

Networking

Network Administration and Security

Associate of Applied Science Degree
Sioux City Campus

Program Overview and Opportunities:

The Networking Administration and Security program is a comprehensive course of study. Students will be trained for computer PC repair and maintenance, operating systems installation and troubleshooting, computer networking, and system administration and security. Through both theory and hands-on instruction, students will achieve a thorough understanding of the design, installation, maintenance, and troubleshooting of computers, operating systems and wired/wireless networks.

Specific network instruction includes LAN/WLAN system design, installation, configuration, administration and troubleshooting. Network and system security issues will be addressed as they pertain to each individual course.

Upon completion of this degree, the students will be better prepared to take national certification exams which may be taken on campus at the Western Iowa Tech Testing Center. The course fees for most classes include the cost of the national certification exam voucher.

According to the Bureau of Labor Statistics, Employment of network and computer systems administrators is expected to increase by 27 percent from 2006 to 2016, which is much faster than the average for all occupations. Computer networks have become an integral part of business, and demand for these workers will increase as firms continue to invest in new technologies. The wide use of electronic commerce and the increasing adoption of mobile technologies mean that more establishments will use the Internet to conduct business online. This growth translates into a need for systems administrators who can help organizations use technology to communicate with employees, clients, and consumers. (Occupational Outlook Handbook. Bureau of Labor Statistics 2006-2007.)

Program Advisors

Keith Price, MCSE, MCP, A+, CCNA
Ext. 1809 Room T215 pricek@witcc.edu

Dave Wellsfry, MCT, MCITP: Server, Enterprise, Messaging,
MCSE 2003: Security
Ext. 3233 Room T215 dave_wellsfry@witcc.edu

Kamali Muthukrishnan, PhD, Division Chair
Ext. 1291 Room L309 muthukk@witcc.edu

Network Administration and Security Curriculum

Course #	Title	Credits
NET 612	Fundamentals of Network Security	3
NET 123	Computer Hardware Basics*	4
NET 132	Operating Systems Software Basics*	3
NET 217	CCNA Exploration: Network Fundamentals	3
MAT	Math General Education Elective	3
NET 218	CCNA Exploration: Routing Concepts	3
NET 219	CCNA Exploration: Switching and Wireless	3
CSC 110	Introduction to Computers*	3
NET 155	Intro to Wireless Networks	3
NET 520	Microsoft Workstation–MCTS	3
NET 542	Microsoft Server 2008 Network Infrastructure MCTS	3
NET 501	Basic Linux Operating System	3
NET 543	Microsoft Server 2008 Applications Infrastructure MCTS . Healthful Living, Leisure, or Humanities Gen. Ed. Elect. ...	3
NET 502	Advanced Linux Operating System	3
NET 540	Microsoft Server 2008 Active Directory MCTS	3
NET 547	Microsoft Server 2008 Server Enterprise Admin. MCITP .	3
NET 220	CCNA Exploration: Accessing the WAN	3
COM 753	Technical Communications*	3
NET 536	Microsoft Exchange 2007 MCTS	3
NET 730	Computer Forensics and Investigations	3
NET 550	Network & Domain Planning and Deployment Capstone .	3
PSY 102	Human and Work Relations*	3
Program Total		70

* Denotes courses commonly articulated with area high schools.

** Denotes courses offered for dual credit at many area high schools.

Are You a Part-time Student?

All of these courses can be taken on a part-time basis
See course descriptions in the back of the catalog for
more detailed information about course
prerequisites and co-requisites.

Please see an advisor to ensure correct course
sequence.

The courses listed above are grouped in the order that they should
be taken each semester.

Networking

LAN Technician

Diploma

Sioux City and Denison Campuses

Program Overview and Opportunities:

The Local Area Network (LAN) Technician program is a one-year diploma program designed to prepare the student to perform a wide range of computer PC troubleshooting and maintenance. Students will also be trained to perform entry-level LAN network troubleshooting, diagnosis, network monitoring, and maintenance of LAN networks. Students also receive hands-on training with various computer applications and hardware.

