

Degree Description

This one-year certificate program is designed to teach students how to administer a Microsoft Windows network and prepare students for the Microsoft Certified System Administration (MCSA) exam. McLennan is a Microsoft Academic Alliance partner.

Marketable Skills

1. Understand and apply computing terminology and concepts used in the workplace- Critical Thinking/Communication.
2. Apply fundamentals of computer programming in structured design concepts- Critical Thinking/Communication.
3. Configure, use, and troubleshoot computer operating systems and/or application software Critical Thinking.
4. Use the Internet to locate, transfer, research and publish information at a level appropriate for the academic and work environment. Critical Thinking/Communication.
5. Install and evaluate desktop and network security protocols and principles- Critical Thinking.

Semester I	Hours
ITCC 1314 CCNA 1: Introduction to Networks ³	3 hours
ITNW 1354 Implementing and Support Servers ²	3 hours
ITSC 1305 Introduction to PC Operating Systems	3 hours
ITNW 2352 Administering a Microsoft SQL Server ²	3 hours
	12 hours

Semester II	Hours
ITCC 1340 CCNA 2: Routing and Switching Essentials ³	3 hours
ITNW 1345 Implementing Network Directory Services ²	3 hours
ITSC 1307 UNIX Operating System I	3 hours
ITSC 2339 Personal Computer Help Desk ⁴ <i>or</i> ITSC 2386 Internship-Computer & Information Scien ⁴	3 hours
ITSY 1342 Information Technology Security	3 hours
	15 hours

Summer Semester	Hours
COSC 1301 Introduction to Computing	3 hours
ITSC 1325 Personal Computer Hardware ¹	3 hours
	6 hours

Total hours: 33 hours

- ¹ May be eligible for articulation through the statewide ATC program. Please check with your high school counselor for more details.
- ² This course is designed to prepare students for the exams to receive the Microsoft Certified Professional (MCP) and Microsoft Certified Systems Administrator (MCSA) certification.
- ³ MCC is a local CISCO Academy. This is one of four courses leading up to the CISCO Certified Network Administrator certification.
- ⁴ This course is designed as a Capstone course and will integrate knowledge and skills from other courses. This Capstone course should be taken in the student's last Fall or Spring semester before graduation.

Course Descriptions

ITCC 1314 CCNA 1: Introduction to Networks

Covers networking architecture, structure, and functions; introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media and operations to provide a foundation for the curriculum. Semester Hours 3 (2 lec/3 lab)

ITNW 1354 Implementing and Support Servers

Develops skills necessary to implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. Prerequisite: ITSC 1305. Semester Hours 3 (2 lec/2 lab)

ITSC 1305 Introduction to PC Operating Systems

Introduction to personal computer operating systems, including installation, configuration, file management, memory and storage management, control of peripheral devices and use of utilities. Semester Hours 3 (2 lec/2 lab)

ITNW 2352 Administering a Microsoft SQL Server

Administering SQL Server is a skills development course in the installation, configuration, administration, and troubleshooting of SQL Servers client/server database management system version. Prerequisite: ITSC 1305 and a networking course or experience. Semester Hours 3 (2 lec/2 lab)

ITCC 1340 CCNA 2: Routing and Switching Essentials

Describes the architecture, components, and basic operation of routers and explains the basic principles of routing and routing protocols. It also provides an in-depth understanding of how switches operate and are implemented in the LAN environment of small and large networks. Prerequisite: ITCC 1314 Semester Hours 3 (2 lec/3 lab)

ITNW 1345 Implementing Network Directory Services

Provides students with the knowledge and skills necessary to install, configure, and administer Network Directory service. Prerequisite: ITNW 1354 or job experience in networking. Semester Hours 3 (2 lec/2 lab)

ITSC 1307 UNIX Operating System I

Introduces the UNIX operating system, including multi-user concepts, terminal emulation, use of system editor, basic UNIX commands, and writing script files using LINUX operating system. Prerequisite: ITSC 1305. Semester Hours 3 (2 lec/2 lab)

ITSC 2339 Personal Computer Help Desk

Covers diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects. Semester Hours 3 (2 lec/2 lab)

ITSC 2386 Internship-Computer & Information Scien

Provides a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: An approved workstation and consent of program director. Semester Hours 3 (15 lab)

ITSY 1342 Information Technology Security

Instructs on security for network hardware, software, and data, including physical security, backup procedures, relevant tools, encryption, and protection from viruses. Students will learn to ensure the physical security of file servers and other network components using best practices; develop backup procedures to provide for data security; use network operating system features to implement network security; describe the nature of computer viruses, their methods of spreading, and means of protecting networks from viruses; use relevant tools to provide for network security; and use encryption techniques to protect network data. Semester Hours 3 (2 lec/2 lab)

COSC 1301 Introduction to Computing

Provides an overview of computer systems-hardware, operating systems, the Internet, and application software including word processing, spreadsheets, presentation graphics, and databases. Current topics such as the effect of computers on society, and the history and use of computers in business, educational, and other interdisciplinary settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science. Semester Hours 3 (2 lec/2 lab)

ITSC 1325 Personal Computer Hardware

Studies current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting. Semester Hours 3 (2 lec/2 lab)
