COMPUTER TECHNOLOGIES

NETWORK MANAGEMENT

Network Management Degree - A25590NM

- Day and Evening

The Network Management curriculum prepares individuals for employment supporting local- and wide-area networks. Students may learn how to use technologies to provide for data, voice, image, and video communications in business, industry, and education.

Course work includes design, installation, configuration, and management of local- and wide-area network hardware and software. Emphasis is placed on developing proficiency in the use of network management software and the use of hardware such as switches and routers.

Graduates may find employment in entry-level jobs as local area network managers, network operators, network analysts, and network technicians. Graduates may also be qualified to take certification examinations for various network products, depending on their local program.

Program Sequence

FIRST SEMESTER

CTI	110	Web, Programming and Database Foundations	3
CTI	120	Network and Security Foundations	3
NOS	110	Operating System Concepts	3
ENG	111	Writing and Inquiry	3
MAT	143	Quantitative Literacy	3

SECOND SEMESTER

NET	125	Introduction to Networks	3
NET	126	Routing Basics	3
CTS	120	Hardware/Software Support	3
NOS	130	Windows Single User	3
NOS	230	Windows Admin I	3

SUMMER SEMESTER

NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3

THIRD SEMESTER

CTS	115	Info Sys Business Concepts	3
ENG	114	Professional Research and Reporting	3
NOS	120	Linux / UNIX Single User	3
___	___	Major Elective I	3

FOURTH SEMESTER

CTS	288	Professional Practices in IT	3
___	___	HUM / FA Elect (Min 3 cr hrs)	3
___	___	Social and Behavioral Sciences Elect (Min 3 cr hrs)	3
___	___	Major Elective II	3

SUMMER SEMESTER

___	___	Major Elective III	2
NET	289	Networking Project	3

Humanities/Fine Arts Elective

(Select 3.0 hours from the following courses)

ART	111	Art Appreciation	3
HUM	115	Critical Thinking	3
MUS	110	Music Appreciation	3
PHI	240	Introduction to Ethics	3

Social/Behavioral Science Elective

(Select 3.0 hours from the following courses)

ECO	251	Prin. Of Microeconomics	3
ECO	151	Survey of Economics	3
POL	120	American Government	3
PSY	118	Interpersonal Psychology	3
PSY	150	General Psychology	3
SOC	210	Introduction to Sociology	3

Graduation Requirements ..... 65 Credit Hours

Concentration Electives List

Select one option from grouping below:

Option 1 – Microsoft Certified IT Professional Track

NOS	231	Windows Administration II	3
NOS	232	Windows Administration III	3

Option 2: Cisco Certified Network Professional Track

NET	270	Building Scalable Networks	3
NET	272	Multi-Layer Networks	3
NET	273	Internetworking Support	3

Option 3: Red Hat Certified Engineer Track

NOS	220	Linux/UNIX Administration I	3
NOS	221	Linux/UNIX Administration II	3
NOS	222	Linux/UNIX Administration III	3

Option 4: Data Storage & Virtualization Track

CTI	140	Virtualization Concepts	3
CTI	240	Virtualization Admin I	3
CTI	241	Virtualization Admin II	3

Option 5: Mixed Elective Track

CCT	121	Computer Crime Investigations	4
CCT	240	Data Recovery Techniques	3
CTS	118	IS Professional Comm	2
CTS	135	Integrated Software Intro	4
CTS	155	Technical Support Functions	3
CTS	220	Advanced Hardware/Software Support	3
CTS	255	Advanced Technical Support Functions	3
CTS	272	Desktop Support: Apps	3
NET	115	Telecom for IT Professionals	3
NET	135	Data Center Networking	3
NET	175	Wireless Technology	3
NET	240	Network Design	3
NOS	125	Linux/UNIX Scripting	3
OMT	154	Customer Satisfaction	2
PMT	110	Intro to Project Management	3
SEC	110	Security Concepts	3
SEC	150	Secure Communications	3
SEC	160	Security Administration I	3
WBL	___	Work Based Learning (All numbers acceptable)	3

Data Storage and Virtualization Diploma - D25590DV

- Evening

This diploma under the Network Management degree includes many courses from that degree, but requires a specific elective path following Virtualization. The skills and credentials that the student could earn with this diploma include those in that area of operating system virtualization, which is a prominent technology in cloud computing and datacenter operations.

The diploma includes courses in Cisco routing and switching, Microsoft desktop and server operating systems, and in-depth training with O/S virtualization. Instruction in these areas can qualify students to take industry certification exams in VMWare, Cisco, Microsoft, CompTIA, and NetApp.

