Course Name: Programming Logic

Course Number: CSC* E105

Credits: 3

Catalog description: An introductory course in computer programming designed to provide beginning programming student with an understanding of the fundamental logic principles used in the writing of computer programs. Topics include input/output, variables, data types, assignment statements, conditional structures, loops, lists (arrays), and functions.

The course requires substantial hands-on programming of computers in a computerized classroom environment.

Prerequisite: The ability to perform basic file management and word processing tasks using Microsoft Windows

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. Develop computer programs employing simple input and output
2. Develop computer programs employing the creation and use of variables
3. Develop computer programs employing different data types
4. Develop computer programs employing assignment statements
5. Develop computer programs employing conditional structures
6. Develop computer programs employing simple loop structures
7. Develop computer programs employing lists
8. Develop computer programs employing functions

Course Content:

- Basics of program structure, program development cycle, and problem solving
- Simple Python execution environments
- Writing, running, testing, and debugging Python programs
- Basic input and output
- Basic concepts of Python, its syntax and language semantics
- Creating and using variables
- Different Python data types
- Strings, substrings, and string manipulations
- Expressions and operators
- Lists
- Functions, using and creating functions
- Relational and logical operators
- Controlling program flow with conditions and loops
- Built-in functions and libraries

Date Course Created: Fall 2015

Date of Last Revision: 04/03/2017