Course Catalog

The WestNet Advantage: -- Textbooks, eBooks, eCourses
-- Instructor Resourse Center
-- Student Resource Center

Available formats

The entire cost of the program is funded by the textbook, eBook or eCourse purchase by your students. The program provides, a wealth of resources such as ; teaching materials, and student study materials.

-- Student and instructor resource centers with teaching and learning tools.

Request access to Instructor Resources

WestNet offers an exclusive, integrated stream of courses ranging from the core courses of networking and telephony fundamentals and architectures, to the complex structures of converging technologies and network implementation. WestNet courses also offer comprehensive content about each subject of study, as well as presenting clear, concise, information and technologies.

WestNet's online courses generally require 16 to 24 hours of seat time, while the individual modules take one to two hours of study time. The most popular WestNet Learning online courses and modules are described on the following pages.

Data Networking Titles

Introduction to Networking

Available formats

This course provides an introductory overview of the fundamental concepts of networking and data communications. It is designed for those with basic experience using a computer, who want to understand how networks move information between computers.

In this course, students will learn how signals travel across different types of physical network structures, and how those signals carry useful data from one device to another. The same key principles and components form the foundation of all networks, from the smallest peer-to-peer systems to the worldwide Internet. The knowledge gained in this course will serve as a firm foundation for students' continued study in data networking.

A comprehensive 544-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Introduction to Networking	LC-1053
Online Modules (1-2 hours)	**SKU**
The OSI Model	SC-1001-01
Network Signals, Cables & Topologies	SC-1001-02
Computers and Software in Networks	SC-1001-03
How Computer Protocols Work	SC-1001-04
How Local Area Networks Work	SC-1001-05
Components Used to Build Networks	SC-1001-06
How Wide Area Networks Work	SC-1001-07
How to Build a Computer Network	SC-1001-08

Introduction to Local Area Networks

Available formats

This course explains the concepts, technologies, components, and protocols used in local area networking (LAN) environments. Students will learn about the popular LAN protocols of Ethernet, Token Ring, and asynchronous transfer mode (ATM), with emphasis on all speeds of Ethernet.

Students will see how computers work together in both peer-to-peer and client/server networks and will also learn the first principles of network design. Students will learn how to use hubs, bridges, switches, and routers to optimize network traffic. When this course is completed, students will have a solid understanding of the fundamental concepts of LAN operation. This knowledge provides a clear advantage when taking other courses to learn how to administer specific network operating systems.

A comprehensive 576-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Introduction to Local Area Networks	LC-1055
Online Modules (1-2 hours)	**SKU**
How Ethernet Works	SC-1002-01
How Token Ring and FDDI Work	SC-1002-02
How ATM LANs Work	SC-1002-03
LAN Software	SC-1002-04
The Basics of Novell NetWare	SC-1002-05
The Basics of Windows NT	SC-1002-06
Review of LAN Fundamentals	SC-1002-07
Connecting Computers	SC-1002-08
Analysis of LANs	SC-1055-07

Introduction to TCP/IP

Available formats

TCP/IP is the most significant architecture in today's networking environments. And although TCP/IP has been around for several decades, it has recently gained a tremendous amount of popularity as the architecture of choice in most computer networks. One reason for the widespread acceptance of TCP/IP, and its adoption by most organizations, is the growth of the Internet and the number of organizations and users that attach to it. Because the Internet is TCP/IP-based, users who access the Internet use TCP/IP at each desktop.

In the *Introduction to TCP/IP* course, students will learn the underlying applications, components, and protocols of transmission control protocol/Internet protocol (TCP/IP) and its necessary link to the Internet. This course will also help them learn how to identify TCP/IP layers, components, and functions. Navigation tools, TCP/IP services, and troubleshooting methodologies are also covered in this course.

A comprehensive 816-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Introduction to TCP/IP	LC-1054
Online Modules (1-2 hours)	**SKU**
TCP/IP Addressing and Subnetting	SC-1054-01
TCP/IP Applications	SC-1054-02
TCP/IP Protocols	SC-1054-03
TCP/IP Structuring and Addressing	SC-1054-04
TCP/IP Services	SC-1054-05
Routing TCP/IP	SC-1054-06
How TCP/IP Applications Work	SC-1054-07
Troubleshooting a TCP/IP Network	SC-1054-08

Internetworking Devices

Available formats

Students in this course will learn about local area, wide area, and enterprise-wide internetworks—whether the internetwork spans a few rooms within a small office environment or covers the entire planet. This course teaches the underlying technology principles of internetworking, and how specialized devices can work together to create a nearly endless variety of internetworking solutions.

In addition, this course focuses on the issues encountered by network growth and the internetworking components that offer solutions to these issues. Students will identify and describe the components of repeaters, hubs, bridges, switches, routers, and gateways, and in addition, will learn when to use a router and when to use a switch, and discuss routing methodologies and routing protocols. This course also reviews Network Management and the Simple Network Management Protocol (SNMP).

