System Administration

Certificate of Achievement : System Administration

The associate degree and the Certificate of Achievement in System Administration prepare students to either enter the workforce as an entry-level information and communication technologies (ICT) professional or pursue a bachelor's degree in managing information systems. Graduates of the associate degree in System Administration are prepared and eligible to sit for Microsoft and/or Linux certification exams. Competency in Microsoft® and/or Unix/Linux systems administration and network administration is required.

A system administrator, or sysadmin, is a person who is responsible for the upkeep, configuration, and reliable operation of computer systems, especially multi-user computers such as servers. The system administrator seeks to ensure that the uptime, performance, resources, and security of the computers he or she manages meet the needs of the users, without exceeding the budget. To meet these needs a system administrator may acquire, install, or upgrade computer components and software; automate routine tasks; write computer programs; troubleshoot; train and/or supervise staff; and provide technical support.

Generally, no courses beyond standard high school diploma requirements are needed to be admitted into these programs. However, most recommend a background in computer science, information systems, and information and communication technologies.

Most graduates enter the workforce as system administrator or sysadmin. New employment opportunities as Storage (SAN) Administrator require the system administrator to create, provision, add, or remove storage to/from computer systems and work with virtualization. Sysadmins can also work as a database administrator, network administrator, security administrator and/or a web administrator. Tasks include managing multiple sites, administering security, and configuring necessary components and software. Responsibilities may also include software change management.

As the use of technology expands throughout the economy, available positions in system administration are expected to grow. Employment of network and computer systems administrators is expected to grow 28% from 2010 to 2020, according to the Bureau of Labor Statistics (www.bls.gov). Demand for these workers is high and should continue to grow as firms invest in newer, faster technology and mobile networks.

Requirements for Certificate of Achievement:
a. Complete Major Field courses and either Linux System Administrator Focus or Microsoft System Administrator Focus.
b. Complete at least six units at Ohlone College.
c. Maintain a 2.0 grade point average in Major Field courses.

Associate in Science: System Administration

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Requirements for AS Degree:
a. Complete Major Field courses; either Linux System Administrator Focus or Microsoft System Administrator Focus; and Supporting Courses with a grade of C or better.
b. Complete Ohlone College General Education (Plan A), CSU GE (Plan B), or IGETC (Plan C) requirements. These requirements are specified in the Ohlone College catalog.
c. Complete at least 60 degree-applicable units with a 2.0 grade point average.
d. Complete at least 12 units at Ohlone College.

Student Learning Outcomes

1. Setup, configure, maintain, and troubleshoot computer systems, stand-alone application, and/or various computer operating systems (client, server, and network).

2. Demonstrate appreciation of the ICT career field and the need to be lifelong learners.

Major Field

CNET 120 VMware: Install, Configure, Manage	2
CNET 122A Information Storage and Management - EMC	2
CNET 122B Cloud Infrastructure and Services	2
CNET 146 Introduction to UNIX/Linux	3
CNET 155A Introduction to Networks (CCNA1)	3
CNET 162 Windows Server Installation and Configuration Administration	2
CNET 164 Windows Server Administration	2
COMM 125 Career Communication	3
or	
ENGL 156 Introduction to Report & Technical Writing	3
	Total Units = 19

System Administrator Focus
Complete either the Linux System Administrator Focus or the Microsoft System Administrator Focus.

Linux System Administrator Focus	8
CNET 140 Linux System Administration I (LPI-1)	4
CNET 141 Linux System Administration II (LPI-2)	4
or	
Microsoft System Administrator Focus	8
CNET 166 Windows Server - Advanced Services	2
CNET 167 Microsoft Exchange Server	2
CNET 168A Querying Microsoft SQL Server	2
CNET 168B Administering Microsoft SQL Server	2
	Total Units = 8.00

Supporting Courses

Complete 1-4 units from the following courses:	1 - 4
WEX 195A1 Occupational Work Experience Education	1
or	
WEX 195A2 Occupational Work Experience Education	2
or	
WEX 195A3 Occupational Work Experience Education	3
or	
WEX 195A4 Occupational Work Experience Education	4
Complete four units from the following courses:	4

CNET 105 IT Essentials (CompTIA A+)	4
CNET 108 IT Project Management	3
CNET 155B Routing and Switching Essentials (CCNA2)	3
CNET 158 Wireless Networks	4
CNET 160A MS Client Operating Systems	2
CNET 170 Network Security (Security+)	4
CNET 172 CCNA Security	2
CNET 180 IP Telephony and VoIP Implementations	2
CNET 182 Advanced Routing (CCNP ROUTE)	3
CNET 184 Advanced Switching (CCNP SWITCH)	3
CNET 186 Troubleshooting IP Networks (CCNP TSHOOT)	3
CS 102 Introduction to Computer Programming Using C++	3
CS 104A Introduction to .NET Programming	4
CS 125 Introduction to Programming Using Java	4
CS 145 PHP Programming with MySQL	4
CS 147 UNIX/Linux Shell Scripting	4
CS 149 PERL Programming	4
CS 152 Data Communications	2
CS 157 TCP/IP and Internetworking	3

Total Units = 5.00 - 8.00

Total Units = 32.00 - 35.00

720