easy-to-maintain systems. The Software Development Technology program develops students' core skills that will be used throughout their careers.

Program Requirements

GENERAL EDUCATION REQUIREMENTS

Written & Oral Communication (6 credits)

[ENG 101](#) (3 credits)

[ENG 102](#) or [ENG 105](#) (one 3-credit course)

Quantitative Knowledge & Skills and Scientific Knowledge and Reasoning (8 credits)

[MTH 100](#) (4 credits)

AND

Choose one mathematics course or one lab science course from the following: MTH 113, MTH 119, MTH 120, MTH 121, MTH 122, MTH 127, MTH 136, MTH 213, MTH 221, MTH 222, or MTH 239; BIO 101, BIO 102, BIO 103, BIO 104, BIO 121, BIO 122, CHM 101, CHM 102, CHM 103, CHM 104, PHY 101, PHY 102, PHY 103, PHY 104, PHY 113, or PHY 114 (one 4-credit course)

Society & Human Behavior (3 credits)

Choose one of the following courses: [ANT 101](#)[ANT 105](#)[ECO 101](#)[ECO 102](#)[POL 101](#)[POL 104](#)[PSY 101](#)[PSY 102](#)[PSY 219](#)[SOC 101](#)[SOC 108](#) or [SOC 219](#) (one 3-credit courses)

Historical Perspective (3 credits)

Choose one of the following history courses: [HST 101](#)[HST 102](#)[HST 111](#)[HST 112](#)[HST 121](#)[HST 122](#)[HST 131](#)[HST 132](#)[HST 134](#)[HST 135](#)[HST 136](#)[HST 137](#)[HST 161](#) or [HST 162](#) (one 3-credit course)

MAJOR COURSE REQUIREMENTS (31 CREDITS)

CSC 104 Network Fundamentals (3 credits)
CSC 113 Introduction to Linux/Unix Operation System (4 credits)
CSC 151 Intro. to Developing Web Applications (3 credits)
CSC 237 Enterprise Java Programming (4 credits)
CSC 231 Database Design (4 credits)
CSC 251 Web Application Development (4 credits)
CSC 255 Mobile Application Development with Android (4 credits)
CSC 232 Advanced Database Management (4 credits)

ADDITIONAL COURSE REQUIREMENTS

CSC 113 Intro. to Linux/Unix Operation System or
CSC 114 Computer Network or
CSC 116 Intro. to Computer and Network Security (4 credits)
CSC 253 Intro. to System and Cloud Administration (4 credits)
CSC 250 IT Capstone Project (3 credits) or
CSC 260 Internship (3 credits) or
Approved 3-4 credit Technical Course

RECOMMENDED SEQUENCE OF COURSES

First Semester

ENG 101 College Composition I (3 credits)
CSC 104 Network Fundamentals (3 credits)
CSC 137 Introduction to Programming in Java (4 credits)
MTH 100 Introductory College Mathematics (4 credits)

Second Semester

Quantitative Knowledge & Skills or Scientific Knowledge & Reasoning mathematics or lab science requirement (4 credits)
CSC 151 Intro. to Developing Web Applications (3 credits)
CSC 113 Intro. to Linux/Unix Operating System or
CSC 114 Computer Networks or
CSC 116 Intro. to Computer and Network Security (4 credits)
CSC 237 Enterprise Java Programming (4 credits)

Summer

Humanities (3 credits)

Third Semester

Social Sciences (3 credits)
CSC 231 Database Design (4 credits)
CSC 251 Web Application Development (4 credits)
CSC 255 Mobile Application Development with Android (4 credits)

Fourth Semester

Communications (3 credits)
CSC 232 Advanced Database Management (4 credits)
CSC 253 Intro. to System and Cloud Administration (4 credits)

CSC 250 IT Capstone Project (3 credits) or
CSC 260 Internship (3 credits) or
Approved 3-4 credit Technical Course

NOTES:

(1) The two General Education Integrated Course Goals, Ethical Reasoning & Action and Information Literacy, are both addressed by the required curriculum described above, regardless of specific choices made by the individual student.

(2) This plan assumes the completion of all required developmental courses in Reading, English, and Mathematics as well as other [pre-requisites](#) and [co-requisites](#) for some of the courses, as listed in the Course Descriptions section.