

NETWORKING SPECIALIST

ASSOCIATE DEGREE AND DIPLOMA PROGRAMS

The courses in the associate degree and diploma programs in Networking Specialist provide students with knowledge of the concepts, principles, and skills required in a client/server computer environment. Program graduates have basic competence in humanities or fine arts, social or behavioral sciences, and natural sciences or mathematics. They also have greater competence in computer terminology and concepts, program design and development, client/server administration and management, installation and maintenance of hardware/software, and computer networking. The Networking Specialist program is a technical specialization of Computer Information Systems.

CAREER OPPORTUNITIES

Computer networking specialists install, configure, diagnose, troubleshoot, and administer data communications networks. They provide technical assistance and training to system users. They assist in the installation of hardware such as routers, switches, firewalls, clients, and servers. Networking infrastructures include local area networks (LANs), wide area networks (WANs), Intranets, and Internets. Graduates qualify to enter careers in which they function as network support specialists, network administrators, or network technicians. Graduates are eligible to take exams that lead to Microsoft and other related certifications.

PROGRAM EXPENSES

The recent reauthorization of the Higher Education Act requires all colleges and universities to notify students and prospective students of all program costs for which they will be responsible. Students will be responsible for the following expenses:

- Quarterly tuition (\$45 per credit hour)
- Quarterly student activity fees (\$16)
- Quarterly registration fee (\$26)
- Quarterly accident insurance fee (\$4)
- Quarterly instructional and technology supply fee (\$35)
- Textbooks (Approximately \$1,900 for entire program)

The expenses are based on costs in effect at the time this catalog was published. Prices are subject to change.

ADMISSION REQUIREMENTS

Applicants must submit the following information to the Admissions Office:

- a. Completed and signed application for admission and a \$20 nonrefundable application fee;
- b. Official high school or GED transcripts and/or official college transcripts from all colleges attended in the past (see *General Admission Requirements*); and
- c. Valid COMPASS, ASSET, SAT, or ACT test scores (see *ASSET and COMPASS Placement Tests*).

NETWORKING SPECIALIST CURRICULUM OUTLINE

Diploma Program (Major Code: CIN4)

Credit Required for Graduation: 90 quarter credit hours

	Credits
General Core	18
EMP 1000 Interpersonal Relations and Professional Development	3
ENG 1010 Fundamentals of English I	5
ENG 1012 Fundamentals of English II	5
MAT 1013 Algebraic Concepts	5
Professional Core	25
* CIS 103 Operating Systems Concepts	6
* CIS 105 Program Design and Development	5
* CIS 106 Computer Concepts	5
* CIS 1140 Networking Fundamentals	6
SCT 100 Introduction to Microcomputers	3
Business Major	47
* CIS 122 Microcomputer Installation and Maintenance	7
* CIS 1121 Visual Basic.NET I	7
* CIS 2149 Implementing Microsoft Windows Professional	6
* CIS 2150 Implementing Microsoft Windows Server	6
* CIS 2153 Implementing Microsoft Windows Networking Infrastructure	6
* CIS 2154 Implementing Microsoft Windows Network Directory	6
Selectives (select from the list provided)	9

** Students must pass courses with grades of C or better.*

NETWORKING SPECIALIST CURRICULUM OUTLINE

Associate of Applied Science Degree Program (Major Code: CIN3)

Credit Required for Graduation: 102 quarter credit hours

			Credits
General Core			30
ECO	2105	Principles of Macroeconomics	
	OR		5
ECO	2106	Principles of Microeconomics	
ENG	1101	Composition and Rhetoric	5
ENG	1102	Literature and Composition	
	OR		5
HUM	1101	Introduction to Humanities	
ENG	1105	Technical Communications	
	OR		5
SPC	1101	Public Speaking	
MAT	1101	Mathematical Modeling	
	OR		5
MAT	1111	College Algebra	
PSY	1101	Introduction to Psychology	5
Professional Core			25
*	CIS	103 Operating Systems Concepts	6
*	CIS	105 Program Design and Development	5
*	CIS	106 Computer Concepts	5
*	CIS	1140 Networking Fundamentals	6
	SCT	100 Introduction to Microcomputers	3
Business Major			47
*	CIS	122 Microcomputer Installation and Maintenance	7
*	CIS	1121 Visual Basic NET I	7
*	CIS	2149 Implementing Microsoft Windows Professional	6
*	CIS	2150 Implementing Microsoft Windows Server	6
*	CIS	2153 Implementing Microsoft Windows Networking Infrastructure	6
*	CIS	2154 Implementing Microsoft Windows Network Directory	6
		Selective (select from the list provided)	9
<i>* Students must pass courses with grades of C or better.</i>			
Selectives			
ACC	1101	Principles of Accounting I	6
ACC	2154	Personal Finance	5
ACC	2155	Legal Environment of Business	5
*	CIS	242 TCP/IP	7
*	CIS	1115 Information Security Fundamentals	5
*	CIS	1118 Implementing Network Security	6
*	CIS	1131 Help Desk Concepts	6
*	CIS	2191 Internet Business Fundamentals	4
*	CIS	2201 HTML Fundamentals	3
HRT	146	Business Etiquette and Communications	3
MKT	101	Principles of Management	5

