

Course Outline

COURSE: CSIS 54 **DIVISION:** 50 **ALSO LISTED AS:**

TERM EFFECTIVE: Spring 2016 **CURRICULUM APPROVAL DATE:** 04/27/2015

SHORT TITLE: PERL PROGRAMMING

LONG TITLE: Perl Programming

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
3	18	Lecture:	3	54
		Lab:	0	0
		Other:	0	0
		Total:	3	54

COURSE DESCRIPTION:

Introduction to the interpreted language called PERL, the Practical Extraction and Report Language. Writing of programs that perform various tasks, including text, file and process manipulation. Semantics and syntax of the Perl language, including discussion of the practical kinds of problems that Perl can solve and provides examples. This course has the option of a letter grade or pass/no pass. Concurrent enrollment in CSIS 54L is required. **COREQUISITE:** CSIS 54L Perl Programming Lab **ADVISORY:** CSIS 45 C++ Programming or equivalent programming experience.

PREREQUISITES:

COREQUISITES:
CSIS 54L

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES

- L - Standard Letter Grade
- P - Pass/No Pass

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

- 02 - Lecture and/or discussion
- 72 - Dist. Ed Internet Delayed

STUDENT LEARNING OUTCOMES:

1. Create Perl programs using calculations, decision statements

Measure: Homework, Lab exercises.

PLO: 1,2,3,4

ILO: 3,2,7

GE-LO:

Year assessed or anticipated year of assessment: 2016

2. Create Perl programs using loops and arrays

Measure: Homework, Lab exercises

PLO: 1,2,4

ILO: 3, 2, 7, 5

GE-LO:

Year assessed or anticipated year of assessment: 2016

3. Create Perl programs using procedures and functions

Measure: Projects, homework, lab work, exams, quizzes.

PLO: 1,2,4

ILO: 2, 3, 7

GE-LO:

Year assessed or anticipated year of assessment: 2016

PROGRAM LEARNING OUTCOMES:

1) Student will code, debug, document, test, and run programs.

2) Student will write programs in at least three different programming languages, and compare and contrast the philosophies and comparative advantages of each these languages.

3) Students will demonstrate professional conduct by meeting project deadlines, and participating in self-managed teams.

4) Student will create algorithms to solve programming problems, and implement those algorithms.

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Curriculum Approval Date: 04/27/2015

WEEK HOURS DESCRIPTION OF CONTENT, ASSIGNMENTS, OBJECTIVES

1-2 6 Lec What is Perl, who uses Perl, which Perl, where to get Perl.

Perl at the command line, Perl scripts.

Perl basics: comments, statements, tokens, white space, quotes.

Running Perl on Windows.

Standard Input and Output.

Definition and use of scalar variables.

Performing arithmetic.

Expressions and assignment.

3-4 6 Lec Understanding scalars: integers, floats, octal, hexadecimal, character strings.

Interchangeability of strings and numeric values.

Perl operators: exponentiation, remainder, and unary negation.

Using comparison operators.

Integer and string comparisons.
Using logical operators.
5-6 6 Lec Auto-increment and auto-decrement operators.
Bit-manipulation operations.
String concatenation and repetition.
Other Perl Operators: comma and conditional.
Order of operations.
List and array variables.
7-8 6 Lec More on lists:
List ranges and list expressions.
Using array slices.
Reading arrays from standard input.
Using array functions.
Reading from and writing to files.
Opening, reading, writing, and closing files.
9-10 6 Lec Determining the status of files.
File test operations, including status and permissions.
Introduction to pattern matching.
Match operations, special characters in patterns.
Pattern-matching options.
11-12 6 Lec Pattern-matching substituting operations.
Pattern-matching translation operations.
Extended Pattern-matching.
More control structures: conditional, for, foreach, do.
Using last, next, redo, and continue statements.
Using and not, using goto statements
13-14 6 Lec Using subroutines.
Defining and invoking a subroutine.
Returning values and passing parameters.
Recursive subroutines.
Passing arrays to subroutines.
15-16 6 Lec Associative arrays.
Limitations and definition of associative arrays.
Creating and copying associative arrays.
Creating data structures using associative arrays.
17-18 6 Lec Review course
Trends and uses of Perl
Final Exam
ASSIGNMENTS:
WEEKS 1-2 HOMEWORK
Browse through early chapters of textbook.
Do assignments that use basic Perl statements.
Do assignments that use scalars and do arithmetic.
Read class chapters. Do exercises at the end of the chapters.
WEEKS 3-4 HOMEWORK
Write programs using more types of scalars.

Write programs using strings and numbers interchangeably.
Write programs using exponentiation, remainder and unary negation operators.

Write programs using integer and string comparison.

Read class chapters. Do exercises at the end of these chapters.

WEEKS 5-6 HOMEWORK

Write programs that use if auto-increment and decrement.

Write programs that use bit manipulation.

Write programs that use conditional expression.

Write programs that use list and array variables.

Read class chapters. Do exercises at the end of these chapters.

WEEKS 7-8 HOMEWORK

Write programs that use list ranges, list expressions and array slices.

Write programs that use array functions.

Write programs that use input and output files.

Read class chapters. Study and use list and arrays. Do exercises.

WEEKS 9-10 HOMEWORK

Write a program that checks the status and permissions for files.

Write programs that use pattern matching operators and pattern-matching options.

Read class chapters that cover files. Do programs with structures.

WEEKS 11-12 HOMEWORK

Write programs that use pattern-matching substituting and translations.

Write programs that use extended pattern matching.

Write programs that use all the new control structures.

Read class chapters. Do exercises at end of this chapter.

WEEKS 13-14 HOMEWORK

Write programs that use subroutines.

Write programs that use recursive subroutines.

Read class chapters. Do exercises at the end of the chapter.

WEEKS 15-16 HOMEWORK

Write programs that use associative arrays.

Write programs that copy and modify associate arrays.

Write programs that create data structures using associative arrays.

Read chapters on topics covered. Do programs.

METHODS OF INSTRUCTION:

Lecture, computer demonstration, hands-on exercises and practices.

METHODS OF EVALUATION:

The types of writing assignments required:

Written homework

The problem-solving assignments required:

Homework problems

Quizzes

Exams

The types of skill demonstrations required:

Class performance

Performance exams

The types of objective examinations used in the course:

Multiple choice

True/false

Matching items

Completion

Other category:

None

The basis for assigning students grades in the course:

Writing assignments: 5% - 20%

Problem-solving demonstrations: 20% - 60%

Skill demonstrations: 5% - 20%

Objective examinations: 10% - 40%

Other methods of evaluation: 0% - 0%

REPRESENTATIVE TEXTBOOKS:

Required:

Ellei Quigley. Perl by Example. Prentice Hall, 2014. Or other appropriate college level text.

Reading level of text, Grade: 12+ Verified by: ev, MS Word

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Transferable CSU, effective 200630

UC TRANSFER:

Transferable UC, effective 200630

SUPPLEMENTAL DATA:

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 1 Program Applicable

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department: CSIS

CSU Crosswalk Course Number: 54

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: B

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000368259

Sports/Physical Education Course: N

Taxonomy of Program: 070710