A comprehensive 416-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Internetworking Devices	LC-1061
Online Modules (1-2 hours)	**SKU**
Overview of Layers and Layer 1 Devices	SC-1061-01
Layer 2 Devices	SC-1061-02
Layer 3 Devices	SC-1061-03
Routing Table Protocols	SC-1061-04
Virtual Local Area Networks	SC-1061-05
Network Management	SC-1061-06
Using Internetworking Devices to Design Networks	SC-1061-07

Implementation of Data Networks

Available formats

This course explains how to design the physical layout of a computer network and organize an installation project. It assumes that a logical network design has already been completed, based on customer requirements.

From that starting point, the course explains how to fulfill those requirements within the constraints of the real world. Students will learn how a wide range of network factors—media, topology, protocols, and devices—can either enhance or degrade its performance.

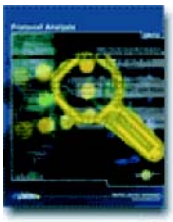
The course covers the technical standards and legal regulations that determine many aspects of a physical design, and thoroughly discusses the process of configuring a Windows network. Students will also be introduced to the project management tools that are essential to complete a network project on time and within budget.

A comprehensive 576-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Implementation of Data Networks	LC-1059
Online Modules (1-2 hours)	**SKU**
Overview of the Implementation Process	SC-1059-01
Physical Layer Implementation	SC-1059-02
LAN Implementation	SC-1059-03
LAN Software Implementation	SC-1059-04
Implementing a Small Network	SC-1059-05
Large Network Implementation Case Studies	SC-1059-06

Protocol Analysis



Available formats

This course covers the underlying processes and protocols that form the foundation of today's networking infrastructure. Its primary focus is TCP/IP networking protocols and applications, with sections devoted to Novell's IPX/NCP, NetBIOS/NetBEUI/SMB, NFS, Microsoft's client/server operations, as well as network routing protocols. It presents the common frame formats found in LANs and WANs, including Ethernet Version 2, IEEE 802.3, SNAP, PPP, Frame Relay, and ATM.

This course begins by discussing important concepts such as virtual circuits, layering, and service boundaries then proceeds to physical and logical network addressing as viewed from both LAN and WAN perspectives. Participants will learn the function of frame, packet, and port addresses, and how these are deployed in the delivery of information to user applications. A web browser/server conversation is covered from the DNS lookup to the subsequent transfer of the Web page across the network.

A comprehensive 416-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Protocol Analysis	LC-1052
Online Modules (1-2 hours)	**SKU**
Network Protocols	SC-1052-01
LAN and WAN Protocols	SC-1052-02
Network Layer Protocols	SC-1052-03
Transport Layer Protocols	SC-1052-04
Upper Layer Protocols	SC-1052-05
Client/Server Information Transfer	SC-1052-06

Network Design

Available formats

This course will serve as a guide to gaining a more in-depth understanding of the methods used to analyze, design, and manage LANs and point-to-point networks.

Students will analyze a business issue and solve it by using a methodical process. Exercises and activities are geared toward learning the techniques necessary for network design and analysis. In addition, students will analyze and discuss network diagrams from several corporate networks.

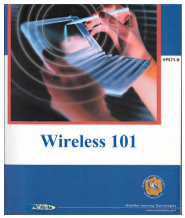
A comprehensive 608-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Network Design	LC-1102
Online Modules (1-2 hours)	**SKU**
Gathering Requirements	SC-1102-01
Analyzing the Network	SC-1102-02
Logical Network Design	SC-1102-03
Physical Network Design	SC-1102-04
Designing a Small Network	SC-1102-05
Large Network Case Studies	SC-1102-06

Wireless Titles

Wireless 101



SKU: VPS71.0

Wireless 101 teaches students how to install, manage, and support wireless networks. This study of wireless networking combines radio frequency (RF) and local area networking (LAN) technology fundamentals. It begins with the basic concepts and building blocks of the convergence between RF and networking technologies.

It focuses on the technologies and tasks vital to installing, managing, and supporting wireless networks. Students learn wireless technology standards, governing bodies, hardware, RF math, RF behavior, security, troubleshooting, and site survey methodology.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Wireless 101	LC-1099
Online Modules (1-2 hours)	**SKU**
Introduction to Wireless LANs	SC-1099-01
RF Fundamentals	SC-1099-02
Spread Spectrum Technology	SC-1099-03
Wireless LAN Infrastructure Devices	SC-1099-04
Antennas and Accessories	SC-1099-05
Wireless LAN Organizations and Standards	SC-1099-06
The 802.11 Network Architecture	SC-1099-07
Physical Layers	SC-1099-08
Troubleshooting Wireless LAN Installations	SC-1099-09
Wireless LAN Security	SC-1099-10
Site Survey Fundamentals	SC-1099-11

Telecommunications Titles

Introduction to Telecommunications

Available formats

This course is a telecommunications primer that will give students a thorough but nontechnical understanding of the worldwide telecommunications network. Students will learn about the basic signaling and switching systems that make the telephone system work, and gain an appreciation of the complex technologies necessary for reliable phone service.

