# UNIX Fundamentals Training

Duration: **5 Day**

BILGINÇ IT Academy
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## Overview

This course is an extensive introduction to the UNIX operating system and how to use its many commands and utilities. It also covers the standard UNIX system file editor and basic shell programming. This course is the foundation and prerequisite for most other courses in HP Education's Tru64 and HP-UX curricula. The course is 60 percent lecture and 40 percent hands-on labs using HP servers.

## Prerequisites

General computer literacy.

**Audience**

System administrators, network administrators, software developers, programmers, operators, and technical users

## What You Will Learn

# Delegates will learn how to

- Prepare for our HP-UX system administration and software development courses
- Learn to use your UNIX system effectively and save time by automating tasks with shell programs
- Customize your UNIX system to meet your individual needs
- Learn how to use the full capabilities of your system through hands-on lab exercises

**Benefits to you**

- Build your UNIX knowledge and command skills
- Increase your productivity

## Outline

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**Introduction to UNIX**

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- UNIX structure and capability overview
- UNIX history and standards

**Logging In and General Orientation**

- Logging in and out
- Viewing online man pages
- Executing basic UNIX commands

**Navigating the File System**

- UNIX file system layout concepts
- Absolute and relative pathname concepts
- Navigating and viewing directories
- Creating and removing directories
- Searching directories

**Managing Files**

- File concepts and characteristics
- Viewing and managing files
- Printing files

**File Permissions and Access**

- UNIX file permission concepts
- Managing file permissions
- Managing other attributes with chgrp, chown, and touch
- Changing user and group identities

**Introduction to the vi Editor**

- Editing files with vi editor

**Shell Basics**

- Shell features and types
- Using command aliasing
- Using command line recall and editing
- Modifying TERM, PATH, and other environment variables

**Shell Advanced Features**

- Shell substitution capabilities
- Set and modify shell variables
- Transfer local variables to the environment
- Make variables available to subprocesses
- How a process is created

**File Name Generation**

- File name generation character concepts
- File name generation characters: ?, [], and *

**Quoting**

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- Quoting concepts and characters

**Input and Output Redirection**

- Redirecting standard input, standard output, and standard error
- Using sort, wc, and grep filters

**Pipes**

- Shell pipeline concepts
- Using tee, cut, tr, more, and pr filters

**Using Network Services**

- Local Area Networks (LANs)
- Hostnames
- Testing connectivity
- ARPA services
- Berkeley services
- Secure shell Services

**Process Control**

- Process overview
- Listing processes
- Starting processes in the background
- Moving jobs to the background and foreground
- Prioritizing and scheduling processes
- Terminating processes

**Introduction to Shell Programming**

- Writing simple shell programs
- Using environment variables in shell scripts
- Using positional parameters in shell scripts
- Using read in shell scripts

**Shell Programming - Branches**

- Using if and case constructs for conditional branching
- Using and generating return codes
- Using string, integer, and file tests

**Shell Programming - Loops**

- Performing arithmetic in the shell
- Shell script while loops
- Shell script until loops!Shell script for loops

**Offline File Storage**

- Creating and using tar archives
- Creating and using cpio archives

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