** Students must pass courses with grades of C or better.*

ACCOUNTING

Department Code: ACC

ACC 1101

Principles of Accounting I (4-4-6)

Banner Title: Principles of Accounting I

This course introduces the basic concepts of the complete accounting cycle and provides students with the necessary skills to maintain a set of books for sole proprietorships. Topics include accounting vocabulary and concepts, the accounting cycle and accounting for personal service businesses and merchandising enterprises, and cash control. Laboratory work demonstrates theory presented in class.

Prerequisite: Diploma-level program admission

Offered quarterly

ACC 2154

Personal Finance (5-0-5)

Banner Title: Personal Finance

This course introduces practical applications of concepts and techniques used to manage personal finance. Topics include cash management, time value of money, credit, major purchasing decisions, insurance, investments, retirement, and estate planning.

Offered Fall, Winter, and Spring terms

ACC 2155

Legal Environment of Business (5-0-5)

Banner Title: Legal Environment of Business

Instructors introduce law and its relationship to business in this course. Topics include legal ethics, legal processes, business contracts, business torts and crimes, real and personal property, agency and employment, risk-bearing devices, and Uniform Commercial Code.

Prerequisite: Program admission

Offered quarterly

COMPUTER INFORMATION SYSTEMS

Department Code: CIS

CIS 103

Operating Systems Concepts (4-4-6)

Banner Title: Operating Systems Concepts

This course provides an overview of operating systems functions and commands that are necessary in computer-working environments. Topics include multiprogramming, multi-user systems, resource management, task command

and control languages, and operating system utilization.

Prerequisite: CIS 106 with a grade of C or better

Offered quarterly

CIS 105

Program Design and Development (5-0-5)

Banner Title: Program Design and Development

This course emphasizes business problem identification and solution through systems of computer programs using such tools as structure charts, flowcharts, and pseudocode. Topics include problem-solving processes, fundamentals of structured programming, program development building blocks, fundamentals of file and report structures, and business application structures.

Prerequisite: Diploma-level program admission

Offered Fall and Spring terms

CIS 106

Computer Concepts (5-0-5)

Banner Title: Computer Concepts

Instructors provide students with an overview of computers and information technology. Topics include computer history and terminology, data representation, data storage concepts, fundamentals of information processing, fundamentals of hardware operation, fundamentals of communications and networking, structured programming concepts, program development methodology, system development methodology, and computer number systems.

Prerequisite: Diploma-level program admission

Offered quarterly

CIS 122

Microcomputer Installation and Maintenance (4-6-7)

Banner Title: Microcomputer Install/Maint

This course introduces the fundamentals of installing and maintaining microcomputers. Topics include identifying components and their functions, safety, installation procedures, troubleshooting techniques, and preventive maintenance.

Prerequisite: CIS 106 with a grade of C or better

Offered Winter and Summer terms

CIS 242

TCP/IP (4-6-7)

Banner Title: TCP/IP

This course provides students with the

knowledge and skills required to set up, configure, use, and support Transmission Control Protocol/Internet Protocol (TCP/IP). Topics include planning a TCP/IP network, installing and configuring TCP/IP, using DHCP manager, and subnetting and supersubnetting. Also included are Windows name resolution techniques and DNS name resolution.

Prerequisite: CIS 1140 with a C or better

Offered annually

CIS 1115

Information Security Fundamentals (5-0-5)

Banner Title: Info Security Fundamentals

This course provides a broad overview of information security. Topics covered include terminology, history, and security systems development and implementation. Students will also cover the legal, ethical, and professional issues in information security.

