Computer Science (A.S.)

Division of Mathematics, Engineering Technologies and Computer Sciences — Curriculum Code: 2302

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

The Computer Science degree program prepares students for transfer upon graduation to four-year institutions to pursue a bachelor's degree in Computer Science or a related field or to enter the computer technology job market directly. The program emphasizes mathematically-oriented computer applications. Employment opportunities for positions such as application programmer, systems programmer, systems analyst, and software engineer have traditionally been reserved for graduates with a B.S. or B.A. in Computer Science. However, due to the rapid growth in computer technology, there are now many job opportunities for A.S. graduates. Such typical entry-level positions include technical support specialist, network technician, database application specialist, personal computer (PC) technician, and Help Desk technician.

Program Requirements

GENERAL EDUCATION REQUIREMENTS
Written & Oral Communications (6 credits)
ENG 101 (3 credits)
ENG 102 (3 credits)

Quantitative Knowledge & Skills (8 credits)
MTH 121 (4 credits)
MTH 122 (4 credits)

Scientific Knowledge & Reasoning (4 credits)
PHY 103 (4 credits)

Society & Human Behavior (6 credits)
Choose two of the following courses: ANT 101ANT 105ECO 101ECO 102POL 101POL 104PSY 101PSY 102PSY 219SOC 101SOC 108 or SOC 219 (two 3-credit courses)

Humanistic Perspective (6 credits)
Choose one of the following literature courses: ENG 205ENG 208ENG 215ENG 221ENG 222ENG 232ENG 237ENG 238ENG 242ENG 250ENG 263 or ENG 264 (one 3-credit course)
AND
Choose one of the following art or music courses: ART 100ART 101ART 102MUS 100MUS 108MUS 109 or MUS 117 (one 3-credit course)

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

MAJOR COURSE REQUIREMENTS
CSC 121 Computer Science I (4 credits)
CSC 122 Computer Science II (4 credits)
CSC 221 Computer Systems & Architecture (4 credits)
CSC 225 Data Structures (4 credits)
CSC 228 Operating Systems (4 credits)
CSC 231 Database Design or CSC 235 Advanced Object-Oriented Programming (one 4-credit course)

ADDITIONAL COURSE REQUIREMENTS
MTH 136 Discrete Mathematics (3 credits)
MTH 239 Introduction to Linear Algebra (3 credits)
PHY 104 General Physics II (4 credits)

RECOMMENDED SEQUENCE OF COURSES
Total Credits Required for Degree: 67

First Semester
ENG 101 College Composition I (3 credits)
CSC 121 Computer Science I (4 credits)
MTH 121 Calculus with Analytic Geometry I (4 credits)
PHY 103 General Physics I (4 credits)

Second Semester
ENG 102 College Composition II (3 credits)
CSC 122 Computer Science II (4 credits)
MTH 122 Calculus with Analytic Geometry II (4 credits)
PHY 104 General Physics II (4 credits)

Summer Session
Society & Human Behavior requirement (one 3-credit course)
Historical Perspective requirement (one 3-credit course)

Third Semester
CSC 221 Computer Systems & Architecture (4 credits)
CSC 225 Data Structures (4 credits)
MTH 136 Discrete Mathematics (3 credits)
Humanistic Perspective literature requirement (one 3-credit course)
Society & Human Behavior requirement (one 3-credit course)

Fourth Semester
CSC 228 Operating Systems (4 credits)
CSC 231 Database Design or CSC 235 Advanced Object-Oriented Programming (4 credits)
MTH 239 Introduction to Linear Algebra (3 credits)
Humanistic Perspective art or music requirement (one 3-credit 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.