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 Program web page (http://www.jccc.edu/academics/credit/programming/)

Associate of Applied Science Degree

First Semester

CS 134	Programming Fundamentals	4
or CIS 142	Beginning Programming using Python	
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/degreerequirements/associate-applied-science/)

Second Semester

CIS 204	UNIX Scripting and Utilities*	3
CS 200	Concepts of Programming Algorithms Using C++*	4
or CS 201	Concepts of Programming Algorithms using C#*	
or CS 205	Concepts of Programming Algorithms using Java*	
Note: Transfer students should take the language that transfers to their chosen school. KU transfer students should contact the JCCC CSIS department chair about potentially taking CS 202 as an alternative. Java or C# is recommended for most career students. C++ is recommended for embedded systems and Java for mobile development.		
IT 141	Introduction to Networks	3
COMS 120	Interpersonal Communication	3
or COMS 121	Public Speaking	
or COMS 125	Personal Communication	
or ENGL 123	Technical Writing I*	
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		**16**

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

Third Semester

Full Semester Courses:		
Technical 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 114	Web Scripting: JavaScript I*	2
Total Hours		**16**

Fourth Semester

Technical Elective (see below)		3
Note: WEB 124 is recommended, a minimum of 6 total hours is required for Technical Electives.		
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*	
Note: Students who successfully completed CS 202 should contact the JCCC CSIS department chair about taking CS 252 as an alternative.		
Total Hours		**15**

Total Program Hours: 63

Technical Electives

ACCT 121	Accounting I	3
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 202	Concepts of Programming Algorithms using Python*	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 252	Basic Data Structures Using Python*	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 260	Data Mining*	3
DS 270	Introduction to Machine Learning*	3
DS 280	Big Data Architecture	3
WEB 124	Web Scripting: JavaScript II*	2
WEB 126	Technical Interface Skills*	3
WEB 128	Server Scripting: PHP with MySQL*	2