This course will also explain the business aspects of the telecommunications industry, and introduce the various types of companies that now compete for commercial and residential customers. Students will explore the issues and trends that are fueling the explosive growth in the telecommunications industry, and gain a firm understanding of the state of the industry today.

A comprehensive 352-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Introduction to Telecommunications	LC-1057
Online Modules (1-2 hours)	**SKU**
Overview of the Telecommunications Industry	SC-1010-01
How a Local Exchange Works	SC-1010-02
Types of Telephone Systems	SC-1010-03
Overview of Telephony Services	SC-1010-04

Introduction to Wide Area Networks

Available formats

In this course, students learn the concepts, technologies, components, and protocols used to move voice and data across long distances, and discover important technologies such as ATM that integrate voice, data, and video communications. Also reviewed are basic concepts of how information is transported over a wide area network (WAN), from the physical layer bits and bytes to the applications that WANs support.

In addition, this course offers a new lesson on IEEE802.16 - The Wireless Last Mile. This course is intended for individuals who desire a better understanding of the global telecommunications infrastructure and how it supports long-distance voice and data communications. When students complete this course, they will have a solid understanding of the fundamental concepts of WAN operations.

A comprehensive 608-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Introduction to Wide Area Networks	LC-1056
Online Modules (1-2 hours)	**SKU**
Foundations of Wide Area Networks	SC-1003-01
WAN Components	SC-1003-02
WAN Physical Layer Protocols	SC-1003-03
WAN Data Link Layer Protocols	SC-1003-04
Higher-Layer WAN Protocols	SC-1056-01
WAN Solutions	SC-1056-02
Convergence of Communications	SC-1056-03

IP Telephony Principles and Applications

Available formats

This course presents and explains the many and varied techniques, solutions, principles, and challenges both carriers and end users utilize, experience, and overcome in implementing Voice-over IP services.

This course explores the various protocols involved, the Quality of Service (QoS) challenges faced and ways to overcome them, engineering principles to consider when designing a VoIP solution, market drivers and applications, security issues, and carrier options.

A comprehensive 646-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
IP Telephony Principles and Applications	LC-1094
Online Modules (1-2 hours)	**SKU**
VoIP Services	SC-1094-01
Enterprise Class IP Solutions	SC-1094-02
VoIP Network Quality of Service Techniques	SC-1094-03
VoIP Network Integration with Legacy Services	SC-1094-04
VoIP Network Engineering, Management, and Support	SC-1094-05
Future Technologies Supporting Convergence	SC-1094-06

Design and Implementation of Voice Networks

Available formats

This course explains the structure and design of telecommunication networks, both large and small. It begins with an overview of the public telephone network, and describes the large networks and transmission facilities that switch telephone calls. The focus then narrows to the PBX switching systems that are essential to most businesses. Students receive a thorough explanation of the components and functions of a typical PBX, with special emphasis on the architecture of the Lucent DEFINITY.

After introducing the public telephone network, the course introduces the digital transmission services that operate over that network. Students will be able to explain the operation, protocols, strengths, and weaknesses of point-to-point services, such as T1, and switched services, such as Frame Relay and ATM.

A comprehensive 480-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Design and Implementation of Voice Networks	LC-1060
Online Modules (1-2 hours)	**SKU**
Telecommunications Concepts and Components	SC-1060-01
PBX and ACD Systems	SC-1060-02
Point-to-Point Telecommunications Protocols	SC-1060-03
Switched Telecommunications Protocols	SC-1060-04
Traffic Engineering	SC-1060-05

Principles of Converged Networks: Data, Voice, and VoIP

Available formats

To cut costs and simplify communications management, more and more businesses want to consolidate different types of communication traffic—voice calls, data transmission, and video conferencing—onto a single physical network infrastructure. However, the resulting converged networks are technically complex. Administrators of converged networks must have a thorough understanding of the special techniques needed to carry voice, video, and data over a single TCP/IP network.

This course will prepare you to pass the Convergence Technology Professional (CTP) certification examination TT0-101, from the Telecommunications Industry Association (TIA). However, this course is not simply an "exam cram" book. From this study guide, you will learn the essential principles of both data networks and the worldwide telephone system. You will then explore the unique requirements of converged networks, which carry both voice and data.

A comprehensive 992-page reference textbook is also available.

E-Learning Course Titles

Online Course (16-24 hours)	SKU
Principles of Converged Networks	LC-1116
Online Modules (1-2 hours)	**SKU**
Physical Communication Infrastructure	SC-1116-01
A Layered System of Data Protocols	SC-1116-02
Data Networking Protocols	SC-1116-03
Data Networking Components	SC-1116-04
TCP/IP Protocols and Services	SC-1116-05
The Public Telephone Network	SC-1116-06
Convergence and VoIP	SC-1116-07
Troubleshooting	SC-1116-08