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.

The associate of applied science degree is awarded for successful completion of 64 credit hours.

(Major Code 2930; State CIP Code 11.0201)

• Programming (http://www.jccc.edu/academics/computers/programming)

Associate of Applied Science Degree

First Semester

Total Hours		16
WEB 110	HTML and CSS	3
Any Precalculus/Calculus Course		
OR		
MATH 171	College Algebra*	3
ENGL 121	Composition I*	3
or ECON 230	Economics I	
ECON 132	Survey of Economics	3
CS 134	Programming Fundamentals	4

Second Semester

Note: Transfer students should take the language that transfers to their chosen school. Java or C# is recommended for most career students.

Total Hours		17
or ENGL 123	Technical Writing I*	
or SPD 125	Personal Communication	
or SPD 121	Public Speaking	
SPD 120	Interpersonal Communication	3
CIS 204	UNIX Scripting and Utilities*	3
IT 140	Networking Fundamentals	4
or PHIL 143	Ethics	
PHIL 124	Logic and Critical Thinking	3
or CS 205	Concepts of Programming Algorithms using Java*	
or CS 201	Concepts of Programming Algorithms using C#*	
CS 200	Concepts of Programming Algorithms Using C++*	4

Third Semester

Full Semester Courses:

CIS Elective (see below)		
Health and/or Physical Education Ele	ctive ^	1
CS 235	Object-Oriented Programming Using C++*	4
or CS 236	Object-Oriented Programming Using C#*	
or CIS 240	Advanced Topics in Java*	
CIS 242	Introduction to System Design and Analysis*	3
CIS 260	Database Management*	4

First or Second Five Week Session:

