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Technical General

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This document outlines what modules are covered through the "Technical General" programme accessible through Walker Hall Associates. Walker Hall Associates have been providers of training solution to both corporate and individual users for more than 15 years and during this time we have continually improved and expanded the courses available to satisfy the needs of our customers.

The Technical General course allows you to Train for A+ Certification. Prepare to become a service technician in the computer industry. Learn about operating systems, modems, troubleshooting and more. A more detailed outline of the course is covered in this document.

Online learning does offer a wide range of benefits to the user and is recognised as a convenient and engaging method of delivery.

Why not visit our website (<u>www.whanet.co.uk</u>) where you can view a presentation on the benefits of elearning for both businesses and individuals. You can also access a sample of our courses to see for your self if e-learning is for you.

2

APLU01

APLU03

A+ 2001 Hardware and Operating System Certification Series

Total Time: 49 hours

A+ 2001 Hardware and Operating System **Certification: Computer Introduction**

A+ 2001 Hardware and Operating System Certification: Computer Introduction provides an overview of computer repair and systems.

- Working on Computers
- Personal and Environmental Safety
- Safe Electrical Handling
- Basic Computer Structure
- The Computer System
- The System Components

5 hours

- **Connected Peripherals**
- **Computer Software**

A+ 2001 Hardware and Operating System Certification: The System Board

A+ 2001 Hardware and Operating System Certification: The System Board explains key concepts of system board operation, and what is necessary to install, maintain, and repair the system board.

- Chip Sets
- Microprocessors
- Memory Systems
- Advanced Memory Structures
- Addressing Input/Output Devices
- Adapter Cards
- Troubleshooting the Board
- Hardware Troubleshooting

A+ 2001 Hardware and Operating System **Certification Connecting Peripherals**

A+ 2001 Hardware and Operating System Certification: Connecting Peripherals explains what is needed to install, maintain, and repair peripherals.

- Expansion Slots
- Parallel Ports
- Serial Ports

- Troubleshooting Port Problems
- **Power Supplies**
- **Troubleshooting Peripherals**

5 hours APLU02

- 4 hours

APLU08

A+ 2001 Hardware and Operating System **Certification: Operating Systems**

A+ 2001 Hardware and Operating System Certification: Operating Systems provides an overview of the computer system bootup procedure and the role of the operating system.

•

- Introduction to Operating Systems
- Bootup Initialisation
- A+ 2001 Hardware and Operating System Certification: MS-DOS

A+ 2001 Hardware and Operating System Certification: MS-DOS explains what is needed to install, use, and configure the MS-DOS operating system.

- **MS-DOS Structure**
- DOS Disk Structure •
- DOS Commands and Utilities
- Drives and Directories
- Files and Filenames

- Basic DOS Memory
- Additional DOS Memory •

Bootup CMOS Setup

• The Bootup Routine

- Configuring DOS
- Installing DOS

A+ 2001 Hardware and Operating System Certification: Windows 9x and 2000

A+ 2001 Hardware and Operating System Certification: Windows 9x and 2000 provides an overview of the use of the Windows 9x and Windows 2000 operating systems, and how to install, use, and configure these operating systems.

- Installing Windows 9x and 2000
- Starting Windows 9x and 2000
- Installing Windows 9x and 2000

A+ 2001 Hardware and Operating System **Certification: Disk Drives**

A+ 2001 Hardware and Operating System Certification: Disk Drives explains how to install, maintain, and repair disk drives.

Introduction to Disk Drives

- Floppy Disk Drives
- Hard Drives

- Hard Drive Interfaces
- Hard Drive Installation
- Hard Drive Troubleshooting

A+ 2001 Hardware and Operating System Certification: Monitors

A+ 2001 Hardware and Operating System Certification: Monitors explains how to operate, maintain, and repair monitors.

- Introduction to Monitors VGA Adapters
- Video Troubleshooting
- Servicing the Monitor

- Using Windows

3 hours APLU07

- Disk Drive Operations

3 hours

3 hours

5 hours

2 hours

APLU04

APLU05

APLU06

A+ 2001 Hardware and Operating System Certification: Modems

A+ 2001 Hardware and Operating System Certification: Modems explains how to install, maintain, and troubleshoot internal and external modems in Windows systems.

- Introduction to Modems
- Communication Protocols
- The Serial Interface
- A+ 2001 Hardware and Operating System Certification: Printers

A+ 2001 Hardware and Operating System Certification: Printers explains how to use and install dot matrix, ink-jet, and laser printers, as well as how to troubleshoot them.

- Types of Printers
- Installing Printers
- Dot-Matrix Printers
- Troubleshooting Dot-Matrix Printers
- Ink-Jet Printers

• Troubleshooting Ink-Jet Printers

6 hours

3 hours

Communicating with the Modem

Troubleshooting Modems

- Laser Printers
- Troubleshooting Laser Printers
- Troubleshooting Windows Print Problems

4 hours

A+ 2001 Hardware and Operating System Certification: Networks

A+ 2001 Hardware and Operating System Certification: Networks explains how to install and maintain networks.

- Local Area Networks
- LAN Protocols
- LAN Setup

- Troubleshooting LANs
- Wide Area Networks
- Using WANs/The Internet

A+ 2001 Hardware and Operating System Certification: Troubleshooting

A+ 2001 Hardware and Operating System Certification: Troubleshooting explains how to troubleshoot common system problems.

- Initial Troubleshooting Tips
- Software Diagnostics
- Hardware Troubleshooting
- Tracking Down Problems
- Operating Systems Troubleshooting

3 hours

- Problems Starting Windows 9x and 2000
- Isolating Windows 9x and 2000 Problems



APLU10



APLU12

A+ 2001 Hardware and Operating System Certification: Maintenance Tasks

3 hours APLU13

A+ 2001 Hardware and Operating System Certification: Maintenance Tasks explains how to clean and otherwise maintain the main components of computers, and provides a schedule of preventive maintenance procedures.

- Preventive Maintenance
- Preventing and Detecting Viruses
- Maintaining Hard Drives
- Maintaining Floppy Disk Drives
- Maintaining Printers

Total Time: 30 hours

C in 21 Days: Week 1

C in 21 Days: Week 1 begins with a basic explanation of C components and quickly progresses to writing and debugging C programs. Sample listings, complete with sample output and an analysis of code, illustrate the topics of the day.

- Day 1: Getting Started
- Day 2: The Components of a C Program
- Day 3: Numeric Variables and Constants Day 7: Basic Input/Output
- Day 4: Statements, Expressions, and
- Operators

• Day 5: Functions - The Basics

10 hours

- Day 6: Basic Program Control
- Week 1 in Review

C in 21 Days: Week 2

10 hours CLGC02

C in 21 Days: Week 2 covers pointers and variable scope, concepts that are important to capitalizing on C's assets. It also covers numeric arrays, characters and strings, and structures. It introduces additional program control statements, provides detailed explanations of functions, and presents alternative functions. Sample listings, complete with sample output and an analysis of code, illustrate the topics of the day.

- Day 8: Numeric Arrays
- Day 9: Pointers
- Day 10: Characters and Strings
- Day 11: Structures

- Day 12: Variable Scope
- Day 13: More Program Control
- Day 14: Working with the Screen, Printer, and Keyboard
- Week 2 in Review

C in 21 Days: Week 3

10 hours CLGC03

C in 21 Days: Week 3 begins with advanced pointer topics and moves on to the use of disk files for data storage and retrieval. It also covers advanced function topics and explores the function library in more detail. The week ends with a discussion of memory management, header files, and pre-processor directives. Sample listings, complete with sample output and an analysis of code, illustrate the topics of the day.

