Introduction to Perl Programming
Course Outcome Summary

Course Information

Organization	Madison Area Technical College
Developers	Dean W Jefferson
Development Date	5/26/2005
Course Number	10-152-150
Instructional Level	Associate Degree
Potential Hours of Instruction	72
Total Credits	3

Description
Designed to introduce programming to students who are nonprogramming Information Technology majors. During the course, students develop sound programming skills for solving common business problems. Stressing structured programming and modular design, this course uses pseudo-code as the major program design technique. The course emphasis is to develop and program using the Perl programming language. Students are required to complete simple to compound programming assignments.CrLfCrLfCrLf

Target Population
This course is a required course in the Information Technology Department's Computer Systems Administration Specialist, Network Specialist, and Network Security Specialist associate degree programs. It is targeted to those students and IT professionals as a first course in computer programming featuring the Perl programming language.

Types of Instruction

Instruction Type	Contact Hours	Credits
Classroom Presentation	36	2
On-Campus lab	36	1

Textbooks

Lesley Anne Robertson. *Simple Program Design - A Step-by-Step Approach Fourth Edition*. Course Technology. **Edition:** 4. **ISBN:** 0-619-16046-2.

Simon Cozens. *Beginning Perl*. (available on the Web).

Cindy Fox and Tony Nemmer. *Perl Guide - Quick Reference Software Guide*. BarCharts, Inc.. **Source:** MATC Bookstore.

Learner Supplies

Java CD. **Manufacturer:** MATC Information Technology Association. **Quantity:** 1. **Source:** MITA.

Exit Learning Outcomes

Core Abilities

A. Critical thinking

B. Science and Technology

Competencies

Unit 1. Introduction to program design and the Perl language

A. Explore the program development process

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

Learner performance will be successful when:

A.1. you correctly explain the process of writing a computer program

A.2. lab exercise includes the required components of a computer program

B. Explore basic Perl language syntax

Linked Core Abilities

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret basic Perl syntax, correctly predicting statement results

B.2. lab exercise includes correct usage of basic Perl syntax

B.3. project includes correct usage of basic Perl syntax

Unit 2. Using pseudocode and working with simple values

A. Write pseudocode programs to work with simple data values

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements using simple data values

A.2. lab exercise includes pseudocode statements using simple data values

A.3. project includes pseudocode statements using simple data values

B. Write Perl scripts that process simple data values

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of simple data values in Perl, correctly predicting statement results

B.2. lab exercise includes processing of simple data values used correctly in Perl scripts

B.3. project includes includes processing of simple data values used correctly in Perl scripts

Unit 3. Developing an algorithm, and using list and hash data structures

A. Write pseudocode to implement algorithms using simple lists and hashes

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements using simple lists and hashes

A.2. lab exercise includes pseudocode statements using simple lists and hashes

A.3. project includes pseudocode statements using simple lists and hashes

B. Write Perl scripts to implement algorithms using simple lists and hashes

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of simple lists and hashes in Perl, correctly predicting statement results

B.2. lab exercise includes simple lists and hashes used correctly in Perl scripts

B.3. project includes simple lists and hashes used correctly in Perl scripts

Unit 4. Decisions: Using selection control structures

A. Write pseudocode using selection control structures

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements using selection control structures

A.2. lab exercise includes pseudocode statements using selection control structures

A.3. project includes pseudocode statements using selection control structures

B. Write Perl scripts using various forms of the if-else control structure

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of various forms of the if-else control structure in Perl, correctly predicting statement results

B.2. lab exercise includes various forms of the if-else control structure used correctly in Perl scripts

B.3. project includes various forms of the if-else control structure used correctly in Perl scripts

Unit 5. Loops: Using repetition control structures

A. Write pseudocode using repetition control structures

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements using repetition control structures

A.2. lab exercise includes pseudocode statements using repetition control structures

A.3. project includes pseudocode statements using repetition control structures

B. Write Perl scripts using the repetion control structures: for, foreach, while & until

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of the repetition control structures: for, foreach, while and until in Perl, correctly predicting statement results

B.2. lab exercise includes the repetition control structures: for, foreach, while & until used correctly in Perl scripts

B.3. project includes the repetition control structures: for, foreach, while & until used correctly in Perl scripts

Unit 6. Using files and data

A. Write pseudocode that reads data from files and writes data to files

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements that read data from files and write data to files

A.2. lab exercise includes pseudocode statements that read data from files and write data to files

A.3. project includes pseudocode statements using that read data from files and write data to files

B. Write Perl scripts that read data from files and write data to files

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of statements that read data from files and write data to files in Perl, correctly predicting statement results

B.2. lab exercise includes statements that read data from files and write data to files used correctly in Perl scripts

B.3. project includes statements that read data from files and write data to files used correctly in Perl scripts

Unit 7. Array processing

A. Write pseudocode that does complex processing using array and hash data structures

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements that do complex processing using array and hash data structures

A.2. lab exercise includes pseudocode statements that do complex processing using array and hash data structures

A.3. project includes pseudocode statements using that do complex processing using array and hash data structures

B. Write Perl scripts that do complex processing using arrays and hashes

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of statements that do complex processing using arrays and hashes in Perl, correctly predicting statement results

B.2. lab exercise includes statements that do complex processing using arrays and hashes used correctly in Perl scripts

B.3. project includes statements that do complex processing using arrays and hashes used correctly in Perl scripts

Unit 8. Subroutines: First steps in modularization

A. Write pseudocode that uses subroutines to make the code more modular

Linked Core Abilities

Critical thinking

Learner will demonstrate competence:

A.1. through an in-class lab exercise

A.2. through a written evaluation

A.3. through a programming project

Learner performance will be successful when:

A.1. you correctly interpret pseudocode statements that use subroutines to make the code more modular

A.2. lab exercise includes pseudocode statements that use subroutines to make the code more modular

A.3. project includes pseudocode statements that use subroutines to make the code more modular

B. Write Perl scripts that use subroutines to make the code more modular

Linked Core Abilities

Critical thinking

Science and Technology

Learner will demonstrate competence:

B.1. through an in-class lab exercise

B.2. through a written evaluation

B.3. through a programming project

Learner performance will be successful when:

B.1. you interpret use of subroutines to make Perl code more modular, correctly predicting statement results

B.2. lab exercise includes correct use of subroutines to make Perl code more modular in scripts

B.3. project includes correct use of subroutines to make Perl code more modular in scripts