CIS COMPUTER PROGRAMMING - ASSOCIATE IN SCIENCE

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.

Program Learning Outcomes

- 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.

A.S. Degree Requirements

Course	Title	Credits
Complete the following:		
CIS 041	Introduction to Computer Information Systems	3
CIS 054	C/C++ Programming	3
CIS 055	Data Structures: Programming	3
CIS 059	Object Oriented Design and Programming	3
CIS 073	Visual Basic Programming	3
CIS 084	Java Programming	3
CIS 157	Introduction to Unix/Linux	3
Non-duplicated units from approved major electives		15
General Education Requirements		24
Physical Activity		1
Total Units		**61**

Approved Major Electives

Course	Title	Credits
(CIS classes not used in the sequence above)		
CIS 014A	Internet Principles and Protocols	3
CIS 017A	Windows	3
CIS 017B	Windows Server	3
CIS 017C	Microsoft Windows Server Active Directory	3
CIS 017D	Microsoft Windows Server Network Infrastructure	3
CIS 018A	CCNAv7: Introduction to Networks	3
CIS 018B	CCNAv7: Switching, Routing, and Wireless Essentials	3
CIS 018C	CCNAv7: Enterprise Networking, Security And Automation (ENSA)	3
CIS 018D	CCNA R&S: Connecting Networks	3
CIS 020	XML Fundamentals	3
CIS 020A	Advanced XML	3
CIS 022	Database Technology	3
CIS 023	JavaScript Programming	3
CIS 023A	Advanced JavaScript Programming	3
CIS 024A	Perl Programming	3
CIS 024B	PHP Programming	3
CIS 024C	Python Programming	3
CIS 036	Web 2.0 Programming	3
CIS 041	Introduction to Computer Information Systems	3
CIS 047	Introduction to Web Development	3
CIS 054	C/C++ Programming	3
CIS 055	Data Structures: Programming	3
CIS 059	Object Oriented Design and Programming	3
CIS 060	Systems Analysis and Design	3
CIS 062A	Introduction to PC Hardware and Diagnostics	2
CIS 062B	A+ PC Hardware Technology	2
CIS 062C	A+ Core PC Operating Systems Technology	2
CIS 068	Administering Microsoft SQL Server	3
CIS 073	Visual Basic Programming	3
CIS 084	Java Programming	3
CIS 098	Directed Study in Computer Information Systems	0.5-9
CIS 157	Introduction to Unix/Linux	3
CIS 158	Linux System Administration	3