- Day 15: More on Pointers
- Day 16: Using Disk Files
- Day 17: Manipulating Strings
- Day 18: Getting More from Functions
- Day 19: Exploring the Function Library
- Day 20: Odds and Ends
- Day 21: Taking Advantage of Pre-
- processor Directives and More
- Week 3 in Review

CLGC01

WeTeachYou Series on CCDA

Total Time: 32 hours

This series of courses is designed to help you prepare for the Cisco Certified Design Associate certification exam. Each of the 60 objectives on the CCDA exam will be covered, and the questions will be indicative of the types of questions on the exam.

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CCDA: Internetworking Review	3 hours CCDA01
CCDA: Internetworking Review provides an overview respect to the network design.	w of internetworking, with
 Types of Networks The OSI Reference Model Rot 	ited Protocols iting Protocols
CCDA: LAN Networking	4 hours CCDA02
<i>CCDA: LAN Networking describes the types of LAN I operate.</i>	networks and how they
 Basic Concepts Ethernets Token Rings and FDDIs Brid Bri	lges tches iters

CCDA: WAN Networking

CCDA: WAN Networking describes types of WANs and their operation.

- Basic Concepts
- WAN Protocols

CCDA: Introduction to Design

CCDA: Introduction to Design provides the initial steps to take when designing a network.

- Customer Considerations
- Network Topologies

- Addressing
- Network Traffic

3 hours os to take when

3 hours

CCDA03

CCDA04

ATM Switching

WAN Issues

CCDA: Examining Existing Networks

CCDA: Examining Existing Networks provides the procedures to assessing the customer's existing network design.

- The Steps of Evaluation •
- Assessing Software and Hardware
- Assessing Traffic and Bottlenecks
- CCDA: Designing LANs
- CCDA: Designing LANs provides the procedures to designing a LAN network.
 - 10 Mbps Ethernets
 - 100- and 1000-Mbps Ethernets
 - Additional Hardware Rules
- CCDA: Designing WANs

CCDA: Designing WANs provides the procedures for designing a WAN network.

- Introduction to WAN Design
- WAN Technologies

CCDA: Specific Design Issues

CCDA: Specific Design Issues provides methods to assess and optimise specific and cross-platform design issues.

- **Defining Protocols**
- Factors Affecting Transmission
- Compression and Encryption
- Network Security
- Specific Designs

CCDA: Optimising by Design

CCDA: Optimising by Design provides the information to optimise your network design.

- Quality of Service •
- Implementing QoS

CCDA: Testing and Managing

CCDA: Testing and Managing provides ways to test your design and manage it when it is operational.

- The Design Document
- Building the Test Model
- Testing the Model

CCDA08

CCDA09

CCDA10

CCDA07

4 hours CCDA06

CCDA05

WAN Hardware

Choosing Hardware

Examples of LAN Designs

3 hours

4 hours

2 hours

3 hours

Cisco-Specific Optimising

- Provisioning the WAN

- Assessing Performance and Related • Issues
 - Assessing Network Health
- 3 hours

WeTeachYou Series on CCNA

Total Time: 73 hours

This series of courses is designed to help you prepare for the Cisco Certified Network Associate certification exam. Each of the 60 objectives on the CCNA exam will be covered, and the questions will be indicative of the types of questions on the exam.

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CCNA: OSI Reference Model

4 hours SCOC01

CCNA: OSI Reference Model describes the OSI reference model and uses it to explain types of networks and networking functions.

- Introduction to Networking
- The Upper OSI Layers

- The Lower OSI Layers
- Using a Layered Model

4 hours

CCNA: Networks and Data Transfer

CCNA: Networks and Data Transfer uses the OSI reference model to show how networks encapsulate data and transfer it throughout a network. This course also introduces routing as a method of data transfer.

- Communication between Layers
- Connection and Data Flow
- The Data Link Layer
- Network Addressing

CCNA: Local Area Networking

CCNA: Local Area Networking describes the components and operation of Ethernets, Fast Ethernets, Token Ring and FDDI local area networks.

• Introduction to LANs

- Fast Ethernet
- Token Ring and FDDI

• Ethernet

4 hours SCOC03

SCOC02

• Netwo

CCNA: Wide Area Networking

CCNA: Wide Area Networking describes WAN components and protocols and how they function in a wide area network. Special emphasis is placed on PPP, ISDN, X.25, and Frame Relay.

- Introduction to WANs
- WAN Protocols
- PPP
- CCNA: Using a Router

CCNA: Using a Router introduces the different types of routing protocols, their use, and the function of routers.

- Routing
- Distance Vector Routing
- **CCNA:** Introduction to IOS

CCNA: Introduction to IOS explains the basic operation of the Internet work Operating System.

- Router Start-up •
- Router Start-up in Setup Mode •
- EXEC Mode Commands

CCNA: IOS Configuration

CCNA: IOS Configuration shows how to configure passwords and banners, and introduces interface and protocol configurations for the Internet work Operating System.

- Passwords, Identification, and Banners
- Configuring Interfaces
- CCNA: Network Management

CCNA: Network Management shows how to set up and maintain a network system.

- LAN Congestion
- Network Segmentation
- Network Management System

4 hours

Cisco FastHub 300

- **Router Status**
- Loading Configuration Files

- X.25
- Frame Relay

ISDN

- Link State Routing
- Understanding Routers

4 hours

4 hours SCOC04

SCOC05

SCOC06

SCOC08

4 hours SCOC07

Sample Interface Configurations

Configuring Protocols

CCNA: Bridges and Switches

CCNA: Bridges and Switches shows how to build and operate network bridges and switches.

- The Spanning Tree •
- Bridges
- Switches

CCNA: TCP/IP Networking

CCNA: TCP/IP Networking explains the functions of TCP/IP and how to manage it and other transport and network layer protocols.

- Overview of TCP/IP
- Transport Layer Protocols
- CCNA: IP Addressing

CCNA: IP Addressing shows how to assign and use IP addresses.

- The IP Address
- Subnetting

CCNA: IP Routing

TCP Specifics

•

- Internet Layer Protocols

4 hours

CCNA: IP Routing explains how to configure IP addresses and implement IGRP routing protocol.

- Configuring IP Addresses
- Basic Routing Configurations
- Interior Gateway Routing Protocols

4 hours

• Exterior Gateway Routing Protocols

4 hours

Showing IPX Configurations

4 hours

CCNA: IPX Networking

CCNA: IPX Networking explains how to operate and manage Novell's IPX protocol and addresses.

- IPX Protocols
- IPX Addressing and Encapsulation

CCNA: Network Security and Control

CCNA: Network Security and Control describes the components and operation of access lists for filtering network traffic.

- Introduction to Network Security •
- Introduction to Access Lists
- Configuring IP Access Lists
- Configuring IPX Access Lists
- Showing Access Lists

Configuring IPX

- Supernetting
 - SCOC12

SCOC13

SCOC14

SCOC09

SCOC10

SCOC11

- ATM Switching •
- Cisco Catalyst 1900/2820 Switches

4 hours

CCNA: Additional Configurations

CCNA: Additional Configurations describes how to configure and verify ISDN, X.25, and Frame Relay routing. It also explains the operation of Frame Relay and other components of the network.

- ISDN •
- Showing ISDN Configurations •
- X.25

CCNA: Exam Preparation 1

CCNA: Exam Preparation 1 provides practice exams that mimic the written portion of the CCNA test.

- Exam Procedures •
- Practice Exam 1

CCNA: Exam Preparation 2

CCNA: Exam Preparation 2 provides practice exams that mimic the written portion of the CCNA test.

- Practice Exam 4
- Practice Exam 5

Decimal

Binary

•

CCNA: Numbering Systems

that are used in Cisco management.

