

**COMPUTER INFORMATION SYSTEMS**  
**NETWORK ADMINISTRATION**  
**(MCSA, MCSE, CCNA, GENERAL NETWORKING, and**  
**UNIX NETWORKS)**

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The department of Computer Information Systems (CIS) offers degrees and 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 Network Administration certificate and degree programs are designed to provide students with the necessary skills to gain employment as a network administrator. Most business computers are being connected in networks. The industry needs skilled people to configure, troubleshoot, and maintain these networks. The Network Administration Program is designed to train students to fill these needs. Five certificates and three Associate in Science Degrees specializing in MCSA, MCSE, CCNA, General Networking, and UNIX Networks 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.
- Demonstrates 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:**

Clem Lundie, [clem.lundie@sjcc.edu](mailto:clem.lundie@sjcc.edu)  
Business and Workforce Development Division  
San José City College Web Page

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

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## ***MCSA CERTIFICATE REQUIREMENTS:***

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<b><u>CERTIFICATE OF ACHIEVEMENT - Level 2:</u></b>	<b><u>UNITS</u></b>
<b>CIS Microsoft Networks-MCSA</b>	
CIS 017A Windows	3
CIS 017B Windows Server	3
CIS 017D Microsoft Windows Server Network Infrastructure	3
Select one of the following:	
CIS 017E Microsoft Exchange Server	3
CIS 068 Administering Microsoft SQL Server	3
Choose 6 units from the following:	
CIS 041 Introduction to Computer Information Systems	3
CIS 014A Internet Principles and Protocols	3
CIS 062A Introduction to PC Hardware and Diagnostics	2
CIS 062B A+ Core PC Hardware Technology	2
CIS 062C A+ Core PC Operating Systems Technology	2
CIS 073 Visual Basic Programming	<u>3</u>
<b>TOTAL</b>	<b>18</b>

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## ***CCNA CERTIFICATE REQUIREMENTS:***

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<b><u>CERTIFICATE OF ACHIEVEMENT - Level 2:</u></b>	<b><u>UNITS</u></b>
<b>CIS CISCO Networks-CCNA</b>	
CIS 018A CCNA R&S: Introduction to Networks	3
CIS 018B CCRN R&S: Routing and Switching Essentials	3
CIS 018C CCNA R&S: Scaling Networks	3
CIS 018D CCNA R&S: Connecting Networks	3
Non-duplicated units from approved major electives	<u>6</u>
<b>TOTAL</b>	<b>18</b>

### **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, 068, 073, 084, 098, 157, 158

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## ***UNIX Networks***

### ***CERTIFICATE/DEGREE REQUIREMENTS:***

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<b><u>CERTIFICATE OF ACHIEVEMENT - Level 1:</u></b> CIS UNIX Networks	<b><u>UNITS</u></b>
CIS 014A Internet Principles and Protocols	3
CIS 062A Introduction to PC Hardware and Diagnostics	2
CIS 157 Introduction to UNIX/LINUX	3
CIS 158 UNIX System Administration	3
Non-duplicated units from approved major electives	<u>3</u>
<b>TOTAL</b>	<b>14</b>

#### **A.S. DEGREE REQUIREMENTS:** CIS UNIX Networks

COMPLETION OF THE CERTIFICATE OF ACHIEVEMENT LEVEL 1:

UNIX Networks	14
NON-DUPLICATED UNITS FROM APPROVED MAJOR ELECTIVES	21
GENERAL EDUCATION PATTERN/GRADUATION REQUIREMENTS	24
PHYSICAL ACTIVITY	<u>1</u>
<b>TOTAL REQUIRED UNITS</b>	<b>60</b>

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## ***General Networking***

### ***CERTIFICATE/DEGREE REQUIREMENTS:***

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<b><u>CERTIFICATE OF ACHIEVEMENT - Level 1:</u></b> CIS General Networking	<b><u>UNITS</u></b>
CIS 014A Internet Principles and Protocols	3
CIS 017A Windows	3
CIS 017B Windows Server	3
CIS 018A CISCO Network Fundamentals	3
CIS 157 Introduction to UNIX/LINUX	3
<b>TOTAL</b>	<b>15</b>

#### **A.S. DEGREE REQUIREMENTS:** CIS General Networking

COMPLETION OF THE CERTIFICATE OF ACHIEVEMENT - LEVEL 1:

General Networking	15
NON-DUPLICATED UNITS FROM APPROVED MAJOR ELECTIVES	20
GENERAL EDUCATION PATTERN/GRADUATION REQUIREMENTS	24
PHYSICAL ACTIVITY	<u>1</u>
<b>TOTAL REQUIRED UNITS</b>	<b>60</b>

#### **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, 068, 073, 084, 098, 157, 158

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**MCSE**  
**CERTIFICATE/DEGREE REQUIREMENTS:**

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<b><u>CERTIFICATE OF ACHIEVEMENT - LEVEL 2:</u></b>	<b><u>UNITS</u></b>
<b>CIS Microsoft Networks-MCSE</b>	
CIS 017A Windows	3
CIS 017B Windows Server	3
CIS 017C Microsoft Windows Server Active Directory	3
CIS 017D Windows Server Network Infrastructure	3
Select one of the following:	
CIS 017E Microsoft Exchange Server	3
CIS 068 Administering Microsoft SQL Server	3
Choose 6 units from the following	
CIS 014A Internet Principles and Protocols	3
CIS 041 Introduction to Computer Information Systems	3
CIS 062A Introduction to PC Hardware and Diagnostics	2
CIS 062B A+ Core PC Hardware Technology	2
CIS 062C A+ Core PC Operating Systems Technology	2
CIS 073 Visual Basic Programming	3
<b>TOTAL</b>	<b>21</b>

**A.S. DEGREE REQUIREMENTS: CIS Microsoft Networks-MCSE**

**COMPLETION OF THE CERTIFICATE OF ACHIEVEMENT LEVEL 2:**

Microsoft Networks - MCSE	21
NON-DUPLICATED UNITS FROM APPROVED MAJOR ELECTIVES	14
GENERAL EDUCATION PATTERN/GRADUATION REQUIREMENTS	24
PHYSICAL ACTIVITY	1
<b>TOTAL REQUIRED UNITS</b>	<b>60</b>

**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, 068, 073, 084, 098, 157, 158