

To complete the requirements for the Associate of Arts for this degree*, a student must:

1. Complete the requirements for an associate degree.
2. **Complete a minimum of twenty-seven to twenty-nine (27-29) units with a "C" or better in each course** in the following major.
3. Complete elective units to meet the minimum 60 units required for the associate degree.

Required Courses:		Units	IP	Need	Grade
CIS 095	Employability Skills For Technical Careers	2			
CIS 101 or BUSAD 230	Introduction to Computer and Information Technology	3			
CIS 130	Hardware and Information Technology	3			
CIS 140	Introduction to Networks (Cisco CCNA 1)	4			
Total Required Units:		12			

Complete at least three (3) units from the following courses:		Units	IP	Need	Grade
CIS 104	Object Oriented Programming with Visual Basic	3			
CIS 111	Web Page Programming and Design	3			
CIS 113	Java Programming	3			
CSCI 110	Introduction to Computer Science I (C++_)	3			
Total Additional Units:		3			

Select **ONE** area of emphasis from the following three options:

Emphasis in Programming: Complete at least twelve (12) additional units from the following courses:		Units	IP	Need	Grade
CIS 104	Object Oriented Programming with Visual Basic	3			
CIS 105	Database Concepts and Design	3			
CIS 113	Java Programming	3			
CSCI 110	Introduction to Computer Science I (C++)	3			
CSCI 120	Introduction to Computer Science II (C++)	3			
CIS 117	Scripting	3			
CIS 121	Android Application Development	3			
CIS 125	Introduction to C#.net Programming	3			
CIS 190D	Software Development Work Experience	1-3			
Math 102	College Algebra	5			
Total Additional Emphasis Units:		12-13			

Emphasis in Web Design: Complete at least twelve (12) additional units from the following courses:		Units	IP	Need	Grade
CIS 111	Web Page Programming and Design	3			
CIS 117	Scripting	3			
CIS 161	Website Design & Programming Using Dreamweaver	3			
CIS 162	Introduction to Flash	3			
CIS 163 or CIS 180	Adobe Photoshop or Computer Graphics with Adobe Illustrator	1-3			
CIS 190A	Web Design Work Experience	1-3			
CIS 211	Cascading Style Sheet (CSS) Web Design	3			
Total Additional Emphasis Units:		12			

Emphasis in Computer Assisted Graphic Design: Complete at least twelve (12) additional units from the following courses:		Units	IP	Need	Grade
CIS 162	Introduction to Flash	3			
CIS 163	Adobe Photoshop	3			
CIS 165	Introduction to 3D Modeling & Animation	3			
CIS 166	Advanced 3D Modeling & Animation	3			
CIS 180	Computer Graphics with Adobe Illustrator	1-3			
CIS 182	Desktop Publishing with Adobe Indesign	1-3			
CIS 184	Photoshop and Digital Photography	3			
CIS 190E	Digital Media Design Internship	1-3			
ART 120	Foundations of Two-Dimensional Design	3			
Total Additional Emphasis Units:		12			

Emphasis in Systems and Network Administration: Complete at least twelve (12) additional units from the following courses:		Units	IP	Need	Grade
CIS 109	Operating Systems and Environments	3			
CIS 132	Systems and Network Administration	3			
CIS 134	Introduction to Information Systems Security	3			
CIS 141	Basic Routing and Switching (CISCO CCNA 2)	4			
CIS 142	Advanced Routing and Switching (CISCO CCNA 3)	4			
Total Additional Emphasis Units:		12			

Total Required, Additional, and Emphasis Units:		27-29			
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**Lower division requirements for students interested in transferring to a four-year institution in this field may differ from Associate degree requirements. Prospective students should complete the general education and lower division requirements of the school to which they will be transferring. See a counselor for details. Information is also available at www.assist.org.*

A student receiving a degree in this field will be able to:

- Apply analytical and logical thinking to gathering and analyzing information, designing and testing solutions to problems, and formulating plans
- Discuss the impact of information technology on society and the workplace
- Work collaboratively in a team setting
- Select and evaluate appropriate written communication strategies and styles for a specific purpose
- Demonstrate knowledge of individual parts that make up a stand-alone PC computer system, and the relationships between components
- Create and maintain Web pages
- Demonstrate an understanding of the overall design and components of a LAN and WAN system