This diploma program should not be confused with the Computer Networking/Information Systems two-year degree program which requires more extensive study within each of these areas leading to a more thorough understanding of both LAN and WAN competencies.

Students may not always be able to schedule these classes in two semesters. Check with an advisor for specific scheduling of courses each semester.



LAN Technician Curriculum

Course #	Title	Credits
NET 612	Fundamentals of Network Security	3
NET 123	Computer Hardware Basics*	4
NET 132	Operating Systems Software Basics*	3
NET 217	CCNA Exploration: Network Fundamentals	3
	Math General Education Elective	3
NET 218	CCNA Exploration: Routing Concepts	3
NET 219	CCNA Exploration: Switching and Wireless	3
CSC 110	Introduction to Computers*	3
NET 155	Intro to Wireless Networks	3
NET 520	Microsoft Workstation MCTS	3
NET 542	Microsoft Server 2008 Network Infrastructure MCTS	3
	Program Total	34

Program Advisors

Keith Price, MCSE, MCP, A+, CCNA

Ext. 1809 Room T215 pricek@witcc.edu

Dave Wellsfry, MCT, MCITP: Server, Enterprise, Messaging,
MCSE 2003: Security

Ext. 3233 Room T215 dave_wellsfry@witcc.edu

Kamali Muthukrishnan, PhD, Division Chair

Ext. 1291 Room L309 muthukk@witcc.edu

Sections of shading above indicate groups of courses that could be taken during the same semester if a full-time student is academically ready for all courses.

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

Please see an advisor to ensure correct course sequence.

Networking

A+ Certification

Certificate

Sioux City and Denison Campuses

Program Overview and Opportunities:

This certificate program was developed to provide training in computer PC repair. Students will gain a fundamental understanding of a PC through hands-on and theory-based instruction. Specific topics include computer hardware and software installation, troubleshooting, and maintenance.

Upon completion of these courses, the students will be better prepared to take national certification tests, which may be taken on campus at the Western Iowa Tech Testing Center. Students must register and pay for the tests online via the VUE testing center web site at VUE.com

A+ Certification Curriculum

Course #	Title	Credits
ELT 115	Electronic Concepts (3) OR	
ELE 112	Basic Electrical Theory	2
NET 123	Computer Hardware Basics**	4
NET 132	Operating Systems Software Basics	3
Program Total		9 or 10

Students may not always be able to schedule these classes in two semesters. Check with an advisor for specific scheduling of courses each semester.

** Denotes courses offered for dual credit at many area high schools.

A+ Certification and CCNA

Program Advisors

Keith Price, MCSE, MCP, A+, CCNA

Ext. 1809 Room T215 pricek@witcc.edu

Dave Wellsfry, MCT, MCITP: Server, Enterprise, Messaging, MCSE 2003: Security

Ext. 3233 Room T215 dave_wellsfry@witcc.edu

Kamali Muthukrishnan, PhD, Division Chair

Ext. 1291 Room L309 muthukk@witcc.edu

Cisco Certified Network Associate–CCNA

Certificate

Sioux City Campus

Program Overview and Opportunities:

This certificate program was developed in response to the growing demand for network technicians throughout the world. Cisco is recognized as an industry leader in developing computer network hardware such as routers, switches, hubs, etc. Western Iowa Tech is a Cisco Regional Training Academy and has Cisco certified instructors trained to deliver the Cisco curriculum.

Upon completion of these courses, the students will be better prepared to take national certification tests. The national certification tests may be taken on campus at the Western Iowa Tech Testing Center. Students must register and pay for the tests online via the VUE testing center web site at VUE.com

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

The courses listed above are grouped in the order that they should be taken each semester. Please see a Networking program advisor to ensure correct course sequence.

