

# Perl Programming Essentials - TT4925

JumpStart Perl Scripting Skills for Task Automation, Web Development and More

**Duration:** 4 Days

**Skill Level:** Introductory

**Available Format:** Instructor-Led Online; Instructor-Led, Onsite In Person ; Blended;  
On Public Schedule

Perl Programming Essentials is an Introductory-level hands-on course that guides the students from the basics of writing and running Perl scripts to using more advanced features such as file operations, report writing, the use of regular expressions, working with binary data files, and using the extensive functionality of the standard Perl library. Students will immediately be able to use Perl to complete tasks in the real world.

## What You'll Learn

### Overview

Perl Programming Essentials is an Introductory-level hands-on course that guides the students from the basics of writing and running Perl scripts to using more advanced features such as file operations, report writing, the use of regular expressions, working with binary data files, and using the extensive functionality of the standard Perl library. Students will immediately be able to use Perl to complete tasks in the real world.

### Objectives

This course is approximately 50% hands-on, combining expert lecture, real-world demonstrations and group discussions with machine-based practical labs and exercises. Our engaging instructors and mentors are highly experienced practitioners who bring years of current "on-the-job" experience into every classroom.

Working in a hands-on learning environment, guided by our expert team, attendees will learn to:

- Create a working script that gets input from the command line, the keyboard, or a file

- Use arrays to store and process data from files
- Create formatted reports
- Use regular expressions
- Use the appropriate types of variables and data structures
- Refactor duplicate code into subroutines and modules
- What is available in the standard library
- Use shortcuts and defaults, and what they replace

## Audience

This is an introductory-level Perl course geared for experienced users who want to use Perl in web development projects, or who wants to automate or simplify common tasks with the use of Perl scripts.

## Pre-Requisites

This is an introductory-level Perl course geared for experienced users who want to use Perl in web development projects, or who wants to automate or simplify common tasks with the use of Perl scripts. Basic familiarity with any programming or scripting language would be helpful, along with a working, user-level knowledge of Unix/Linux, Mac, or Windows.

## Agenda

*Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We will work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs are subject to change, and may adjust during live delivery based on audience needs and skill-level.*

### **Session: An overview of Perl**

- What is Perl?
- Perl is compiled and interpreted
- Perl Advantages and Disadvantages
- Downloading and Installing Perl
- Which version of Perl
- Getting Help

### **Session: Creating and running Perl programs**

- Structure of a Perl program
- Running a Perl script

- Checking syntax and warnings
- Execution of scripts under Unix and Windows

### **Session: Basic Data and I/O**

- Numeric and Text literals
- Math operators and expressions
- Scalar variables
- Default values
- Writing to standard output
- Command line arguments
- Reading from the standard input

### **Session: Logic and Loops**

- About flow control
- The if statement and Boolean values
- Using unless and elsif
- Statement modifiers
- warn() and die()
- The conditional construct
- Using while loop and its variants
- Using the for loop
- Exiting from loops

### **Session: Lists and Arrays**

- The list data type
- Accessing array elements
- Creating arrays
- List interpolation
- Arrays and memory
- Counting elements
- Iterating through an array
- List evaluation
- Slices and ranges

### **Session: Reading and writing text files**

- File I/O Overview
- Opening a file
- Reading text files
- Writing to a text file

- Arrays and file I/O
- Using the <> operator

### **Session: List functions**

- Growing and shrinking arrays
- The split() function
- Splitting on whitespace
- Assigning to literal lists
- The join() function
- The sort() function
- Alternate sort keys
- Reversing an array

### **Session: Formatting output**

- Using sprintf() and printf()
- Report formatting overview
- Defining report formats
- The write() function
- Advanced filehandle magic

### **Session: Hashes**

- Hash overview
- Creating hashes
- Hash attributes
- Traversing a hash
- Testing for existence of elements
- Deleting hash elements

### **Session: References**

- What is a reference?
- The two ways to create references
- References to existing data
- References to anonymous data
- Dereferencing scalar, array, and hash references
- Dereferencing elements of arrays and hashes
- Multidimensional arrays and other data structures

### **Session: Text and Regular Expressions**

- String length

- The substr() function
- The index() and rindex() functions
- String replication
- Pattern matching and substitution
- Regular expressions

### **Session: Raw file and data access**

- Opening and closing raw (binary) files
- Reading raw data
- Using seek() and tell()
- Writing raw data
- Raw data manipulation with pack() and unpack()

### **Session: Subroutines and variable scope**

- Understanding packages
- Package and Lexical variables
- Localizing builtin variables
- Declaring and calling subroutines
- Calling subroutines
- Passing parameters and returning values

### **Session: Working with the operating system**

- Determining current OS
- Environment variables
- Running external programs
- User identification
- Trapping signals
- File test operators
- Working with files
- Time of day

### **Session: Shortcuts and defaults**

- Understanding \$\_
- shift() with no array specified
- Text file processing
- Using grep() and Using map()
- Command-line options for file processing

### **Session: Data wrangling**

- Quoting in Perl
- Evaluating arrays
- Understanding qw( )
- Getting more out of the <> operator
- Read ranges of lines
- Using m//g in scalar context
- The /o modifier
- Working with embedded newlines
- Making REs more readable
- Perl data conversion

### **Session: Using the Perl Library**

- The Perl library
- Old-style library files
- Perl modules
- Modules bundled with Perl
- A selection of modules
- Getting modules from ActiveState
- Getting modules from CPAN
- Using Getopt::Long

### **Session: Some Useful Tools**

- Sending and receiving files with Net::FTP
- Using File::Find to search for files and directories
- Grabbing a Web page
- Some good places to find scripts
- Perl man pages for more information
- Zipping and unzipping files

## **For More Information**

Please [contact us](#) or call 844-475-4559 toll free for more information about our training services (instructor-led, self-paced or blended), coaching and mentoring services, public course enrollment or questions, partner programs, courseware licensing options and more.