Computer Information Systems: Associate in Science (AS)
The Associate in Science in Computer Information System is designed to provide students with knowledge and skills required for a variety of positions in the field of computer information technology. The program includes foundation courses in computer information systems and a wide range of skill-builder courses in current topics of technology.

Program Learning Outcomes:
- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Apply software development techniques that use the correct syntax and semantics of a programming language to write the source code to implement and test/debug a specified design.
- Use current techniques, skills, and tools necessary for computing practice.

Career/Transfer Opportunities:
Career opportunities include the following: Computer System Analyst, Software Developer, Computer Programmer and Other Computer Occupations such as Quality Assurance Engineer and Tester.

To earn this degree, students must meet the following requirements:
1. Completion of 60 degree applicable units with an overall GPA of 2.0.
2. Completion of a minimum of 18 semester units in the major with a grade of C (or P) or better.
3. Completion of the AA/AS Graduation Requirements, CSU GE-B or IGETC.

Core Requirements (12 units):
Complete all of the following

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 007</td>
<td>Python Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 043</td>
<td>Software Development With Java</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 044</td>
<td>Introduction to Data Structures Using Java</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Elective (8 units):
Complete a minimum of eight additional units from the following. A maximum of two units of WRK 300GW can be applied to these eight units.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 008</td>
<td>Advanced Python Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 033</td>
<td>Robotics and Embedded Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 037A</td>
<td>Introduction to C Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 039</td>
<td>Introduction to Computer Systems and Assembly Language</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 040</td>
<td>C++ Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 045</td>
<td>Linux Essentials I</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 047</td>
<td>Linux System Administration</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 051</td>
<td>Introduction to Data Analysis</td>
<td>4.0</td>
</tr>
<tr>
<td>CIS 055</td>
<td>Database Management Systems I</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 056</td>
<td>Database Management Systems II</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 063</td>
<td>Mobile Apps Programming - Android</td>
<td>4.0</td>
</tr>
<tr>
<td>WRK 300GW</td>
<td>General Work Experience</td>
<td>1.0-2.0</td>
</tr>
</tbody>
</table>

Units Required for the Major: 20.0-22.0
Completion of General Education Requirements and electives as needed to reach 60 units.

Total Required Units: 60.0