**CSIT 216**
**Python Programming**
4 Credits

# Community College of Baltimore County
# Common Course Outline

## Description

**CSIT 216 – Python Programming:** provides an introduction to the python programming language with an emphasis on applied problem solving and program development within the context of cyber security. Topics include input and output, control structures, classes and objects, methods, functions, file I/O, and the use of various libraries.

**Pre-requisites:** CSIT 111 or consent of the Program Coordinator

## Overall Course Objectives

Upon completion of this course, students will be able to:

1. identify the steps in the software design process;
2. design algorithms and apply to working solutions;
3. demonstrate how Python can be used in cyber security related tasks;
4. demonstrate the appropriate use of data types;
5. analyze and use various control structures;
6. develop classes, methods, and functions;
7. write programs using object-oriented techniques;
8. construct programs that use files and other data sources;
9. design programs using various programming libraries; and
10. examine the impact of security related issues when developing an application.

## Major Topics

   I.     Programing development life cycle
  II.    Variables, naming conventions, and scope
 III.    Input and output
 IV.    Control structures
  V.    Methods and functions
 VI.    Classes and Objects
VII.    Basic data structures
VIII.   Strings
 IX.    File Management
  X.    Application Security
 XI.    Libraries

## Course Requirements

Grading will be determined by the individual faculty member, but shall include the following, at a minimum:

- Six programming projects which may include collaborative work, written components, and oral presentations
- Two exams
- Comprehensive final programming project or exam

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

Date Revised: 12/3/2019