

## INTRODUCTION TO UNIX®

### General:

This course will provide an in-depth introduction to the effective use of the UNIX Operating System. Topics covered include the operating system's major features and facilities, frequently used commands, command usage, the `vi` text editor, the File System, user communication, file access permissions, redirection of input and output, and job control.

### Objectives:

Upon successful completion of this course, the student will be able to:

- Log onto and off a UNIX system.
- List the types of UNIX files.
- Describe and use various UNIX commands and command line options.
- Use the command history mechanism provided by the Korn Shell.
- Use the UNIX User Reference Manual to locate appropriate commands.
- Use the UNIX editor `ex/vi` to create and modify files.
- Use Regular Expressions to match patterns of characters.
- Describe and use the file system capabilities provided by UNIX.
- Communicate with other users.
- Protect files from unauthorized access using the UNIX file permission capabilities.
- Redirect input and output to and from UNIX commands.
- Initiate background (asynchronous) command execution.
- Use the job control mechanism provided by the Korn Shell.

### Audience:

Programmers, Analysts, Managers, Technical, and Non-Technical Users who require a basic knowledge of how to use the UNIX Operating System.

### Prerequisites:

None. Some understanding of computer systems would prove helpful.

### Duration:

Three (3) days. Class consists of classroom lecture and nine (9) lab sessions.

*INTRODUCTION TO UNIX  
COURSE OUTLINE*

**I. INTRODUCTION TO THE UNIX OPERATING SYSTEM**

- A. Capabilities of the UNIX System
- B. Hardware vs. Software
- C. Typical UNIX configurations
- D. Setting up the Terminal
- E. Logging on and off
- F. Correcting Typing Errors

**II. FILES AND SIMPLE COMMANDS**

- A. Definition of a File
- B. File Naming Conventions
- C. File Types
- D. UNIX System Command Syntax
- E. Listing, Viewing, Copying, Moving, and Removing Files
- F. Using the User Reference Manual
- G. Using the man command

**III. UNIX SYSTEM TEXT EDITOR vi**

- A. Editor Features
- B. Relationship of Editor to Shell
- C. Editor Command Syntax
- D. Putting Text into the Buffer
- E. Viewing, Copying, Moving, Deleting and Modifying Text
- F. Saving the Buffer
- G. Leaving the Editor

**IV. FILE SYSTEM**

- A. File System Structure
- B. The Home Directory
- C. Usage of Directory Files
- D. Printing, Creating, Changing, and Removing Directories
- E. Pathnames
- F. Special Directory Names
- G. Special Filename Generation Characters

**V. COMMUNICATION**

- A. Sending and Receiving Electronic Mail
- B. Communicating Immediately with Another User
- C. Communicating with the System Administrator

**VI. EDITOR REVISITED**

- A. Additional Editor Commands
- B. ex vs. vi
- C. Line Addressing Capabilities
- D. Setting the Editor Environment
- E. Searching for Patterns
- F. Regular Expressions and Special Characters

**VII. FILE PERMISSIONS**

- A. Ordinary Files
- B. Directory Files
- C. Determining File Permissions
- D. Changing File Permissions
- E. Numeric vs. Symbolic Representation
- F. Setting Default File Permissions

**VIII. ADDITIONAL UNIX SYSTEM COMMANDS**

- A. Interrogating Files
- B. Comparing Files
- C. Miscellaneous Commands
- D. Command Line History

**IX. STANDARD INPUT AND OUTPUT**

- A. Definition of Standard Input and Output
- B. Input/Output Redirection
- C. Pipelines
- D. Filters
- E. Job Control
- F. Foreground and Background Command Execution