

CSE 4255 (Approved): Programming in Perl

Course Description

Syntax and pragmatics of Perl programming; Perl mechanisms for text and file processing, scripting, client-server programming, etc.; powerful ways to combine these mechanisms.

Prior Course Number: 459.51

Transcript Abbreviation: Perl Prgrmng

Grading Plan: Satisfactory/Unsatisfactory

Course Deliveries: Classroom

Course Levels: Undergrad

Student Ranks: Junior, Senior

Course Offerings: Spring

Flex Scheduled Course: Never

Course Frequency: Every Year

Course Length: 14 Week

Credits: 1.0

Repeatable: No

Time Distribution: 1.0 hr Lec

Expected out-of-class hours per week: 2.0

Graded Component: Lecture

Credit by Examination: No

Admission Condition: No

Off Campus: Never

Campus Locations: Columbus

Prerequisites and Co-requisites: CSE 2231 and CSE 2331 and CSE 2421

Exclusions: Not open to students with credit for CSE 459.51

Cross-Listings:

The course is required for this unit's degrees, majors, and/or minors: No

The course is a GEC: No

The course is an elective (for this or other units) or is a service course for other units: Yes

Subject/CIP Code: 14.0901

Subsidy Level: Baccalaureate Course

Programs

Abbreviation	Description
BS CSE	BS Computer Science and Engineering

Course Goals

Be competent with Perl's data types;
Be competent with text and file manipulations using Perl;
Be competent with combining Perl's mechanisms and techniques to solve complex, practical problems.
Be familiar with using DBI to access a database;
Be familiar with basic CGI scripts written in Perl;

Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
Introduction to Perl, basic skeleton, scalar variables;	1.5							
Arrays, lists, subroutines;	1.5							
Hashes, basic I/O;	1.0							
Regular expressions;	1.0							
Control structures;	1.0							
File and directory manipulations;	1.0							
Process orchestration;	1.5							
String manipulations and sorting;	1.0							
Perl DBI; CGI scripting;	1.0							
Other common Perl modules;	1.0							
Combining Perl's mechanisms and techniques to solve complex problems;	1.5							
Object-oriented Perl.	1.0							

Representative Assignments

Basic Perl skeleton, basic input/output commands and control structures;
Use of hashes for storing and presenting reports on a set of data;
Read in a configuration file and write a simulation program to use that configuration data;
Fetch data from a database using DBI, and produce simple reports;
Use of several advanced sorting methods.
CGI-based.

Grades

Aspect	Percent
Programming labs	100%

Representative Textbooks and Other Course Materials

Title	Author
<i>Learning Perl, 3rd Edition</i>	Randal L. Schwartz and Tom Phoenix

ABET-EAC Criterion 3 Outcomes

Course Contribution		College Outcome
*	a	An ability to apply knowledge of mathematics, science, and engineering.
*	b	An ability to design and conduct experiments, as well as to analyze and interpret data.
**	c	An ability to design a system, component, or process to meet desired needs.
	d	An ability to function on multi-disciplinary teams.
	e	An ability to identify, formulate, and solve engineering problems.
*	f	An understanding of professional and ethical responsibility.
*	g	An ability to communicate effectively.
	h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.

Course Contribution		College Outcome
**	i	A recognition of the need for, and an ability to engage in life-long learning.
	j	A knowledge of contemporary issues.
**	k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

BS CSE Program Outcomes

Course Contribution		Program Outcome
*	a	an ability to apply knowledge of computing, mathematics including discrete mathematics as well as probability and statistics, science, and engineering;
*	b	an ability to design and conduct experiments, as well as to analyze and interpret data;
**	c	an ability to design, implement, and evaluate a software or a software/hardware system, component, or process to meet desired needs within realistic constraints such as memory, runtime efficiency, as well as appropriate constraints related to economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability considerations;
	d	an ability to function on multi-disciplinary teams;
	e	an ability to identify, formulate, and solve engineering problems;
*	f	an understanding of professional, ethical, legal, security and social issues and responsibilities;
*	g	an ability to communicate effectively with a range of audiences;
	h	an ability to analyze the local and global impact of computing on individuals, organizations, and society;
**	i	a recognition of the need for, and an ability to engage in life-long learning and continuing professional development;
	j	a knowledge of contemporary issues;
**	k	an ability to use the techniques, skills, and modern engineering tools necessary for practice as a CSE professional;
*	l	an ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
*	m	an ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
*	n	an ability to apply design and development principles in the construction of software systems of varying complexity.

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