Course Name: C Programming

Course Number: CSC* E210

Credits: 3

Catalog description: Designed to give students a detailed knowledge of the "C" programming language. Topics include functions, simple data types, looping, conditional statements, user-defined and enumerated types, arrays, pointers, mathematical functions, string manipulation and advanced data types.

Substantial hands-on work will be required in the computer lab.

Prerequisite: Any previous computer programming course _and_ satisfactory score on the mathematics placement test.

Corequisite or Parallel:

General Education Competencies Satisfied:

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

⊠ **COMP**   **Computer Science Elective**

Course objectives:

General Education Goals and Outcomes:

None

Course Specific Objectives:

1. Demonstrate use of text editors, compilers, and execution environments
2. Plan, design, write, save, edit, compile, run, and debug C programs
3. Understand the basic syntax of the C language and language semantics and C pre-processor
4. Understand C program organization: source code files, header files, and Make
5. Create and use variables and constants
6. Understand C basic data types and data type conversions
7. Understand expressions, operators, and statements
8. Understand and use C arrays
9. Understand and use C strings and string manipulations
10. Understand and use C pointers and pointer arithmetic
11. Understand, use, and create C functions
12. Understand and use advanced user-defined types: structures, unions, and enumerated types
13. Create programs that use decision and loop structures

Course Content:

- Basics of C language, its syntax, semantics, and the C pre-processor
- Mechanics of writing, compiling, running, and debugging C programs
- Basics of program structure, program development cycle, and problem solving
- C program organization: source code files, header files, and Make
- C variables and constants
- C basic data types and data type conversions
- C expressions and statements, and C operators
- C pointers, arrays, and strings
- C functions
- Advanced user-defined data types: structures, unions, and enumerated types
- Relational and logical operators
- Decision and loop structures

Date Course Created: Fall 2010

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