Hexadecimal

- **Conversion Exercises**
- CCNA: Numbering Systems introduces the alternative base numbering systems

SCOC17 4 hours

4 hours

5 hours

4 hours

Frame Relay

• Practice Exam 2

• Practice Exam 6

Features

SCOC15

SCOC16

SCOC18

Introduction to Data Warehousing

Data Warehousing: Concepts

Data Warehousing Series

Total Time: 8 hours

- Managing Data with Data Warehousing
- Data Warehouse Components
 Data Models and Structures
- Data Models and Structures

Data Warehousing: Management

Data Warehousing: Management provides an introduction to designing, building, and maintaining a data warehouse.

- Identifying Requirements
- Designing and Implementing the Warehouse
- Maintaining a Data Warehouse
- Matching Warehouses to Requirements
- Supporting Warehouse Needs
- Business Management of Data Warehouses

DWHC01

4 hours

4 hours DWHC02

FOCUS Series

Total Time: 75 hours

FOCUS: Getting Started

FOCUS: Getting Started provides an introduction to the FOCUS environment and its features and terminology.

- General Concepts
- File Structures
- Master File Descriptions
- Facilities for End Users
- More Facilities for End Users
- Application Developer Facilities

FOCUS: Working with FOCUS

FOCUS: Working with FOCUS shows users how to work in FOCUS using TED.

- General TED Concepts
- **TED** Commands
- Terminal Operator Environment

FOCUS: Basic Report Preparation

FOCUS: Basic Report Preparation shows users how to create simple reports using FOCUS.

- Course Conventions and Databases •
- Starting a Simple Report
- Printing Values

FOCUS: Creating Simple Reports

FOCUS: Creating Simple Reports shows users how to use FOCUS to create simple reports.

- Course Conventions and Databases •
- Line and Page Formatting
- Headings and Footings

- Creating Report Requests
- Record Selection

Techniques for Formatting Reports

4 hours

- FOCUS Hot Screen
- Using the Hot Screen •

4 hours

FOCS01

FOCS02

FOCS03

FOCS04

4 hours

- Types of Windows

- WINDOW Commands

FOCUS: Creating Complex Reports

FOCUS: Creating Complex Reports shows users how to use various techniques to create sophisticated reports with FOCUS.

- Course Conventions and Databases
 - Advanced Sorting Techniques
- Creating Matrix Reports
- Additional Formatting Options

FOCUS: Additional Reporting Techniques

FOCUS: Additional Reporting Techniques explains what you need to know in order to perform additional reporting techniques.

•

- Course Conventions and Databases
- The JOIN Command
- The MATCH Command
- FOCUS: Fundamentals of Graphs

FOCUS: Fundamentals of Graphs provides an introduction to graphing concepts and techniques used in FOCUS.

- Conventions and Graph Types
- Graph Requirements
- Setting Graph Parameters

FOCUS: Advanced Graph Topics

FOCUS: Advanced Graph Topics explains how to create and format graphs for presentation on various types of platforms.

- Conventions and Graph Types
- Connected Point Plots
- Scatter Diagrams

FOCUS: Data Manipulation for Reporting

FOCUS: Data Manipulation for Reporting explains how to create and format graphs for presentation on various types of platforms.

- Course Conventions and Databases
- Expressions
- **Prefix Operators**

- The COMPUTE Command •
- The DEFINE Command
- Comparing COMPARE and DEFINE

- Bar Charts
- Bar Chart Parameters
- Histograms

- The WHEN Clause
- Ranking Data
- Subtotalling Operations •

4 hours

2 hours

HOLD and PCHOLD Files

SAVE and SAVB Files

Retrieving Data

4 hours

FOCS07

FOCS05

FOCS06

4 hours FOCS08

FOCS09

Adjusting Graphs

Display Options

FOCUS: Advanced Screening Techniques 4 hours

FOCUS: Advanced Screening Techniques explains how to create and format graphs for presentation on various types of platforms.

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- Course Conventions and Databases DECODE and EDIT
- INCLUDES and EXCLUDES

FOCUS: Creating File Definitions

FOCUS: Creating File Definitions explains how to create and format graphs for presentation on various types of platforms.

- Course Conventions and Databases
- Describing the File

FOCUS: Adjusting File Definitions

FOCUS: Adjusting File Definitions shows users how to adjust file definitions in FOCUS.

- **Course Conventions and Databases**
- **Field Attributes**
- **Editing Options**

FOCUS: Accessing External Files

FOCUS: Accessing External Files shows users how to describe external files to FOCUS.

- Defining External Files •
- **Fixed Format Files**
- Variable Segment Files
- FOCUS: Basic MODIFY Requests

FOCUS: Basic MODIFY Requests provides an overview of the basic MODIFY requests in FOCUS.

- What is MODIFY?
- Entering a Basic MODIFY Request
- Reading and Describing Data
- FREEFORM
- PROMPT and CRTFORM

4 hours

- Additional Ways to Describe Fields
- Creating an MFD

4 hours

Other DBMS Files

Optional Interfaces

Field Declaration

Describing Segments

Additional Screening Procedures

Screening on Masked Fields

Screening Accumulated Data

4 hours

FOCS10

FOCS11

FOCS12

FOCS13 2 hours

FOCS14

FOCUS: Segment Modification

FOCUS: Segment Modification provides further instruction in maintaining and understanding files and databases in FOCUS.

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- The MATCH Statement •
- **Root Segments**
- Updating Segment Instances

FOCUS: Complex MODIFY Requests

FOCUS: Complex MODIFY Requests provides an overview of the use of FOCUS and how to use it to perform complex MODIFY Requests.

- **Course Conventions**
- Course Databases
- FOCUS: Additional File Maintenance

FOCUS: Additional File Maintenance provides further instruction in maintaining and understanding files and databases in FOCUS.

- Course Databases
- Messages
- The LOG Statement

FOCUS: Dialogue Manager and FIDEL

FOCUS: Dialogue Manager and FIDEL provides an advanced look at the Dialogue Manager and FIDEL features found in FOCUS.

- Course Conventions and Databases
- **Dialogue Manager**
- **Control Statements**

- - Cursor Control

FOCUS: More Features of FIDEL

FOCUS: More Features of FIDEL provides an overview of the additional features of FIDEL and how FIDEL is used with MODIFY and Dialogue Manager.

- Course Conventions and Databases .
- FIDEL in MODIFY .
- Additional FIDEL Features
- FIDEL and CRTFORMs •
- FIDEL in Dialogue Manager •

3 hours

The COMPUTE Statement

The VALIDATE Statement

3 hours

4 hours

Deleting Segment Instances

Modifying Unique Segments

4 hours

Modifying Descendent Segments

- Case Logic
- Branching
- Designing a Sample Application

4 hours



FOCS16

FOCS17

FOCS18

FOCS19

- FIDEL
- PF Keys

FOCUS: MAINTAIN Facility

FOCS20 4 hours

FOCUS: MAINTAIN Facility explains how to use the FOCUS MAINTAIN facility to maintain FOCUS files.

- Course Overview •
- Basic MAINTAIN Procedures •
- Developing Screens •

- The Winform Properties Dialog Box •
- The Create Field Dialog Box • Creating Buttons
- FOCUS: Completing a MAINTAIN Application FOCS21 2 hours

FOCUS: Completing a MAINTAIN Application teaches users how to build cases, create a grid, and use other commands to complete an application in MAINTAIN.

• Course Overview

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Developing Cases • Case Codes

- Using a Grid •
- Additional Command •

LANs Series

Total Time: 6 hours

LANs: Network Basics

LANs: Network Basics introduces the user to fundamental LAN concepts.

