

COMPUTER INFORMATION SYSTEMS
COMPUTER PROGRAMMING

The department of Computer Information Systems (CIS) offers degrees and certificates in three major areas: Computer Programming, Network Administration and Web Developer. See the respective major sheets for additional information about the specific certificates and degrees. A grade of “C” or better is required in all certificate, major and major elective courses.

The CIS Computer Programming Certificate and Degree Programs are designed to provide students with skills in computer programming to enable graduates to gain employment as an entry-level programmer. Courses will emphasize skills on how to organize a computer program, and how to program in several different languages such as Java and C++. An Associate in Science Degree and two levels of certificates are offered.

Upon completion of the program, students will be able to:

- Recognize the components that constitute a computer information system. Identify various hardware, software, data, computer number systems, and procedures.
- Demonstrate understanding of the impact and application of computers in business, government, and social organizations. Students solve common business problems with computer applications and the internet.
- Receive and process written and oral technology related information. Students Interpret technology communication concepts including wired and wireless networks, servers and clients, users interfaces, operating systems, applications, utilities, and programming languages.
- Recognize the influence of the Internet on business and terms relating to the World Wide Web. Students perform the fundamental functions that operating systems and applications software provides. Students demonstrate skills in word processing, spreadsheets, presentation graphics, and use of Internet. Students will recognize a programming language and demonstrate steps involved in developing an application.
- Demonstrate the ability to work and interact effectively in teams consisting of individuals with differing interests, gender, global backgrounds and professions.
- Demonstrate ability to exercise professional, ethical responsibility in the use of technology in society.

FOR ADDITIONAL INFORMATION, SEE A COUNSELOR, VISIT THE CAREER/TRANSFER CENTER, OR CONTACT:

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Computer Information Systems **Computer Programming**

<u>CERTIFICATE OF ACHIEVEMENT - Level 2:</u>	<u>UNITS</u>
CIS Computer Programming	
CIS 041 Introduction to Computer Information Systems	3
CIS 054 C/C++ Programming	3
CIS 055 Data Structures	3
CIS 059 Object Oriented Design Programming	3
CIS 073 Visual Basic Programming	3
CIS 084 JAVA Programming	<u>3</u>
TOTAL UNITS REQUIRED	18

<u>CERTIFICATE OF ACHIEVEMENT - Level 3:</u>	
CIS Computer Programming	
COMPLETION OF THE CERTIFICATE OF ACHIEVEMENT – LEVEL 2	18
CIS 157 Introduction to UNIX/LINUX	3
NON-DUPLICATED UNITS FROM APPROVED MAJOR ELECTIVES	<u>9</u>
TOTAL UNITS REQUIRED	30

<u>A.S. DEGREE REQUIREMENTS:</u>	
CIS Computer Programming	
COMPLETION OF THE CERTIFICATE OF ACHIEVEMENT – LEVEL 3	30
GENERAL EDUCATION PATTERN/GRADUATION REQUIREMENTS	24
NON-DUPLICATED UNITS FROM APPROVED MAJOR ELECTIVES	6
PHYSICAL ACTIVITY	<u>1</u>
TOTAL UNITS REQUIRED	61

Approved Major Electives:

CIS 014A, 017A, 017B, 017C, 017D, 017E, 018A, 018B, 018C, 018D, 020, 020A, 022, 023, 023A, 024A, 024B, 024C, 036, 041, 047, 054, 055, 059, 060, 062A, 062B, 062C, 068, 073, 084, 098, 157, 158