

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
- Create and maintain Web pages
- Demonstrate an understanding of the overall design and components of a LAN and WAN system

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 27.75-28.75 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 101 or BUSAD 230 | Introduction to Computer and Information Technology or Using Computers for Business | 3 | | | |
| CIS 104 or CIS 113 or CIS 114 or CSCI 110 | Object Oriented Programming with Visual Basic or Java Programming or C++ Programming I or Introduction to Computer Science I | 3-4 | | | |
| CIS 111 | Web Page programming and Design | 3 | | | |
| CIS 130 | Hardware and Information Technology | 3 | | | |
| CIS 140 | Networking for Home and Small Businesses (Cisco CCNA 1) | 3.75 | | | |
| Total Required Units: | | 15.75- 16.75 | | | |

Select one area of emphasis from the following three options:

| Emphasis in Programming: | | Units | IP | Need | Grade |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------|-----------|-------------|--------------|
| Complete at least twelve (12) additional units from the following courses: | | | | | |
| CIS 104 | Object Oriented Programming with Visual Basic | 3 | | | |
| CIS 113 or CIS 114 or CSCI 110 | Java Programming or C++ Programming I or Introduction to Computer Science I | 3-4 | | | |
| CIS 116 or CSCI 120 | C++ Programming II or Introduction to Computer Science II | 3-4 | | | |
| CIS 117 | Scripting | 3 | | | |
| Total Additional Emphasis Units: | | | | | |

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

| Emphasis in Computer Assisted Graphic Design: Complete at least twelve (12) additional units from the following courses: | | Units | IP | Need | Grade |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------|-----------|-------------|--------------|
| ART 120 or ART 124 | Foundations of Two-Dimensional Design or Drawing I | 3 | | | |
| CIS 163 | Introduction to 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 | | | |
| Total Additional Emphasis Units: | | | | | |

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| Total Required and Additional Emphasis Units: | 27.75- 28.75 | |
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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.*