- Introduction to LANs
- LAN Protocols
- The OSI Reference Model

LANs: Hardware and Software

LANs: Hardware and Software explains the features and operation of the hardware and software needed for establishing and maintaining a LAN.

- Cabling
- Interface Cards
- Servers

2 hours

- Wireless Networking
- **Client/Server Computing**

LANs: Internetworking

LANs: Internetworking describes some of the popular hardware and software that provide interoperability between different LANs or different applications.

- Network Operating Systems .
- Printing
- Application and Database Servers
- Internetworking Products •
- Bridges
- **Routing Protocols**

LANC01

LANC02

- Popular Protocol Standards
- Topologies
- Access Methods

LANC03 2 hours

- Network Wiring Hubs

Networking for Technical Users Series

Total Time: 4 hours

Networking: Technical Information

Networking: Technical Information provides an overview about the concepts related to a networking computers.

Networking: Hardware and Software provides an overview of the use of the

- Data Communication
- Data Storage And Transmission
- The Telephone Line

• Transmission Errors

2 hours

NETW02

NETW03

Error Checking

Networking: Hardware and Software

hardware components of a data communication system.

- System Hardware Components
- Host Computer Hardware
- Systems Network Architecture

- Software Components
- Transmission-Associated Hardware

Notes 5 Programming Series

Total Time: 22 hours

Notes 5 Programming: Designing in Domino 4 hours N5PR01

Notes 5 Programming: Designing in Domino provides an overview of the Domino Designer interface and an introduction to Notes databases.

- The Domino Designer
- Adding Databases to Your Application
- Database Copies, Replicas, and Security
- Working with Database Designs

Form Actions and Subforms

4 hours

Notes 5 Programming: Pages and Forms 4 hours

Notes 5 Programming: Pages and Forms explains how to create high quality, Web-ready pages and forms.

- Creating Pages
- Including Graphics
- Working with Tables
- Notes 5 Programming: Organizing Info

Notes 5 Programming: Organizing Info shows how to use the tools that make information easy to find and easy to use.

- **Developing Views**
- Programming Views
- Using Outlines

- **Creating Frames**
- Adding Navigators
- Working with Hotspots

Notes 5 Programming: Scripting

Notes 5 Programming: Scripting introduces using scripts in applications and working with the Domino Object Model.

- Formula Language
- Keywords and @functions
- Adding Scripts to Your Application

Notes 5 Programming: LotusScript

Notes 5 Programming: LotusScript explains the tools needed to create agents and scripts in LotusScript.

- Working with Variables
- User-Defined Types and Classes •
- Loops and Conditionals
- LotusScript Procedures
- LotusScript and Front-End Classes

4 hours

3 hours

Objects and Events Programming Events

N5PR05

N5PR04

Adding Forms

N5PR02

N5PR03

Notes 5 Programming: Java

3 hours N5PR06

Notes 5 Programming: Java explains how Lotus handles Java and gives an overview on using Java for agents, applets, servlets, and standalone applications.

- Java in Domino
- Java Agents and Applets
- Java Applications and Servlets
- Java and DOM Classes

Novell 560 CNE Series

Total Time: 30 hours

Novell 560 CNE: NetWare Basics

Novell 560 CNE: NetWare Basics introduces networking concepts and the role of NetWare 5. It also covers the procedures for installing the Novell Client and logging in to the NetWare 5 network.

- Networking and NetWare
- Novell Directory Services
- NDS and Resource Access
- Network Communications
- Selecting a Protocol
- The Novell Client

Novell 560 CNE: Installation

Novell 560 CNE: Installation provides instructions on how to perform a basic and custom installation of NetWare 5 on a new computer.

- Preparing to Install NetWare 5
- Creating a DOS Partition
- Creating the NetWare Partition
- Protocols, NDS, and Licenses

Completing the Installation

4 hours

- NetWare Architecture and Management
- Novell Licensing Services

Novell 560 CNE: Using NDS

Novell 560 CNE: Using NDS examines Novell Directory Services (NDS), including objects and object properties. This course shows users how to use the CX command to find NDS objects and set user context. It also shows users how to create User, Alias, and Group objects.

- Browsing the NDS Tree
- Creating User Objects
- Login Security

- ConsoleOne and UIMPORT •
- Shortcuts to Network Resources

4 hours

Novell 560 CNE: File System

Novell 560 CNE: File System provides an introduction to NetWare 5 file system concepts and management procedures.

Managing the File System

Volume Space

- Examining Login Scripts
- Creating and Executing Login Scripts
- Drive Mappings
- Login Scripts and Resources

3 hours 560C03

560C01

560C02

560C04

Novell 560 CNE: NDS Security

Novell 560 CNE: NDS Security shows users how to control access to NDS objects by granting users rights and managing those rights.

- Controlling Access to Objects
- Inherited and Effective Rights in NDS
- Assigning NDS Rights

Novell 560 CNE: File Security

Novell 560 CNE: File Security provides an introduction to NetWare 5 file system security measures and procedures for setting file access rights.

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- Examining File System Security
- Setting Directory and File Security

Novell 560 CNE: ZENworks

Novell 560 CNE: ZENworks shows users how to distribute and manage applications over a NetWare 5 network by using ZENworks and Novell Application Launcher (NAL).

- Zero Effort Networks
- Novell Application Launcher (NAL)

Novell 560 CNE: Advanced ZENworks

Novell 560 CNE: Advanced ZENworks shows users how to manage workstation environments by using various types of policy packages. The course also explains how to enable remote control workstation access and Help Requester.

- Policy Packages
- Workstations and NDS
- Policies and the Desktop Environments
- Remote Control Access to Workstations
- Help Requester

Novell 560 CNE: Distributed Printing

Novell 560 CNE: Distributed Printing shows users how to set up Novell Distributed Printing Services (NDPS) on a NetWare 5 network.

- Novell Distributed Printing Services
- Working with NDPS

• Managing Workstation Printing and NDPS

- **Distributing Applications**
- Managing Applications with NAL •

- Security Problems •
- User Context and Resource Access •

2 hours

Planning File System Rights

Examining Attribute Security

3 hours

560C05

560C06

560C07

3 hours 560C09



4 hours 560C08

25

Novell 570 CNE Advanced Administration Series

Total Time: 19 hours

Novell 570 CNE Advanced Administration: Upgrading or Migrating

Novell 570 CNE Advanced Administration: Upgrading or Migrating reviews the procedures for upgrading an existing NetWare server to NetWare 5 or migrating the information on an existing NetWare server to a new NetWare 5 server.

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- Upgrading
- Migrating
- Preparing the Source and the Project

Novell 570 CNE Advanced Administration: Managing the Server

Novell 570 CNE Advanced Administration: Managing the Server provides instructions on how to manage a NetWare 5 server by using NLMs, configuration files, and ConsoleOne. The course also examines how to secure the server and enable Java support.

- Server Components and Functions
 - Server Configuration Files
- Remote Console

- Securing the Server
- Managing with ConsoleOne

4 hours

System Created Directories

Custom Directory Structures

4 hours

Novell 570 CNE Advanced Administration: The File System

Novell 570 CNE Advanced Administration: The File System reviews the role of volumes and directories in the file system, including principles for structuring the file system. It also provides instruction on how to create custom volumes and directories.

- Examining the File System
- Managing Volumes
- Mirroring and Duplexing

Novell 570 CNE Advanced Administration: NSS and Backup

Novell 570 CNE Advanced Administration: NSS and Backup examines how information on the NetWare 5 server can be stored in a Novell Storage System volume. It also examines the concepts and procedures for backing up and restoring both server and workstation data.