Prerequisite: CIS 1140 with a grade of C or better or advisor approval

Offered Spring term

CIS 1118

Implementing Network Security (4-4-6)

Banner Title: Implementing Network Security

This course provides the knowledge and practical experience necessary to evaluate, implement, and manage secure information transferred over computer networks. Topics include network security, intrusion detection, types of attacks, methods of attacks, security devices, basics of cryptography, and organizational security elements.

Prerequisite: CIS 1115 with a grade of C or better

Offered Summer term

CIS 1121

Visual Basic.NET I (4-6-7)

Banner Title: Visual Basic.NET I

In this course, instructors introduce Microsoft Windows event-driven programming. Students will create and manipulate Windows applications using the Microsoft Visual Studio development environment. Topics include numeric data types and variables, decision-making structures, validating input with strings and functions, repetition and multiple forms, test files, arrays, lists, and common dialog controls.

Prerequisite: CIS 105 with a grade of C or better

Offered annually

CIS 1131
Help Desk Concepts (4-4-6)

Banner Title: Help Desk Concepts

This course prepares students to work in positions that provide customer and technical support through analysis and problem solving. Students will master the role of a help desk analysis, navigate the help desk environment, and learn crucial problem solving skills. Students will also learn to troubleshoot hardware problems, printer problems, OS problems, application problems, and user problems.

Prerequisite: CIS 106 with a grade of C or better

Offered annually

CIS 1140
Networking Fundamentals (4-4-6)

Banner Title: Networking Fundamentals

This course introduces networking technologies and covers a wide range of material about networking, from careers in networking to local area networks, wide area networks, protocols, topologies, transmission media, and security. This course also focuses on operating network management systems and implementing the installation of networks. This course also reviews cabling, connection schemes, the fundamentals of LAN and WAN technologies, TCP/IP configuration and troubleshooting, remote connectivity, and network maintenance and troubleshooting.

Prerequisite: CIS 106 with a grade of C or better

Offered quarterly

CIS 2149
Implementing Microsoft Windows Professional (4-4-6)

Banner Title: Implementing Windows Pro

Students will implement, administer, and troubleshoot Windows Professional as a desktop operating system in any network environment. Topics include implementing and conducting the administration of resources; implementing, managing, and troubleshooting hardware devices and drivers; monitoring and optimizing system performance and reliability; configuring and troubleshooting the desktop environment; implementing, managing, and troubleshooting network protocols and services; and implementing, managing, and troubleshooting security.

Prerequisites: CIS 103 with a grade of C or better, CIS 1140 with a grade of C or better

Offered Fall term

CIS 2150
Implementing Microsoft Windows Server (4-4-6)

Banner Title: Implementing Windows Server

Students learn to implement, administer, and troubleshoot Windows Server as a member server of a domain in an Active Directory. Topics include installing Windows Server; installing, configuring, and troubleshooting access to resources; configuring and troubleshooting hardware devices and drivers; managing, monitoring, and optimizing system performance; reliability and availability; managing, configuring, and troubleshooting storage use; configuring and troubleshooting network connections; and implementing, managing, and troubleshooting security.

Prerequisite: CIS 2149 with a grade of C or better

Offered Winter term

CIS 2153
Implementing Microsoft Windows Networking Infrastructure (4-4-6)

Banner Title: Windows Network Infrastructure

Students obtain the knowledge and skills needed for new-to-product support professionals who will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows Server family of products. Topics include automating Internet Protocol (IP), assigning addresses using DHCP, implementing name resolution using DNS and WINS, configuring and supporting remote access to a network, configuring network security, using public key infrastructure, integrating network services of Windows, deploying Windows Professional, and using remote installation services.

Prerequisite: CIS 2150 with a grade of C or better

Offered Spring term

CIS 2154
Implementing Microsoft Windows Network Directory (4-4-6)

Banner Title: Windows Network Directory

Students will obtain the knowledge and skills they will need in order to install, configure, and administer the Microsoft Windows Active Directory service. The course also focuses on implementing group policy and understanding the group policy tasks required to manage users and computers from a central location. Topics include understanding the

logical and physical structure of Active Directory, configuring the Domain Name System (DNS), providing server service to support Active Directory, creating and administering user accounts and group resources, delegating and administratively controlling Active Directory objects, implementing and using group policy, managing replication of Active Directory, and maintaining and restoring the database of Active Directory.