See all AAS general education electives (http://catalog.jccc.edu/degreerequirements/associate-applied-science)	WEB 156	JavaScript I*	1	
Section Sect	Total Hours		16	
S Elective (see below) Sasic Data Structures using C++* 4 4 7 CS 255 Basic Data Structures Using Java* Sac Application Development and Programming* 4 4 18 275 Web-Enabled Database Programming* 4 4 18 275 Web-Enabled Database Programming* 4 4 18 275 Web-Enabled Database Programming* 5 5 5 5 5 5 5 5 5	^ See all AAS gene	eral education electives (http://catalog.jccc.edu/degreerequirements/associate-applied-scien	nce)	
82 250 Basic Data Structures using C++* 4 r CS 255 Basic Data Structures Using Java* 4 IS 264 Application Development and Programming* 4 deta Hours Meb-Enabled Database Programming* 4 CIS Electives CCT 121 Accounting I 3 IS 162 Database Programming* 4 IS 201 Introduction to Information Systems* 3 IS 208 Mobile Application Development* 4 IS 240 Advanced Topics in Java* 4 IS 291 Information Systems Internship* 3 IS 292 Special Topics:* 1-7 IS 293 Special Topics:* 1-4 IS 210 Discrete Structures I* 3 IS 211 Discrete Structures II* 3 IS 225 Digital Logic with VHDL* 2 IS 236 Object-Oriented Programming Using C++* 4 IS 250 Basic Data Structures using C++* 4 IS 255 Basic Data Structures using Java* 4 I	Fourth Semeste	er		
Record R	CIS Elective (see below)		3	
81S 264 Application Development and Programming* 4 41S 275 Web-Enabled Database Programming* 4 4 cotal Hours 15 CCT 121 Accounting I 3 181S 162 Database Programming* 4 181S 201 Introduction to Information Systems* 3 182 208 Mobile Application Development* 4 182 240 Advanced Topics in Java* 4 182 270 Information Systems Internship* 3 182 291 Independent Study* 1-7 182 292 Special Topics:* 1-4 182 291 Discrete Structures I* 3 18 210 Discrete Structures I* 3 18 221 Discrete Structures I* 3 18 225 Digital Logic with VHDL* 2 18 235 Object-Oriented Programming Using C++* 4 18 250 Basic Data Structures using C++* 4 18 255 Basic Data Structures Using Java* 4 18 26 Technical Interface Skills* 3 18 27 Technical Interface Skills* 3 18 28 </td <td>CS 250</td> <td>Basic Data Structures using C++*</td> <td>4</td>	CS 250	Basic Data Structures using C++*	4	
State Stat	or CS 255	Basic Data Structures Using Java*		
State Hours 15 CCT 121 Accounting I 3 CCT 121 Accounting I 3 SIS 162 Database Programming* 4 4 4815 201 Introduction to Information Systems* 3 182 208 Mobile Advanced Topics in Java* 4 4815 270 Information Systems Internship* 3 182 291 Independent Study* 17 182 292 Special Topics:* 1-4 482 292 Special Topics:* <th colsp<="" td=""><td>CIS 264</td><td>Application Development and Programming*</td><td>4</td></th>	<td>CIS 264</td> <td>Application Development and Programming*</td> <td>4</td>	CIS 264	Application Development and Programming*	4
CCT 121	CIS 275	Web-Enabled Database Programming*	4	
CCT 121 Accounting I 3 21S 162 Database Programming* 4 21S 201 Introduction to Information Systems* 3 21S 208 Mobile Application Development* 4 21S 240 Advanced Topics in Java* 4 21S 270 Information Systems Internship* 3 21S 291 Independent Study* 1-7 21S 292 Special Topics:* 1-4 25 210 Discrete Structures I* 3 25 211 Discrete Structures II* 3 25 225 Digital Logic with VHDL* 2 25 235 Object-Oriented Programming Using C++* 4 25 236 Object-Oriented Programming Using C#* 4 25 250 Basic Data Structures using C++* 4 25 255 Basic Data Structures Using Java* 4 4EC 125 Digital Electronics I 4 4EB 126 Technical Interface Skills* 3 4/EB 128 Server Scripting: PHP with MySQL* 2	Total Hours		15	
8IS 162 Database Programming* 4 8IS 201 Introduction to Information Systems* 3 8IS 208 Mobile Application Development* 4 8IS 240 Advanced Topics in Java* 4 8IS 270 Information Systems Internship* 3 8IS 291 Independent Study* 1-7 8IS 292 Special Topics:* 1-4 8IS 210 Discrete Structures I* 3 8IS 211 Discrete Structures II* 3 8IS 225 Digital Logic with VHDL* 2 8IS 235 Object-Oriented Programming Using C++* 4 8IS 236 Object-Oriented Programming Using C#* 4 8IS 250 Basic Data Structures using C++* 4 8IS 255 Basic Data Structures Using Java* 4 8IS 250 Basic Data Structures Using Java* 4 8IS 251 Digital Electronics I 4 8IS 252 Digital Electronics I 4 8IS 255 Basic Data Structures Using Java* 4 8IS 255 Basic Data Structures Using Java* 4 8IS 255 Basic Data Structures Using Java* <td>CIS Electives</td> <td></td> <td></td>	CIS Electives			