- Novell Storage System (NSS)
- NSS Volumes
- Understanding Backup

- Preparing for Backup
- Backing Up Data
- Data Restoration

Java Support

2 hours

Selecting and Verifying Data

3 hours

Completing the Migration



570C04

570C01

570C02

Novell 570 CNE Advanced Administration: Memory and CPU Performance

3 hours 570C05

Novell 570 CNE Advanced Administration: Memory and CPU Performance shows users how to optimise server performance by using the MONITOR application and managing server memory.

- NetWare 5 Memory Allocation
- Virtual Memory
- Monitoring Server Performance
- Configuring Cache
- Optimising CPU Utilization

Novell 570 CNE Advanced Administration: Disk and Network Performance 3 hours 570C06

Novell 570 CNE Advanced Administration: Disk and Network Performance shows the user advanced techniques for optimising the server. These techniques increase the amount of data that can be stored on the server and the speed at which server communications occur.

- Block Sub allocation
- File Compression
- Packet Receive Buffers
- Large Internet Packets (LIPs)
- Packet Burst Protocol

Object-Oriented Analysis & Design Series

Total Time: 8 hours

Object-Oriented Analysis & Design: Intro

Object-Oriented Analysis & Design: Intro provides an overview of object orientation and its development process.

- Advantages of Using Object Orientation
- Concepts for Object Orientation
- Components of Object Orientation
- The Development Process

4 hours

OADC01

OADC02

- Object Relationships
- Object Hierarchies

Object-Oriented Analysis & Design: System

Object-Oriented Analysis & Design: System explains the creation of object-oriented design and analysis systems.

- Analysis and Design of a Sample System
- The Structure and Subject Layers
- The Attribute Layer
- The Service Layer

- Object-Oriented Design
- The Problem Domain Component

- The Human Interaction Component
- The Data Management Component

OOP Using C++ Series

Total Time: 24 hours

OOP Using C++: Week 1

OOP Using C++: Week 1 begins with a basic explanation of C++ components and quickly progresses to writing real object-oriented programs. Sample listings, complete with sample output and an analysis of code, illustrate the topics of the day.

- Day 1: Getting Started
- Day 2: The Parts of a C++ Program
- Day 3: Variables and Constants
- Day 4: Expressions and Statements

OOP Using C++: Week 2

OOP Using C++; Week 2 begins with how pointers and references work and then moves on to the advanced use of functions. It also presents arrays and collections, explores inheritance and polymorphism and ends with a discussion of special classes and friends. Sample listings, complete with sample output and an analysis of code, illustrate the topics of the dav.

- Day 8: Pointers
- Day 9: References
- Day 10: Advanced Functions
- Day 11: Arrays

OOP Using C++: Week 3

OOP Using C++: Week 3 begins with a discussion of advanced inheritance and then moves on to cover streams in depth. It also presents advanced tricks of the pre-processor, discusses object-oriented analysis and design, and introduces templates. Week 3 ends with an explanation of exceptions, standard libraries, and bit manipulation. Sample listings, complete with sample output and an analysis of code, illustrate the topics of the day.

- Day 15: Advanced Inheritance
- Day 16: Streams
- Day 17: The Pre-processor
- Day 18: Object-Oriented Analysis and Desian

- Day 5: Functions • Day 6: Basic Classes
- Day 7: More Program Flow
- Week 1 in Review

10 hours

10 hours

• Day 12: Inheritance

- Day 13: Polymorphism
- Day 14: Special Classes and Functions
- Week 2 in Review

4 hours CPPC03

• Day 19: Templates

- Day 20: Exceptions and Error Handling •
- Day 21: What's Next
- Week 3 in Review

CPPC02

CPPC01

Oracle Series

Total Time: 26 hours

A basic understanding of how to retrieve information from relational databases using SQL.

Recommended Prerequisite

Oracle: Introduction to PL/SQL

Oracle: Introduction to PL/SQL provides an introduction to the PL/SQL, Oracle's procedural language extension to SQL.

- PL/SQL
- PL/SQL Structures
- Packages

Oracle: Overview of Developer/2000

Oracle: Overview of Developer/2000 presents the common features shared by the suite of tools in Oracle Developer/2000. These tools include Oracle Forms 4.5, Oracle Reports 2.5, Oracle Graphics 2.5, and Oracle Procedure Builder 1.5.

- Introducing Oracle Applications
- The Windows Interface
- The Object Navigators
- Setting Object Properties
- Introducing the Layout Editors

Oracle: Forms 4.5 and Reports 2.5

Oracle: Forms 4.5 and Reports 2.5 provides an overview of Oracle Forms 4.5 and Oracle Reports 2.5.

- Overview of Oracle Forms
- Introducing Forms Designer
- The Layout Editor
- The PL/SQL and Menu Editors
- Creating Forms Objects and Libraries
- Overview of Oracle Reports
- Introducing Reports Designer
- The Reports Designer Editors
- Displaying Report-Style Formats

Oracle: Graphics 2.5 and Procedure Builder 1.5 4 hours ORDC03

Oracle: Graphics 2.5 and Procedure Builder 1.5 provides an overview of Oracle Graphics 2.5 and Oracle Procedure Builder 1.5.

- Overview of Oracle Graphics
- Introducing Graphics Designer
- The Layout Editor
- The Chart Template and Program Unit Editors
- Displaying Chart Types

- Overview of Procedure Builder
- Introducing Procedure Builder
- The Procedure Builder Editors
- Debugging PL/SQL Program Units

• Working with Objects in the Layout Editor

3 hours

- Introducing the PL/SQL Editors
- Getting Help
- Object Orientation and OLE2

- - 4 hours ORDC02

PLSC01

ORDC01

- Triggers
- Stored Procedures

Oracle: Developer/2000 Applications

4 hours ORDC04

Oracle: Developer/2000 Applications explores the development of applications using Oracle Forms and Oracle Reports.

- Developing Oracle Forms Applications
- Developing Oracle Reports Applications

Oracle: Developer/2000 Integration

4 hours ORDC05

Oracle: Developer/2000 Integration explores the incorporation of Oracle Graphics displays into an application and the integration of Oracle Forms, Oracle Reports, Oracle Graphics, and Oracle Procedure Builder applications through a single point of entry for the user.

• Developing Oracle Graphics Applications • Integration and Deployment in the Windows Environment

Oracle8 Series

Total Time: 42 hours

Oracle8: Installing Oracle

Oracle8: Installing Oracle introduces users to Oracle administration and shows how to install Oracle8.

- Introduction to Oracle Administration
- How Oracle Operates
- Oracle Performance

Oracle8: Database Management

Oracle8: Database Management shows users how to manage the Oracle8 databases and servers.

- Planning for Capacity and Sizing
- Calculating the System Requirements
- Calculating the Disk Requirements
- Managing the Database

Oracle8: Building Databases

Oracle8: Building Databases shows users how to create and set up new Oracle databases.

- Database Planning and Design
- Creating a New Database and Catalogues Modifying Table spaces
- Modifying Databases

Oracle8: Files, Data, and Users

Oracle8: Files, Data, and Users shows users how to manage files, import and export data, and manage user accounts.

- Redo Log Files
- Control Files and Rollback Segments
- Managing Rollback Segments
- Creating User Accounts
- **Oracle8: Database Schema Objects**

Oracle8: Database Schema Objects shows users how to manage tables and indexes.

- Understanding Tables
- Creating Tables
- Special Tables and Table Views
- Indexes

Modifying User Accounts

- Managing User Profiles
- Managing User Roles

- Creating Indexes
- Special Indexes
- Synonyms and Table Sequences

6 hours

- Server Manager and NT Bootstraps
- Starting and Shutting Down Instances
- Connecting to and Modifying an Instance

6 hours

6 hours

6 hours

• Creating Table spaces

• Preparing for Installation

• The Oracle Components

• Installing Oracle

- Managing Table spaces
- - - 6 hours ORCC04

ORCC01

ORCC02

ORCC03

ORCC05

Oracle8: Processes and Security

Oracle8: Processes and Security explains server processes to students and how to use Oracle security features.

