

## COMPUTER INFORMATION SYSTEMS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Computer Information Systems	T002900C	A.S.	21*	24	21	45
Computer Information Systems	T021839D	C		24	21	45

At least 60 degree applicable units are required to earn an Associate degree.  
 \*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.  
 These programs are Financial Aid Eligible.

### PROGRAM OVERVIEW

The Computer Information Systems program is designed to prepare students for careers in the exciting Information Technology fields such as programming, software engineering, database administration, computer networking, multimedia programming, and web programming technologies. Microcomputer usage continues to grow at an ever increasing pace as does the demand for workers with solid technical skills and knowledge of programming, networking, and website development and management. The primary goal of the program is to prepare students for entry-level employment as well as providing marketable career advancement knowledge and skills.

The Computer Information Systems Degree and Certificate are designed to prepare students for employment in many industries such as network engineering, software development, user support, web development, and database administration. These educational programs include transferable coursework.

Career opportunities for students completing these programs of study include, but are not limited to:

- Computer Programmers
- Web Developers
- Computer Network Support Specialists
- Computer User Support Specialists

By fulfilling the program requirements, students will have the necessary knowledge and skills for software development, web design, database development, business computer services, and computer networking.

### PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Create, debug, and comment computer programming codes in order to integrate multiple language constructs in a single project.
- Create business applications using advanced computer software.
- Identify and describe computer hardware, networking concepts, and computer software.

## COMPUTER INFORMATION SYSTEMS

### Associate in Science Degree

Major Units: 45

Requirements for the Associate in Science degree in Computer Information Systems may be met by completing 24 units of Required Courses and 21 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

Students planning to continue studies at a four-year institution should consult with a counselor concerning a transfer curriculum.

### REQUIRED COURSES

#### SEMESTER I UNITS

CS 101	Introduction to Computer Science	3
CIS 120	Introduction to Databases	3
CS 116	Programming in C++	3
CS 119	Programming in Python	3

#### SEMESTER II UNITS

CIS 148	Introduction to Web Development Using HTML and CSS	3
CIS 210	Introduction to Computer Networking	3
CS 115	Programming in C#	3
CS 112	Programming in JavaScript	3

#### SEMESTER III UNITS

Four elective courses

#### SEMESTER IV UNITS

Three elective courses

### MAJOR ELECTIVES

#### Select at least 21 units from the courses below UNITS

CIS 101	Introduction to Computers and their Uses	3
CIS 104	Microcomputer Application Software	3
CIS 112	Introduction to Linux	3
CIS 126	Adobe Dreamweaver	3
CIS 146	Multimedia Presentation for the Internet	3
CIS 149	Web Development Using PHP- MYSQL	3
CIS 165	Principles of Information Security	3
CIS 192	Introduction to Cloud Computing	3
CIS 193	Database Essentials in Amazon Web Services	3
CIS 194	Compute Engines in Amazon Web Services	3
CIS 195	Security in the Cloud	3
CIS 215	Network Security Fundamentals	3
CS 111	Programming in Visual Basic	3
CS 143	Mobile Application Development – Android	3
CS 170	Introduction to Computer Games Programming	3
CS 171	Video Game Programming	3
CS 216	Object Oriented Programming in C++	3
CS 113	Programming in Java	3

## COMPUTER INFORMATION SYSTEMS

### Certificate of Achievement

Major Units: 45

A Certificate of Achievement in Computer Information Systems may be earned by completing 24 units of Required Courses and 21 units of Major Electives listed under the Associate degree in Computer Information Systems with a grade of "C" or better in each course.