Prerequisite: CIS 2153 with a grade of C or better

Offered Summer term

CIS 2191
Internet Business Fundamentals (3-2-4)

Banner Title: Internet Business Fundamentals

This course teaches students how to access the Internet and the World Wide Web using a web browser as a general-purpose Internet application. Students learn to use the Internet for email, the World Wide Web, news-groups, Gopher, Veronica, File Transfer Protocol (FTP), and Telnet. Students gain experience using and configuring both Netscape Navigator and Microsoft Internet Explorer to access rich multimedia data and objects, as well as Java, Shockwave, and Active X content. Students will use a variety of web-based search engines to conduct advanced searches and learn the basics of project leadership, security, and e-business solutions. Students will also learn about conducting business and using business research on the Internet to gain market intelligence.

Prerequisite: CIS 106 with a grade of C or better

Offered annually

CIS 2201
HTML Fundamentals (2-3-3)

Banner Title: HTML Fundamentals

This course teaches basic through intermediate concepts in Hypertext Markup Language (HTML) authoring, including forms, complex table designs, graphic elements, and client-side image maps. Students design inter-linking pages that incorporate design elements, graphic elements, and client-side image maps. Students also design inter-linking pages that incorporate, in practical applications, a wide range of HTML tags and attributes.

Prerequisite: CIS 105 with a grade of C or better, CIS 106 with a grade of C or better

Offered annually

ECONOMICS

Department Code: ECO

ECO 2105

Principles of

Macroeconomics (5-0-5)

Banner Title: Macroeconomics

This course provides a description and analysis of macroeconomic operations in contemporary society. Students develop an understanding of macroeconomic concepts, theories, and policies. Topics include basic economic principles; macroeconomic principles, theories, and policies; money and banking; and the United States economy in perspective.

Prerequisites: ENG 099 with a grade of C or better or placement by diagnostic testing, MAT 097 with a grade of C* or better and MAT 099 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly

ECO 2106

Principles of

Microeconomics (5-0-5)

Banner Title: Microeconomics

This course provides a description and analysis of microeconomic operations in contemporary society. Students develop an understanding of microeconomic concepts and theories as they apply to daily life. Topics include basic economic principles; theories of the corporate firm; the market system; market structures, pricing, and government regulations; resource markets; and international trade.

Prerequisites: ENG 099 with a grade of C or better or placement by diagnostic testing, MAT 097 with a grade of C* or better and MAT 099 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly

EMPLOYABILITY SKILLS

Department Code: EMP

EMP 1000

Interpersonal Relations and Professional Development (3-0-3)

Banner Title: Interpersonal Relations

Students study human relations and professional development in today's changing world in order to prepare themselves for living and working in a complex society. Topics include human relations skills, job acquisition skills and communications, job retention skills, job advancement skills, and professional image skills.

Prerequisite: Provisional admission

Offered quarterly

ENGLISH

Department Code: ENG

ENG 1010

Fundamentals of English I (5-0-5)

Banner Title: Fundamentals of English I

This course emphasizes the development and improvement of written and oral communication abilities. Topics include analysis of writing techniques, applied grammar and writing skills, editing and proofreading skills, research skills, and oral presentation skills.

Prerequisites: ENG 097 with a grade of C or better and RDG 097 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly

ENG 1012

Fundamentals of English II (5-0-5)

Banner Title: Fundamentals of English II

This course provides knowledge and application of written and oral communications found in workplace situations. Topics include writing fundamentals and speaking fundamentals.

Prerequisites: ENG 1010

Offered Summer and Winter terms

ENG 1101

Composition and Rhetoric (5-0-5)

Banner Title: Composition and Rhetoric

Students practice various modes of writing ranging from exposition to argumentation and persuasion. The course also explores the analysis of literature and articles about issues in the humanities and in society. The course includes a review of standard grammatical and stylistic usage in proofreading and editing. An introduction to library resources lays the foundation for research. Topics covered in the course include writing analysis and practice, revision, and research. Students write a research paper using library resources and using a formatting and documentation style appropriate to the purpose and audience.

Prerequisites: ENG 099 with a grade of C or better and RDG 098 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly

ENG 1102

Literature and Composition (5-0-5)

Banner Title: Literature and

Composition

This course emphasizes the ability of students to read literature analytically and meaningfully and to communicate clearly. Students analyze the form and content of literature in historical and philosophical contexts. Topics include reading and

analysis of fiction, poetry, and drama; research, and writing about literature.

Prerequisite: ENG 1101 with a grade of C or better

Offered quarterly

ENG 1105

Technical Communications (5-0-5)

Banner Title: Technical Communications

This course emphasizes practical knowledge of technical communications techniques, procedures, and reporting formats used in industry and business. Topics include reference use and research, device and process description, formal technical report writing, business correspondence, and oral technical report presentation.