- Understanding Processes
- The Parallel Query Option
- Monitoring Processes

Oracle8: Backup and Recovery

Oracle8: Backup and Recovery shows students how to protect Oracle database data by creating and using backups.

- Oracle Backups
- Configuring Disks for Protection
- Backup and Recovery strategies
- Backing Up the Database
- Recovering the Database
- Replicating Databases
- Configuring Replication
- Other Replication Options

• Managing Job Queues

6 hours

6 hours

• Using Oracle Auditing

ORCC07

ORCC06

Power Builder 5 Series

Total Time: 35 hours

Power Builder 5: Power Builder 5 Overview 3 hours PB5TC1

Power Builder 5 Overview introduces using Power Builder 5 with the Windows 95 operating system and establishes a foundation of knowledge from which the rest of the Power Builder courses can build.

Using Menus

Using Windows

• Exploring Windows

- Introducing Power Builder
- Using Power Builder Libraries
- Using Power Builder Application Painter and
- Applications
- Using Menu Options in Power Builder Painters

Power Builder 5: Getting Started with Power **Builder 5**

Getting Started with Power Builder 5 takes a comprehensive look at application development using Power Builder 5. Users learn first-hand how to analyse, design and implement a simple Power Builder application

- Understanding Analysis and Design
- Designing a System with the Database Painter
- Using the Application Painter

Power Builder 5: Using Power Script

Using Power Script explains some of the more powerful features of Power Builder. Users expand their programming skills while learning how to program in Power Script and how to use SQL in Power Builder 5.

- Using Events, Functions, and the Power Script • Using SQL in Power Builder
- Language
- Programming in Power Script

Power Builder 5: Using DataWindows

Using DataWindows covers one of Power Builder's strongest features: DataWindows. It describes several DataWindows development techniques and how to associate DataWindows with an application. The course also explains how to generate reports.

- Creating DataWindows
- Enhancing DataWindows

Power Builder 5: Delivering the Final Product 8 hours

Delivering the Final Product covers how to manage Power Builder libraries, debug applications, and deliver an executable.

- Power Builder Libraries • Pulling It All Together in an Application
- Debugging Your Applications
- Delivering an Executable

Manipulating Data Using DataWindows

Creating Reports

PB5TC2

Designing Menus

Pulling It Together with Power Script and Events

8 hours

8 hours

• Using Databases, Toolbars, and Online Help

PB5TC3

PB5TC5

8 hours PB5TC4

Power Builder 6 Series

Total Time: 60 hours

Power Builder 6: Introducing Power Builder

Power Builder 6: Introducing Power Builder provides an introduction to Power Builder and its development environment.

- Installing Power Builder and Libraries
- Application Painter and Property Sheets
- **Creating Menus**

- **Creating Windows**
- Responding to Events with Power Script

6 hours

6 hours

Running Your Application

Power Builder 6: Design Concepts

Power Builder 6: Design Concepts provides an introduction to Power Builder design and object-oriented development.

- Analysing the Requirements
- Creating a Logical Data Model
- Creating a Data Model Database
- Creating Database Tables

Power Builder 6: Building Objects

Power Builder 6: Building Objects begins showing the user the basic building blocks for developing Power Builder applications.

- Using the Application Painter
- Using the Library Painter
- Using Libraries

- Using Database Tables
- Using Table Data
- Understanding Object Orientation
- Features of Object Oriented Software

Managing Libraries

- **Creating Menus**
- Attaching Menus and Toolbars

Power Builder 6: Building Windows

Power Builder 6: Building Windows shows users how to create and manage windows in a Power Builder application.

- Setting Window Properties
- Setting Windows 95 Controls
- Window Properties, Buttons, and Pictures
- User Input on Windows

6 hours

Controlling Window Appearance

- Adding Elements to Windows
- Using Advanced Window Features
- Window Sheets

P6BC04

P6BC01

P6BC02

P6BC03

Power Builder 6: Event Programming

Power Builder 6: Event Programming shows users how to respond to events in an application and use variables with Power Script.

- Responding to Events
- Scripting with Variables
- **Declaring Variables**
- Array, Class, and Reference Variables

Power Builder 6: Power Script and SQL

Power Builder 6: Power Script and SQL shows users how to use SQL commands to interact with databases in Power Builder applications.

- Understanding Database Transactions
- **Creating Functions**
- Using DataWindow Objects
- Scripting for Specific Events

Using Arguments and DataWindow Events

6 hours

6 hours

- Scripting for Treeviews
- Understanding SQL Syntax
- SQL Commands, Painter, and Cursors

6 hours

Power Builder 6: Creating DataWindows

Power Builder 6: Creating DataWindows shows users how to create and control DataWindows in their Power Builder applications.

- Using the DataWindow Painter
- Data Sources and Layout
- Creating Freeform DataWindows
- More DataWindows
- Using Other Data Sources
- DataWindow Controls

Power Builder 6: Using DataWindows

Power Builder 6: Using DataWindows shows users how to manipulate and display data and data sources using DataWindows.

- Using Edit Styles
- EditMasks and Drop-Down DataWindows
- **Display Formats and Validation**
- Customizing DataWindows
- Column Defaults and Conditionals

6 hours

- Displaying Data and Data Sources
- Modifying the Data Source
- Manipulating Data
- Accessing DataWindow Columns

Power Builder 6: Reviewing an Application

Power Builder 6: Reviewing an Application shows users how to provide reports and final touches on a Power Builder application.

- The Report Painter
- **Creating Grouped Reports**
- Modifying Grouped Reports
- **Creating Graphs**
- Creating Label Reports

Nested Reports and Crosstabs

6 hours

- Adding the Final Touches
- Creating Windows within Windows
- Checking the Finished Product

P6BC07

P6BC08

P6BC09

P6BC05

P6BC06

- Using Operators **Power Script Statements**
 - Using the Script Painter

Power Builder 6: The Final Product

6 hours P6BC10

Power Builder 6: The Final Product shows users how to debug a Power Builder application and create an executable program.

- The Debug Window
- Modifying the Debug Window
- Understanding the Source Views
- Using and Setting Breakpoints
- Examining the State of an Application
- Debugging the Application
- Building the Executable
- Creating Deployment Files

37

RPG IV Programming Series

Total Time: 38 hours

RPG IV Programming: Introduction to RPG 3 hours

RPG IV Programming: Introduction to RPG provides an overview of the RPG programming language and general programming concepts needed to begin learning to program in RPG IV.

- History of RPG •
- Variables and Data
- Programming

- Beginning Program Entry
- Completing Program Entry and Testing

RPG IV Programming: Getting Started with RPG 3 hours RPGI02

RPG IV Programming: Getting Started with RPG shows users how to write simple programs in RPG IV.

- Program File Specifications
- Program Input Specifications •
- Program Output Specifications
- Program Calculation Specifications
- **RPG IV Output Editing**

RPG IV Programming: Defining Data

RPG IV Programming: Defining Data shows users how to define work fields, data structures, and other data items in RPG IV programs.

- Definition Specifications
- Data Types and Constants
- **RPG IV Programming: Arithmetic Operations** 3 hours

RPG IV Programming: Arithmetic Operations shows users how to perform arithmetic calculations in RPG IV programs.

