



# HOUSATONIC COMMUNITY COLLEGE

**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:** MAT\* E137 *or* higher. CSC\*E105 *or* permission of the instructor

**Corequisite or Parallel:**

## General Education Competencies Satisfied:

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

- |                               |   |
|-------------------------------|---|
| <input type="checkbox"/> AESX | <b>Appreciation of the Aesthetic Dimensions of Humankind</b>  |
| <input type="checkbox"/> QUAX | <b>Quantitative Reasoning</b>   |
| <input type="checkbox"/> SCKX | <b>Scientific Knowledge &amp; Understanding</b>   |
| <input type="checkbox"/> SOCX | <b>Social Phenomena Knowledge &amp; Understanding I</b><br><i>(within the fields of anthropology, psychology or sociology)</i>      |
| <input type="checkbox"/> SOPX | <b>Social Phenomena Knowledge &amp; Understanding II</b><br><i>(not within the fields of anthropology, psychology or sociology)</i> |
| <input type="checkbox"/> WRGX | <b>Written Communication in English I</b>   |
| <input type="checkbox"/> WRIX | <b>Written Communication in English II</b>  |

**Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:**

- |                               |   |
|-------------------------------|---|
| <input type="checkbox"/> ORAX | <b>Oral Communication in English</b>            |
| <input type="checkbox"/> HISX | <b>Historical Knowledge &amp; Understanding</b> |
| <input type="checkbox"/> SCRX | <b>Scientific Reasoning</b>                     |

**Embedded Competency(ies):**

- |      |   |
|------|---|
| CRIX | <b>Critical Analysis &amp; Logical Thinking (Outcomes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5)</b> |
| CONX | <b>Continuing Learning &amp; Information Literacy (Outcomes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4)</b>                      |



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**ED** Appreciation of the Ethical Dimensions of Humankind (Outcomes  1  2  3  4)  
**WCIII** Written Communication in English III (Outcomes  1  2  3  4  5)

## Discipline-Specific Attribute Code(s):

<input type="checkbox"/> BHEL	Behavioral Science elective
<input type="checkbox"/> BUS	Business elective
<input type="checkbox"/> C	Computer Literacy (satisfies requirement)
<input checked="" type="checkbox"/> COMP	Computer Science Elective
<input type="checkbox"/> FINA	Fine Arts elective
<input type="checkbox"/> HUM	Humanities elective
<input type="checkbox"/> MATH	Mathematics elective
<input type="checkbox"/> SCI	Science elective
<input type="checkbox"/> SSCI	Social Science elective

## Course objectives:

### General Education Goals and Outcomes:

### 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

Date of Last Revision: 04/03/2017