SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS

I. TITLE OF COURSE CS1914- Python Programming I

II. COURSE DESCRIPTION _4_ credit hours _3_ credit hours of lecture and _1_ credit hours of lab per week.

Python programming language is used to teach programming concepts, problem-solving skills and modularization with emphasis in principles of software development, style, and testing. Python programming provides the use of structured and logically correct programs using documentation for business, Data analysis and robotics applications. The course will begin by covering pseudocode, flowcharts, and structure charts. Students will be learning the python programming language variables, data types, control structures, looping, program breaks, and arrays. Topics will include an emphasis on the design and implementation.   procedures and functions, iteration, recursion, arrays and vectors, strings, an operational model of procedure and function calls, algorithms, exceptions, object-oriented programming, and GUIs (graphical user interfaces). Weekly labs provide guided practice on the computer, with staff present to help. Assignments use graphics and GUIs to help develop fluency and understanding.

For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected.

Pre-requisite: None

III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:
The CIS Program will provide superior learning opportunities in the area of information technology. Utilizing state-of-the-art technology, we will give both CIS majors and non-CIS majors the tools they need in order to achieve their career and/or educational goals.

IV. TEXTBOOK AND MATERIALS
1. Starting Out w/Python-MyProgrammingLab Author Gaddis- ISBN 9780136679110, Ed 5
2. Hardware Requirements: This course can be taken on wither a PC or Mac.
3. Software Requirements:
   - PC: Windows 10
   - Mac: Lastest OS X
   - Browser: The latest version of Google Chrome or Mozilla Firefox are preferred. Microsoft Edge and Safari are also compatible.
4. Python 3.X (3.1, 3.2, or a later version), which you can download free

V. SCCC OUTCOMES
Students who successfully complete this course will demonstrate the ability to do the following SCCC Outcomes.
   Outcome #1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life
   Outcome #5- Demonstrate the ability to think critically by gathering facts, generating

insights, analyzing data, and evaluating information
Outcome #6- Exhibit skills in information and technological literacy
Outcome #9-Exhibit workplace skills that include respect for others, teamwork competence, attendance/punctuality, decision making, conflict resolution, truthfulness/honesty, positive attitude, judgment, and responsibility

VI. **COURSE OUTCOMES:** Upon completion of the Python Programming I course with 80% or higher mastery of course competencies, the student should be able to:
1. Describe software development careers and types of software applications.
2. Describe and convert among data representations.
3. Apply different problem-solving techniques.
4. Write computer programs that utilize fundamental statements and processes.
5. Break solutions into more manageable code using functions.
6. Use built-in objects and implement elementary user-defined objects.
7. Write computer programs that respond to events.

VII. **COURSE OUTLINE**
1. Software Development Careers and Software Applications Programming
2. Data Representation
3. Problem-Solving techniques for Software Development
4. Fundamental Statements and Processes
5. Functions
6. Object-Oriented Programming
7. Event-driven Programming

VIII. **INSTRUCTIONAL METHODS**
1. Chapter Assignments
2. Exercises
3. Online Quizzes
4. Canvas Learning Management System

IX. **INSTRUCTIONAL AND RESOURCE MATERIALS**
1. Module Resources Page
2. Companion Website
3. Python Interpreter: Python interpreter is a free download from the Python website.
4. Installation of Python 3.0 or a later version is required. Python for Windows is recommended, however it is available for Mac users

X. **METHODS OF ASSESSMENT**
Assessment will consist of the solutions to real life problems for which students will have to research, plan, program, execute and document.
Outcome #1 will be assessed and measured by the comprehension of reading assignments and in class discussion.
Outcome #5 will be assessed through tests, quizzes and the presentation of a final portfolio.
Outcome #6 will be assessed through the completion of projects.
Outcome #9 will be assessed through attendance, group assignments and presentation of portfolios

XI. ADA STATEMENT

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Student Success and Enrollment at 620-417-1106 or go to the Student Success Center in the Hobble Academic building, room A149.

Syllabus Reviewed: 09/06/2022