Prerequisite: ENG 1101 with a grade of C or better

Offered quarterly

HOTEL, RESTAURANT, AND TOURISM MANAGEMENT

Department Code: HRT

HRT 146

Business Etiquette and Communication (2-2-3)

Banner Title: Business Etiquette

This course focuses on professionalism in a variety of business settings. Topics include professional image and conduct at work, telephone etiquette, table manners, oral and written communication skills, and diversity in the hospitality industry.

Offered quarterly

HUMANITIES

Department Code: HUM

HUM 1101

Introduction to Humanities (5-0-5)

Banner Title: Introduction to

Humanities

This course explores the philosophic and artistic heritage of humanity expressed through a historical perspective on visual arts, music, and literature. Instructors present the humanities as a source of subjective insights for the understanding of people and society. Topics include historical and cultural developments and contributions of the humanities. Students will complete a research project as part of this course.

Prerequisite: ENG 1101 with a grade of C or better

Offered Fall, Winter, and Spring terms

MATHEMATICS

Department Code: MAT

MAT 1013

Algebraic Concepts (5-0-5)

Banner Title: Algebraic Concepts

Instructors introduce concepts and operations which can be applied to the study of algebra. Course content emphasizes basic mathematical concepts and both basic and intermediate algebraic concepts. Class includes lecture, applications, and homework to reinforce learning.

Prerequisite: MAT 098 with a grade of C or better or placement by diagnostic testing*

Offered quarterly

MAT 1101

Mathematical Modeling (5-0-5)

Banner Title: Mathematical Modeling

This course is an alternative to *College Algebra* for those who will not take trigonometry, pre-calculus, or calculus. It is an applications-driven course that introduces functions using real-world phenomena as models. Topics include fundamental algebra concepts; functions and graphs; linear, quadratic, polynomial, exponential, and logarithmic functions and models of real-world phenomena; systems of equations; and additional topics in algebra.

Prerequisite: MAT 097 with a grade of C or better and/or MAT 099 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly

MAT 1111

College Algebra (5-0-5)

Banner Title: College Algebra

This course emphasizes techniques of problem solving using algebraic concepts. Topics include fundamental concepts of algebra, equations and inequalities, functions and graphs, systems of equations, analytic geometry, and optional topics, including sequences, series, and probability.

Prerequisite: MAT 097 with a grade of C or better and/or MAT 099 with a grade of C* or better or placement by diagnostic testing*

Offered Quarterly

MARKETING MANAGEMENT

Department Codes: MKT

MKT 101

Principles of Management (5-0-5)

Banner Title: Principles of Management

Students develop the skills and behaviors they need to supervise people and job responsibilities successfully. Topics include personnel management, the basic supervisory functions, supervisory skills and techniques, and the special challenges and demands of supervising employees. Topics also include management theories; motivation, supervision, and evaluation of employees; recruitment, screening, and selection of employees; supervision techniques; and functions of management.

Prerequisite: Provisional admission

Offered quarterly

PSYCHOLOGY

Department Code: PSY

PSY 1101

Introduction to Psychology (5-0-5)

Banner Title: Introduction to Psychology

This course emphasizes the basics of psychology. Topics include the science of psychology; social environments; life stages; physiology and behavior; personality; emotions and motives; conflicts, stress, and anxiety; abnormal behavior; and perception, learning, and intelligence.

Prerequisites: ENG 099 with a grade of C or better and RDG 098 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly

SCIENCE AND TECHNOLOGY

Department Code: SCT

SCT 100

Introduction to Microcomputers (1-4-3)

Banner Title: Intro to Microcomputers

This course introduces the fundamental concepts and operations necessary to use microcomputers. Course content emphasizes basic functions and familiarity with computer use. Topics include computer terminology and an introduction to the Windows environment, networking, word processing, spreadsheets, presentation graphics, and databases.

Prerequisite: Provisional admission

Offered quarterly

SPEECH

Department Code: SPC

SPC 1101

Public Speaking (5-0-5)

Banner Title: Public Speaking

This course introduces the fundamentals of oral communication. Topics include selection and organization of materials, preparation and delivery of individual and group presentations, and analysis of ideas presented by others, and professionalism.

Prerequisites: ENG 099 with a grade of C or better and RDG 098 with a grade of C* or better or placement by diagnostic testing*

Offered quarterly