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This diploma also includes a work-based learning component, putting students to work in live datacenters

FIRST SEMESTER

CTI	110	Web, Pgm, & DB Foundation	3
ENG	111	Writing and Inquiry	3
___	___	Operating System Elective	3

SECOND SEMESTER

CTI	140	Virtualization Concepts	3
CTS	120	Hardware/Software Support	3
NET	125	Networking Basics	3
NET	126	Routing Basics	3
NOS	130	Windows Single User	3

THIRD SEMESTER

CTI	240	Virtualization Admin I	3
CTS	115	Info Sys Business Concepts	3
ENG	114	Professional Research & Reporting	3
NOS	230	Windows Admin I	3

FOURTH SEMESTER

CTI	241	Virtualization Admin II	3
WBL	113	Work-Based L earning I	3

Graduation Requirements ..... 42 Credit Hours

Electives
(Choose a Min of 3 Credit Hrs)

NOS	110	Operating System Concepts	3
CTI	130	OS and Device Foundation	6

CISCO Network Associate Certificate – C25590CA

This certificate is designed to prepare students for the CISCO Certified Network Associate (CCNA) examination. Topics include network topologies and design, router configuration and protocols, switching theory, virtual LANS and threaded case studies.

Upon completion of the four-course sequence, students may have the expertise they need to pass the test required to achieve CCNA status. Completion of NET 110 or CTI-120 or its equivalent is required to begin this program.

NET	125	Networking Basics	3
NET	126	Routing Basics	3
NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3

Graduation Requirements ..... 12 Credit Hours

CISCO Network Professional Certificate - C25590CP

The CISCO Certified Network Professional (CCNP) certificate provides the student with advanced skills in LAN/WAN networking technologies with an emphasis on CISCO methodology. These courses will provide an in-depth study of theory, as well as practical hands-on lab activities to prepare the student for the CCNP certification objectives. Topics include routing protocols, switching technology, remote access setup and maintenance, building multi-layer networks, and networking troubleshooting.

NET	270	Building Scalable Networks	3
NET	272	Multi-Layer Networks	3
NET	273	Internetworking Support	3
___	___	Major Elective (min 3 cr hrs)	3

Graduation Requirements ..... 12 Credit Hours

Major Electives
(Choose a Min of 3 Credit Hrs)

CTI	140	Virtualization Concepts	3
CTS	135	Integrated Software Intro	4
CTS	155	Technical Support Functions	3
CTS	240	Project Management	3
NET	115	Telecom for IT Professionals	3
NET	135	Data Center Networking	3
NET	175	Wireless Technology	3
NET	240	Network Design	3
NOS	220	Linux/UNIX Admin I	3
NOS	231	Windows Admin II	3
SEC	110	Security Concepts	3
SEC	150	Secure Communications	3
SEC	160	Security Administration I	3
WBL	___	Work Based Learning (All Numbers Accepted)	3

Cisco Security Certificate – C25590CX

-Day and Evening

This program is intended for individuals who are interested in getting certified in network security. Courses may lead to industry credentials in networking and network security.

SEC	110	Security Concepts	3
SEC	150	Secure Communications	3
NET	225	Routing and Switching I	3
NET	226	Routing and Switching II	3

Graduation Requirements ..... 12 Credit Hours

Linux Certified IT Professional Certificate – C25590LX

-Day and Evening

This certificate is designed to prepare students for Linux or Red Hat certifications. Topics include network installation, Red Hat Linux file system and kernel concepts, scripts, system recovery, cron system, LILO configuration, implement configure, log and restrict various Red Hat network services, configuration issues associated with using Red Hat Linux as a router, basic firewall policies, and basics of the XWindow system. Completion of NOS-110 or CTI-130 is required to begin this program.

NOS	120	Linux/UNIX Single User	3
NOS	125	Linux/UNIX Scripting	3
NOS	220	Linux/UNIX Admin I	3
NOS	221	Linux/UNIX Admin II	3
NOS	222	Linux/UNIX Admin III	3

Graduation Requirements ..... 15 Credit Hours

Microsoft Certified IT Professional Certificate - C25590MS

- Day and Evening

This certificate is intended for students who are interested in testing for the MCITP or MCSA industry certifications. Courses cover the installation, configuration and management of Microsoft operating systems.

NOS	130	Windows Single User	3
NOS	230	Windows Admin I	3
NOS	231	Windows Admin II	3
NOS	232	Windows Admin III	3

Graduation Requirements ..... 12 Credit Hours

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Global Windows Security Administration Certificate – C25590WS

-Day

Graduates from this certificate program may be prepared to demonstrate their knowledge, skills, and abilities in securing Microsoft Windows clients and servers, including technologies such as PKI, IPSec, and Group Policies. Students can learn how to install, configure and secure Windows operating systems. Graduates may be ready to demonstrate proficiency in managing the hardening of Windows systems against malware and persistent adversaries.

SEC	160	Security Administration I	3
NOS	230	Windows Admin I	3
NOS	231	Windows Admin II	3
NOS	232	Windows Admin III	3

Graduation Requirements ..... 12 Credit Hours