CURRICULUM GUIDE
2017-2018

SYSTEM ADMINISTRATION

Associate in Science in System Administration
and
Certificate of Achievement in System Administration

The Associate in Science 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 Associate in Science 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.

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.

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 OR	3
ENGL-156	Introduction to Report and Technical Writing	(3)
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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) OR	4

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

SUPPORTING COURSES

Complete 1-4 units from the following courses:		1-4
WEX-195A1	Occupational Work Experience Education OR	1
WEX-195A2	Occupational Work Experience Education OR	(2)
WEX-195A3	Occupational Work Experience Education OR	(3)
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 Required Units: 32-35