

Computer Information Systems, AAS

Employment opportunities for programmer analysts and related positions continue to be strong and growing. Key areas include object-oriented programming, database management, client-server applications, security and mobile development.

JCCC's associate of applied science in computer information systems focuses on skills needed for entry-level software development and related positions. The program is designed to prepare professionals with skills that are applicable to different computing systems. With its emphasis on practical experience and on currency in software and curriculum, the program has much to offer the information systems professional who wishes to upgrade or broaden his or her knowledge of the field.

(Major Code 2930; State CIP Code 11.0201)

- Programming (<http://www.jccc.edu/academics/computers/programming>)

Associate of Applied Science Degree

First Semester

| | | |
|--|--|----|
| CS 134 or CIS 142 | Programming Fundamentals Beginning Programming using Python | 4 |
| ENGL 121 | Composition I* | 3 |
| MATH 171 | College Algebra* | 3 |
| OR | | |
| Any Precalculus/Calculus Course | | |
| WEB 110 | HTML and CSS | 3 |
| Social Science and/or Economics Elective | | 3 |
| Note: An Economics course is recommended. Transfer students should take a social science/economics course that transfers to their chosen school. | | |
| Total Hours | | 16 |

^ See all AAS general education electives (<http://catalog.jccc.edu/degree/requirements/associate-applied-science>)

Second Semester

| | | |
|--|---|----|
| CIS 204 | UNIX Scripting and Utilities* | 3 |
| CS 200 or CS 201 or CS 205 | Concepts of Programming Algorithms Using C++* Concepts of Programming Algorithms using C#* Concepts of Programming Algorithms using Java* | 4 |
| Note: Transfer students should take the language that transfers to their chosen school. Java or C# is recommended for most career students. C++ is recommended for embedded systems and Java for mobile development. | | |
| IT 140 | Networking Fundamentals | 4 |
| SPD 120 or SPD 121 or SPD 125 or ENGL 123 | Interpersonal Communication Public Speaking Personal Communication Technical Writing I* | 3 |
| Humanities Elective | | 3 |
| Note: PHIL 124 or PHIL 143 is recommended. Transfer students should take a humanities course that transfers to their chosen school. | | |
| Total Hours | | 17 |

^ See all AAS general education electives (<http://catalog.jccc.edu/degree/requirements/associate-applied-science>)

Third Semester

Full Semester Courses:

| | | |
|--------------------------|---|---|
| CIS Elective (see below) | | 3 |
| CIS 242 | Introduction to System Design and Analysis* | 3 |
| CIS 260 | Database Management* | 4 |
| CS 235 | Object-Oriented Programming Using C++* | 4 |

| | | |
|------------------------------------|---------------------------------------|----|
| or CS 236 | Object-Oriented Programming Using C#* | |
| or CIS 240 | Advanced Topics in Java* | |
| First or Second Five Week Session: | | |
| WEB 156 | JavaScript I* | 1 |
| Total Hours | | 15 |

Fourth Semester

| | | |
|--------------------------|--|----|
| CIS Elective (see below) | | 3 |
| CIS 264 | Application Development and Programming* | 4 |
| CIS 275 | Web-Enabled Database Programming* | 4 |
| CS 250 | Basic Data Structures using C++* | 4 |
| or CS 255 | Basic Data Structures Using Java* | |
| Total Hours | | 15 |

CIS Electives

| | | |
|----------|---|-----|
| ACCT 121 | Accounting I | 3 |
| CIS 162 | Database Programming* | 4 |
| CIS 201 | Introduction to Information Systems* | 3 |
| CIS 208 | Mobile Application Development* | 4 |
| CIS 240 | Advanced Topics in Java* | 4 |
| CIS 270 | Information Systems Internship* | 3 |
| CIS 291 | Independent Study* | 1-7 |
| CIS 292 | Special Topics:* | 1-4 |
| CS 210 | Discrete Structures I* | 3 |
| CS 211 | Discrete Structures II* | 3 |
| CS 235 | Object-Oriented Programming Using C++* | 4 |
| CS 236 | Object-Oriented Programming Using C#* | 4 |
| CS 250 | Basic Data Structures using C++* | 4 |
| CS 255 | Basic Data Structures Using Java* | 4 |
| DS 210 | Introduction to Data Science | 3 |
| DS 220 | Data Visualization | 3 |
| DS 230 | SQL for Data Analysis | 3 |
| DS 240 | Introduction to Statistical Programming | 3 |
| DS 250 | Data Analysis | 3 |
| DS 260 | Data Mining | 3 |
| DS 270 | Introduction to Machine Learning | 3 |
| DS 280 | Big Data Architecture | 3 |
| WEB 126 | Technical Interface Skills* | 3 |
| WEB 128 | Server Scripting: PHP with MySQL* | 2 |
| WEB 166 | JavaScript II* | 1 |

Total Program Hours: 63