- Numbers and Arithmetic •
- Defining Field Sizes •
- Example Program

RPG IV Programming: Flow of Control

RPG IV Programming: Flow of Control shows users how to write programs in RPG *IV using top-down, structured design.*

- Structured Program Design
- SELECT and Iteration
- Early Exits and Subroutines
- Creating a Report with Subtotals

Assignment and Conversion

Functions, Operations, and

Data Structures

Indicators

RPGI04

RPGI01

3 hours RPGI05

- 2 hours
- RPGI03

RPG IV Programming: Externally Described Files 3 hours RPGI06

RPG IV Programming: Externally Described Files shows users how to write programs in RPG IV to access AS/400 database files.

- Physical Files
- Logical Files

- Creating and Using Database Files
- **Printer Files**

RPG IV Programming: File Access and Record 3 hours RPGI07 Manipulation

RPG IV Programming: File Access and Record Manipulation shows users how to read, write, and update records in RPG IV programs.

- Sequential Input Access
- Random Input Access
- Output Access •
- Handling I/O Errors

RPG IV Programming: Interactive Applications 4 hours RPGI08

RPG IV Programming: Interactive Applications shows users how to define display files and how to use them to develop interactive applications.

- Display Files
- DDS Kevwords

- Data Validation and Indicators
- File Maintenance

RPG IV Programming: Tables and Arrays

RPG IV Programming: Tables and Arrays shows users how to create, store, and access tables, and how to define and use arrays.

Using Tables •

- Defining Arrays
- Accessing Array Data
- **RPG IV Programming: Modular Programming** 3 hours RPGI10

RPG IV Programming: Modular Programming shows users how RPG IV programs can communicate with one another by passing data values.

Introduction to Modular Programming • Data and Procedures

Using Related Tables

- Prototypes and APIs
 - Data Areas

RPG IV Programming: Advanced Data Definition 4 hours RPGI11

RPG IV Programming: Advanced Data Definition shows users how to use a number of advanced RPG IV features to define data in ways that facilitate data manipulation.

- Data Types
- LIKE and Data Structures
- More Data Structures

- Field Inspection
- Character Field Inspection
- Character Field Manipulation

3 hours

•

RPGI09

RPG IV Programming: Advanced Techniques

RPG IV Programming: Advanced Techniques shows users how to write RPG IV programs that use sub files and online help.

- Interactive Programs •
- Loading the Sub file a Page at a • Time

RPG IV Programming: Maintaining the Past

RPG IV Programming: Maintaining the Past shows users how to recognize features and operations used extensively in earlier versions of RPG that are now considered obsolete but still supported.

- **RPG III Differences** •
- More RPG III Differences •
- RPG II Initial Look •

• RPG II Differences

• Using Sub files

- More RPG II Differences

2 hours

2 hours

RPGI12

RPGI13

SAS Series

Total Time: 38 hours

SAS: Introduction

SAS: Introduction provides a preview of the SAS System and describes some of its software features and components. It also covers basic data concepts and the structure of the SAS programming language.

- SAS Preview
- Data Basics

SAS: Using SAS

SAS: Using SAS discusses the basic statements used when coding SAS programs and explains how to use the SAS log to troubleshoot coding errors. It also presents the different modes for executing SAS.

- Using SAS Statements
- Analysing SAS Logs

SAS: Data Manipulation

SAS: Data Manipulation covers optional SAS statements used to modify data so that more complex data analysis tasks can be performed.

- Reviewing the Course Program
- Using Variables
- Using Expressions

- Working with Dates •
- Working with Observations

3 hours

Analysing SAS Logs

SAS: DATA Step Programming

SAS: DATA Step Programming describes statements and options available to program various features in the DATA step.

SAS: Results describes SAS procedures used to create more informative and

Working with Sorted Data

Printing Basic Output

Simple SAS Statistics

Accumulating Totals

- Writing Output
- Analysing SAS Logs

SAS: Results

specialized output as well as some basic statistical procedures.

- PROC REPORT
- Analysing SAS Logs
- 5 hours

3 hours SAS601

SAS602

SAS603 4 hours

SAS604

SAS605

• Executing the SAS System

4 hours

SAS Language

SAS: Display Manager System

SAS: Display Manager System explains how to use Display Manager, a full-screen facility that allows you to create and run SAS jobs interactively.

- What is Display Manager?
- Managing the Windowing Environment
- Using Display Manager Windows

SAS: Data Libraries

SAS: Data Libraries explains the model that SAS uses to store and access data in SAS files. It shows how to use SAS procedures and Display Manager windows to manage SAS data libraries and their members.

- Data Library Model •
- SAS Data Sets
- Getting Information

SAS: Inputting Data and PROC SQL

SAS: Inputting Data and PROC SQL describes ways to create and manipulate SAS data sets, including an introduction to using the SQL procedure in SAS.

- Input Styles
- Reading External Files
- SAS: Combining and Updating Data Sets

SAS: Combining and Updating Data Sets presents various methods for combining and updating existing SAS data sets.

- Concatenating Data Sets
- Interleaving and Merging Data Sets
- Updating with UPDATE
- Using Other Techniques •

Using the SAS Text Editor • Managing SAS Files •

5 hours

5 hours

SAS606

SAS607

SAS608

SAS609

Modifying Data Library Files

4 hours

5 hours

Managing Data Library Members

- Introduction to SQL
- Using PROC SQL
- Updating with MODIFY

SAS 8 Series

Total Time: 37 hours

SAS 8: Introduction

SAS 8: Introduction provides a preview of the SAS System and describes some of its software features and components. It also covers basic data concepts and the structure of the SAS programming language.

- SAS Preview
- Data Basics

SAS 8: Using SAS

SAS 8: Using SAS discusses the basic statements used when coding SAS programs and explains how to use the SAS log to troubleshoot coding errors. It also presents the different modes for executing SAS.

- Using SAS Statements
- Analysing SAS Logs
- SAS 8: Data Manipulation

SAS 8: Data Manipulation covers optional SAS statements used to modify data so that more complex data analysis tasks can be performed.

- Reviewing the Course Program
- Using Variables
- Using Expressions

- •

SAS 8: DATA Step Programming

SAS 8: DATA Step Programming describes statements and options available to program various features in the DATA step.

- Working with Sorted Data
- Accumulating Totals
- Writing Output
- Analysing SAS Logs

5 hours

SAS 8: Results

SAS 8: Results describes SAS procedures used to create more informative and specialized output as well as some basic statistical procedures.

- Printing Basic Output
- Simple SAS Statistics

- PROC REPORT
- Analysing SAS Logs

• Executing the SAS System

3 hours

4 hours

SAS Language

4 hours

Working with Dates

- Working with Observations
- Analysing SAS Logs

SASS04 3 hours

SASS01

SASS02

SASS03

SASS05

SAS 8: Display Manager System

SAS 8: Display Manager System explains how to use Display Manager, a fullscreen facility that allows you to create and run SAS jobs interactively.

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- Understanding Display Manager •
- Managing the Windowing Environment
- Using Display Manager Windows

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- Data Library Model •
- SAS Data Sets
- Getting Information

SAS 8: Inputting Data and PROC SQL

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- Input Styles
- Reading External Files

SAS 8: Combining and Updating Data Sets presents various methods for combining and updating existing SAS data sets.

- Concatenating Data Sets
 - Interleaving and Merging Data Sets
- Updating with UPDATE

- Introduction to SQL
- Using PROC SQL

SAS 8: Combining and Updating Data Sets

• Updating with MODIFY

- Using Other Techniques

5 hours

Modifying Data Library Files

4 hours

5 hours

Managing Data Library Members

Using the SAS Text Editor

Managing SAS Files

4 hours

SASS06

SASS07

SASS08

SASS09

Sybase Series

Total Time: 28 hours

Sybase: Introduction to Sybase

Sybase: Introduction to Sybase provides an overview to Sybase SQL Server, the client/server system model, and the tools and components of Sybase System 11.

