

**San José City College**  
**Certificate of Achievement**  
**Level 3**  
**2020-2021**

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**COMPUTER INFORMATION SYSTEMS**  
**COMPUTER PROGRAMMING**

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The department of Computer Information Systems (CIS) offers certificates in three major areas: **Computer Programming**, Network Administration and Web Developer. See the respective major sheets for additional information about the specific certificates and degrees. A grade of “C” or better is required in all certificate, major and major elective courses.

The CIS Computer Programming Certificate and Degree Programs are designed to provide students with skills in computer programming to enable graduates to gain employment as an entry-level programmer. Courses will emphasize skills on how to organize a computer program, and how to program in several different languages such as Java and C++. An Associate in Science Degree and two levels of certificates are offered.

Upon completion of the program, students will be able to:

- Recognize the components that constitute a computer information system. Identify various hardware, software, data, computer number systems, and procedures.
- Demonstrate understanding of the impact and application of computers in business, government, and social organizations. Students solve common business problems with computer applications and the internet.
- Receive and process written and oral technology related information. Students Interpret technology communication concepts including wired and wireless networks, servers and clients, users interfaces, operating systems, applications, utilities, and programming languages.
- Recognize the influence of the Internet on business and terms relating to the World Wide Web. Students perform the fundamental functions that operating systems and applications software provides. Students demonstrate skills in word processing, spreadsheets, presentation graphics, and use of Internet. Students will recognize a programming language and demonstrate steps involved in developing an application.
- Demonstrate the ability to work and interact effectively in teams consisting of individuals with differing interests, gender, global backgrounds and professions.
- Demonstrate ability to exercise professional, ethical responsibility in the use of technology in society.

**FOR ADDITIONAL INFORMATION, SEE A COUNSELOR, VISIT THE CAREER/TRANSFER CENTER, OR CONTACT:**

Business and Workforce Development Division  
San José City College Web Page

(408) 288-3131  
[www.sjcc.edu](http://www.sjcc.edu)

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## **Computer Information Systems** **Computer Programming**

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**CERTIFICATE OF ACHIEVEMENT - Level 3:****CIS Computer Programming****UNITS**

CIS	041	Introduction to Computer Information Systems	3
CIS	054	C/C++ Programming	3
CIS	055	Data Structures	3
CIS	059	Object Oriented Design Programming	3
CIS	073	Visual Basic Programming	3
CIS	084	JAVA Programming	3
CIS	157	Introduction to UNIX/LINUX	3

**NON-DUPLICATED UNITS FROM APPROVED MAJOR ELECTIVES** **9**

**Approved Major Electives:**

CIS 014A, 017A, 017B, 017C, 017D, 017E, 018A, 018B, 018C, 018D, 020, 020A, 022, 023, 023A, 024A, 024B, 024C, 036, 041, 047, 054, 055, 059, 060, 062A, 062B, 062C, 073, 084, 098, 157, 158

**TOTAL UNITS REQUIRED** **30**