

**AUSTIN COMMUNITY COLLEGE
CONTINUING EDUCATION**

Perl Programming for the Web

(24 hours)

ITSE 6030, 6080

COURSE SYLLABUS

Course Description: This introduction to the Perl 5 programming language and its use as an Internet programming language will cover programming fundamentals, data types, control structures, loops and I/O processing. All topics taught in the context of the Web.

Prerequisites: Previous programming experience and Part II: Intermediate Web Authoring and HTML.

Objectives: Every student will be able to:

- Use the Pico editor to create a Perl program
- Use basic Unix commands and CHMOD for Perl programming
- Telnet to a Unix account for program development
- Describe and use Perl variables, relational operators and control statements
- Explain and use looping and array manipulation in Perl
- Use the sequential and binary search methods in Perl
- Write Perl programs that open files to store data
- Use subroutines in Perl programs
- Describe the use of Perl modules

Rationale: The World Wide Web, using HTML only, is a static medium. In order to introduce interactivity to a Web site it is necessary to write Client/Server computer programs. The Perl programming language is used extensively on Web sites to implement the Common Gateway Interface (CGI) protocol to provide this interactivity to static Web pages. Webmasters increasingly will need to know how to implement real programs on Web pages and the Perl programming language is a fundamental method of achieving this goal.

Required Material: None

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Evaluation: Students will be evaluated on their competency in performing a variety of hands-on exercises created to insure the student has achieved all course objectives throughout the course, and class participation. In order to grant CEU credit for a course the students must be able to complete assessment exercises for each part of the course given by the instructor. The instructor will validate each participant's achievement of the course objectives by signing and awarding individual certificates of completion.

Course Outline:

- I. Introduction to Perl Programming (6 hours)
 - A. The Pico editor and basic Pico commands
 - B. Basic Unix for Perl Programmers
 - C. A first Perl Program
 - D. Using numbers and strings

- II. Perl Programming II (6 hours)
 - A. Perl variables and numerical operators
 - B. Assignment operators
 - C. Control statements and relational operators
 - D. Logical operators and complex conditions

- III. Perl Programming III (6 hours)
 - A. Looping and regular expressions
 - B. Substitution and translation
 - C. Arrays and array manipulation
 - D. The anatomy of an X/HTML tag
 - E. Push and Pop
 - F. Sorting

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- IV. Perl Programming IV (6 hours)
- A. Sequential search
 - B. Binary search
 - C. Hashes
 - D. File input and output
 - E. Using subroutines
 - F. Perl Modules

Student Assessment Checklist:

At the completion of the course each student will be able to:

1. Use a Unix account and the Pico editor to create a Perl program
2. Write a Perl program that uses variables
3. Demonstrate decision making in a Perl program using control structures
4. Demonstrate repeatability in a program using looping
5. Use arrays in a Perl program
6. Write Perl programs that use the sequential and binary search methods.
7. Use subroutines in a Perl program