CCNA–Cisco Certified Network Associate Curriculum

Course #	Title	Credits
ELT 115	Electronic Concepts (3) OR	
ELE 112	Basic Electrical Theory	2
NET 123	Computer Hardware Basics**	4
NET 132	Operating Systems Software Basics	3
NET 217	CCNA Exploration: Network Fundamentals	3
NET 218	CCNA Exploration: Routing Concepts	3
NET 219	CCNA Exploration: Switching and Wireless	3
NET 220	CCNA Exploration: Accessing the WAN	3
Program Total		21 or 22

Students may not always be able to schedule these classes in two semesters. Check with an advisor for specific scheduling of courses each semester.

* Denotes courses commonly articulated with area high schools.

** Denotes courses offered for dual credit at many area high schools.

Networking

Microsoft Certified Technology Specialist (MCTS)

Certificate
Sioux City Campus

Program Overview and Opportunities:

This certificate program was developed in response to the growing demand for network technicians throughout the world. Cisco is recognized as an industry leader in developing computer network hardware such as routers, switches, hubs, etc. Western Iowa Tech is a Cisco Regional Training Academy and has Cisco certified instructors trained to deliver the Cisco curriculum.

Upon completion of these courses, the students will be better prepared to take national certification tests. The national certification tests may be taken on campus at the Western Iowa Tech Testing Center. Students must register and pay for the tests online via the VUE testing center web site at VUE.com

Microsoft Certified Technology Specialist (MCTS) Curriculum

Course #	Title	Credits
ELT 115	Electronic Concepts	3
ELT 132	Operating Systems Software Basics	3
ELT 150	Basic Electrical Theory	2
NET 123	Computer Hardware Basics	4
NET 520	Microsoft Workstation – MCTS	3
Program Total		15

Students may not always be able to schedule these classes in two semesters. Check with an advisor for specific scheduling of courses each semester.

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

The courses listed above are grouped in the order that they should be taken each semester. Please see a program advisor to ensure correct course sequence.

Program Advisors

Keith Price, MCSE, MCP, A+, CCNA
Ext. 1809 Room T215 pricek@witcc.edu

Dave Wellsfry, MCT, MCITP: Server, Enterprise, Messaging, MCSE 2003: Security
Ext. 3233 Room T215 dave_wellsfry@witcc.edu

Kamali Muthukrishnan, PhD, Division Chair
Ext. 1291 Room L309 muthukk@witcc.edu

Microsoft Certified IT Professional (MCITP)

Certificate
Sioux City Campus

Program Overview and Opportunities:

This program was developed to provide students with the knowledge and training needed to obtain an MCITP certification. Role-based training reinforces key skills required to successfully administer current Microsoft systems.

Students benefit by using official training materials, up-to-date systems labs supplemented with online training from Microsoft. Courses cover configuration and administration of workstations, active directory domains, application infrastructure, network infrastructure, multi-domain enterprises, and email systems. Upon completion of each course, students will be better prepared to take a specific Microsoft certification exam. While passing Microsoft certification exams are not required, Microsoft exam vouchers are included in course fees and exams may be taken at the Western Iowa Tech Testing Center. Most certification exams are heavily discounted for Microsoft IT Academy students.

Microsoft Certified Professional (MCP) Curriculum

Course #	Title	Credits
NET 132	Operating Systems Software Basics	3
NET 520	Microsoft Workstation MCTS	3
NET 536	Microsoft Exchange Server 2007 MCTS	3
NET 540	Microsoft Server 2008 Active Directory MCTS	3
NET 542	Microsoft Server 2008 Network Infrastructure MCTS	3
NET 543	Microsoft Server 2008 Applications Infrastructure MCTS .	3
NET 547	Microsoft Server 2008 Server Enterprise Admin. MCITP .	3
Program Total		21

Are You a Part-time Student?

All of these courses can be taken on a part-time basis

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

Please see an advisor to ensure correct course sequence.