- Host versus Client/Server Systems
- Sybase Introduction

SQL Server, Data Replication, and Open Architecture

4 hours

System Management Tools and Servers

4 hours

Sybase: Using SQL Server

Sybase: Using SQL Server introduces users to SQL Server and how to use it to create, manage, and access database information.

- SQL Server Overview
- SQL Server Functions
- SQL Server Features
- T-SQL and Database Integrity
- Sybase: System Administration

Sybase: System Administration provides an overview of the tasks and commands of a system administrator.

- The Role of a System Administrator
- Using System Procedures
- Creating and Dropping Database Devices

Sybase: User Administration

Sybase: User Administration shows users how to manage user accounts and groups in Sybase.

Sybase: Programming with T-SQL introduces users to basic T-SQL commands and

functions through the isgl interface. Using T-SQL and isql

Defining Integrity Constraints

Managing Tables

- Managing Server Logins
- Managing User Access and Aliases

Sybase: Programming with T-SQL

Managing Groups

- Creating Integrity Defaults and Rules
- Using Views
- Managing Indexes

4 hours SYBC05

- Creating and Altering Databases
- Managing Segments

SYBC01

SYBC02

SYBC03

SYBC04

- Triggers, Partitions, and Security Using isql and Performing Queries
- Viewing, Managing, and Creating Tables
- Maintaining Databases

4 hours

Revoking and Modifying Permissions

Assigning and Managing Roles

Granting Permissions

Sybase: Querying Databases with T-SQL

Sybase: Querying Databases with T-SQL shows users how to create database queries and to manipulate the data received through queries.

- Introduction to Queries •
- Using Functions in Queries
- Manipulating Query Data

Sybase: T-SQL Commands

Sybase: T-SQL Commands explains how to join queries, create sub queries, and how to insert and modify data in Sybase.

- Join Queries .
- Sub queries
 - Other Sub query Types

4 hours

Ordering and Grouping Query Results

Combining Queries and View Queries

- Inserting Data
- Deleting and Modifying Data

SYBC06

4 hours SYBC07

UNIX Systems Series

Total Time: 40 hours

UNIX: Introduction to UNIX

Introduction to UNIX presents the features of UNIX that are most useful to new users, including logging in and out, file administration, command processing, displaying text, and using mail.

- Introduction to UNIX
- The File System

• Processing Commands

4 hours

8 hours

6 hours

8 hours

10 hours

UNXTC1

UNXTC3

UNXTC4

UNXTC5

UNXTC6

UNXTC7

Some Utility Programs

UNIX: Shells: Bourne, Korn, and C

UNIX Shells - Bourne, Korn, and C presents the three shells that are typically available on a UNIX system. It describes how to get the most out of the three shells, and describes the advantages and disadvantages of each shell.

C Shell

- What Is a Shell?
- Bourne Shell
- Korn Shell

UNIX: Shell Programming

Shell Programming presents the basics of shell programming using the Bourne shell, then covers additional features of the Korn and C shells.

- Bourne Shell Programming
- Korn Shell Programming

UNIX: System Administration I

System Administration I covers installing UNIX, and setting up and maintaining file systems and user accounts.

- UNIX Installation Basics
- Starting Up and Shutting Down
- UNIX: System Administration II

System Administration II presents UNIX system accounting, performance monitoring, device management, and UNIX security.

- System Accounting
- Performance Monitoring

UNIX: Process Management

Process Management describes how to control programs in UNIX, including how to start a job (program) and how to kill it.

- What is a Process?
- Administering Processes
- Scheduling Processes

Device Administration

UNIX System Security

- File System Administration
- User Administration

- C Shell Programming
- Using Shell Scripts

Shell Comparison

Visual Basic 4.0 Series

Total Time: 16 hours

Visual Basic 4.0: Beginning Skills

Beginning Skills explains the principles involved in developing robust applications. Users develop their programming skills while building a solid understanding of Visual Basic. Each program teaches a new concept in Visual Basic and shows users how to apply the concept to their programs.

- Writing Your First Program
- Properties and Controls
- Programming Building Blocks
- The Mouse

Visual Basic 4.0: Intermediate Skills

Intermediate Skills explains some of the more powerful features of Visual Basic. Users expand their programming skills while learning how to use Visual Basic to interface with the screen, the keyboard, Windows, and the file-system.

- Graphics Methods
- The Grid Control
- Displaying and Printing
- Interfacing with Windows

Visual Basic 4.0: Advanced Skills

Advanced Skills teaches the more advanced features of Visual Basic. Users hone their programming skills by developing advanced applications which employ the most sophisticated features of Visual Basic, such as interfacing with databases, creating multiple-document interface applications, and using OLE 2.0.

- Arrays, OLE, and Other Topics
- The Data Control and SQL
- Multiple-Document Interface
- Sending Keystrokes and the Spin Control Adding Your Own Custom Property to a
- Form

Next	Recommended	Course

Visual Basic 5.0: Windows API and	ActiveX	4 hours	VB5C04
Visual Basic 5.0: Windows API and ActiveX te Visual Basic programs by using the Windows controls.	eaches how to o API and by cre	extend the function Pating and using C	onality of OCX ActiveX
 Adding Multimedia Controls Enhancing the MyUSAMap Program Using Windows API Building Your Own OCX ActiveX Controls 	 Testing OC Adding Pro Controls Adding Pro Controls 	X ActiveX Control cedures to OCX A perties to OCX Ac	s ctiveX tiveX

4 hours

- Menus
- Dialog Boxes
- Graphics Controls

• The Keyboard

Accessing Files

• File-System Controls

4 hours VB4TC3

VB4TC2 4 hours

VB4TC1

Visual Basic 5.0 Series

Total Time: 16 hours

Visual Basic 5.0: Beginning Skills

Visual Basic 5.0: Beginning Skills explains the principles involved in developing robust applications. Users develop their programming skills while building a solid understanding of Visual Basic. Each program teaches a new concept in Visual Basic and shows users how to apply the concept to their programs.

- Properties and Controls
- Programming Building Blocks
- The Mouse

- Menus
- Dialog Boxes

• The Keyboard

• Accessing Files

• File-System Controls

Graphics Controls

Visual Basic 5.0: Intermediate Skills

Intermediate Skills explains some of the more powerful features of Visual Basic. You'll expand your programming skills while learning how to use Visual Basic to interface with the screen, the keyboard, Windows, and the file-system.

• Graphics Methods

- The Grid Control
- Displaying and Printing
- Interfacing with Windows

Visual Basic 5.0: Advanced Skills

Visual Basic 5.0: Advanced Skills teaches the more advanced features of Visual Basic. Users hone their programming skills by developing advanced applications which employ the most sophisticated features of Visual Basic, such as interfacing with databases, creating multiple-document interface applications, and using OLE 2.0.

- The Data Control and SQL
- Multiple-Document Interface
- Sending Keystrokes and the Spin Control
- Adding Your Own Custom Property to a Form

Visual Basic 5.0: Windows API and ActiveX 4 hours **VB5C04**

Visual Basic 5.0: Windows API and ActiveX teaches how to extend the functionality of Visual Basic programs by using the Windows API and by creating and using OCX ActiveX controls.

- Adding Multimedia Controls
- Enhancing the MyUSAMap Program
- Using Windows API
- Building Your Own OCX ActiveX Controls
- Testing OCX ActiveX Controls
- Adding Procedures to OCX ActiveX
- Controls Adding Properties to OCX ActiveX

Controls

VR5C02

VB5C03 4 hours

VB5C01

4 hours



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Technical Web Development	141.00		

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