IS 201 Introduction to Information Systems* 3 IS 208 Mobile Application Development* 4 IS 240 Advanced Topics in Java* 4 IS 270 Information Systems Internship* 3 IS 291 Independent Study* 1-7 IS 292 Special Topics:* 1-4 IS 291 Discrete Structures I* 3 IS 210 Discrete Structures II* 3 IS 211 Discrete Structures II* 3 IS 225 Digital Logic with VHDL* 2 IS 235 Object-Oriented Programming Using C++* 4 IS 236 Object-Oriented Programming Using C#* 4 IS 250 Basic Data Structures using C++* 4 IS 255 Basic Data Structures Using Java* 4 IE C 125 Digital Electronics I 4 IE B 126 Technical Interface Skills* 3 IE B 128 Server Scripting: PHP with MySQL* 2	ACCT 121	Accounting I	3	
8IS 208 Mobile Application Development* 4 8IS 240 Advanced Topics in Java* 4 8IS 270 Information Systems Internship* 3 8IS 291 Independent Study* 1-7 8IS 292 Special Topics:* 1-4 8IS 293 Discrete Structures I* 3 8IS 211 Discrete Structures II* 3 8IS 225 Digital Logic with VHDL* 2 8IS 235 Object-Oriented Programming Using C++* 4 8IS 236 Object-Oriented Programming Using C#* 4 8IS 250 Basic Data Structures using C++* 4 8IS 255 Basic Data Structures Using Java* 4 8IS 256 Digital Electronics I 4 8IS 257 Digital Electronics I 4 8IS 258 Digital Electronics I 4 8IS 259 Digital Electronics I 4 8IS 250	CIS 162	Database Programming*	4	
Advanced Topics in Java* Information Systems Internship* Information Systems Internship* Independent Study* Independent St	CIS 201	Introduction to Information Systems*	3	
IS 270 Information Systems Internship* 3 IS 291 Independent Study* 1-7 IS 292 Special Topics:* 1-4 IS 210 Discrete Structures I* 3 IS 211 Discrete Structures II* 3 IS 225 Digital Logic with VHDL* 2 IS 235 Object-Oriented Programming Using C++* 4 IS 236 Object-Oriented Programming Using C#* 4 IS 250 Basic Data Structures using C++* 4 IS 255 Basic Data Structures Using Java* 4 ILEC 125 Digital Electronics I 4 IVEB 126 Technical Interface Skills* 3 IVEB 128 Server Scripting: PHP with MySQL* 2	CIS 208	Mobile Application Development*	4	
IS 291 Independent Study* 1-7 IS 292 Special Topics:* 1-4 IS 210 Discrete Structures I* 3 IS 211 Discrete Structures II* 3 IS 225 Digital Logic with VHDL* 2 IS 235 Object-Oriented Programming Using C++* 4 IS 236 Object-Oriented Programming Using C#* 4 IS 250 Basic Data Structures using C++* 4 IS 255 Basic Data Structures Using Java* 4 IEC 125 Digital Electronics I 4 IEB 126 Technical Interface Skills* 3 IEB 128 Server Scripting: PHP with MySQL* 2	CIS 240	Advanced Topics in Java*	4	
SIS 292 Special Topics:* 1-4 SS 210 Discrete Structures I* 3 SS 211 Discrete Structures II* 3 SS 225 Digital Logic with VHDL* 2 SS 235 Object-Oriented Programming Using C++* 4 SS 236 Object-Oriented Programming Using C#* 4 SS 250 Basic Data Structures using C++* 4 SS 255 Basic Data Structures Using Java* 4 LEC 125 Digital Electronics I 4 VEB 126 Technical Interface Skills* 3 VEB 128 Server Scripting: PHP with MySQL* 2	CIS 270	Information Systems Internship*	3	
Size Discrete Structures 1* 3 3 3 3 3 3 3 3 3	CIS 291	Independent Study*	1-7	
S 211 Discrete Structures II* 3 3	CIS 292	Special Topics:*	1-4	
2S 225 Digital Logic with VHDL* 2 2S 235 Object-Oriented Programming Using C++* 4 2S 236 Object-Oriented Programming Using C#* 4 2S 250 Basic Data Structures using C++* 4 2S 255 Basic Data Structures Using Java* 4 LEC 125 Digital Electronics I 4 VEB 126 Technical Interface Skills* 3 VEB 128 Server Scripting: PHP with MySQL* 2	CS 210	Discrete Structures I*	3	
S 235 Object-Oriented Programming Using C++* 4	CS 211	Discrete Structures II*	3	
S 236 Object-Oriented Programming Using C#* 4	CS 225	Digital Logic with VHDL*	2	
S 250 Basic Data Structures using C++* 4	CS 235	Object-Oriented Programming Using C++*	4	
S 255 Basic Data Structures Using Java* 4 LEC 125 Digital Electronics I 4 VEB 126 Technical Interface Skills* 3 VEB 128 Server Scripting: PHP with MySQL* 2	CS 236	Object-Oriented Programming Using C#*	4	
LEC 125 Digital Electronics I 4 VEB 126 Technical Interface Skills* 3 VEB 128 Server Scripting: PHP with MySQL* 2	CS 250	Basic Data Structures using C++*	4	
VEB 126 Technical Interface Skills* 3 VEB 128 Server Scripting: PHP with MySQL* 2	CS 255	Basic Data Structures Using Java*	4	
VEB 128 Server Scripting: PHP with MySQL* 2	ELEC 125	Digital Electronics I	4	
	WEB 126	Technical Interface Skills*	3	
VEB 166 JavaScript II* 1	WEB 128	Server Scripting: PHP with MySQL*	2	
	WEB 166	JavaScript II*	1	

Total Program Hours: 64