



COURSE OUTLINE: CSD0105 - PYTHON

Prepared: Mark Allemang

Approved: Martha Irwin, Chair, Community Services and Interdisciplinary Studies

Course Code: Title	CSD0105: PYTHON CICE
Program Number: Name	1120: COMMUNITY INTEGRATN
Department:	C.I.C.E.
Semesters/Terms:	19F
Course Description:	The Python programming language, is an easy-to-learn and increasingly popular object-oriented language, that allows students to become comfortable with the fundamentals of programming without the troublesome syntax that can be challenging for novices. With the knowledge acquired using Python, students gain confidence in their skills and learn to recognize the logic behind developing high-quality programs. The course focuses on the use of variables, program structure, control structures, functions and lists.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Essential Employability Skills (EES) addressed in this course:	EES 3 Execute mathematical operations accurately. EES 5 Use a variety of thinking skills to anticipate and solve problems.
Course Evaluation:	Passing Grade: 50%, D
Other Course Evaluation & Assessment Requirements:	To successfully pass this course, the student must receive passing grades for both the Test portion of the class AND the Laboratory portion. Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 - 59% 1.00 F (Fail) 49% and below 0.00 CR (Credit) Credit for diploma requirements has been awarded. S Satisfactory achievement in field /clinical placement or non-graded subject area. U Unsatisfactory achievement in field/clinical placement or non-graded subject area. X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. NR Grade not reported to Registrar's office. W Student has withdrawn from the course without academic penalty.



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Books and Required Resources:

Starting Out with PYTHON by Tony Gaddis
 Publisher: Pearson Edition: 4th
 ISBN: 9780134489209

Course Outcomes and Learning Objectives:

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Describe the nature of computers and programming	1.1 Differentiate between and describe the characteristics of computer Hardware and Software 1.2 Describe the Compile Link vs Interpreter systems for computer programming. 1.3 Describe what happens when you run a program. 1.4 Use the Python Interpreter and a Text Editor to create python programs.
Course Outcome 2	Learning Objectives for Course Outcome 2
2. Describe the nature of Input, Processing, and Output as it relates to computer programming.	2.1 Describe the Input, processing, and output characteristics of computer programs. 2.2 Display output with the print Function. 2.3 Write code Comments 2.4 Describe the nature of a variables and the different types of data 2.5 Read input form the keyboard 2.6 Performing calculations 2.7 Utilize various methods for formatting the output.
Course Outcome 3	Learning Objectives for Course Outcome 3
3. Implement the various Decision Structures and Boolean Logic	3.1 Utilize the if and the if-else statements 3.2 Compare Strings 3.3 Utilize Nested Decision structures and the if-elif-else statements 3.4 Describe and utilize Logical operators 3.5 Describe and utilize Boolean Variables
Course Outcome 4	Learning Objectives for Course Outcome 4
4. Utilize Repetition Structures in order to solve iterative problems	4.1 Describe the general nature of Repetition structures 4.2 Describe and utilize the while loop: a conditional-controlled loop 4.3 Describe and utilize the for loop: a count-controlled loop 4.4 Calculating a running total utilizing a loop 4.5 Describe the purpose of Sentinels 4.6 Create Input validation loops 4.7 Solve problems involving Nested loops
Course Outcome 5	Learning Objectives for Course Outcome 5
5. Implement User-Defined Functions	5.1 Describe the nature of user defined functions. 5.2 Define and call a user defined function. 5.3 Modularize a program using functions. 5.4 Differentiate Local variables from global variables and global constants. 5.5 Pass Arguments to Functions
Course Outcome 6	Learning Objectives for Course Outcome 6



6. Implement Value-Returning Functions and Modules	6.1 Describe how functions can both receive and return data. 6.2 Write value-returning Functions 6.3 Examine the math module as an example. 6.4 Store Functions in Modules
Course Outcome 7	Learning Objectives for Course Outcome 7
7. Implement File I/O and Exceptions	7.1 Describe the nature of file input/output. 7.2 Utilize loops to process files 7.3 Describe the nature of a record 7.4 Write code to Process records. 7.5 Describe the nature of exceptions and write code to handle exceptions.
Course Outcome 8	Learning Objectives for Course Outcome 8
8. Implement Lists and Tuples	8.1 Describe the nature of a list. 8.2 Utilize lists consisting of various data types. 8.3 Describe how lists can be sliced. 8.4 Slice lists extracting sublist data. 8.5 Find Items in Lists with the IN operator 8.6 Compare list methods and list function. 8.7 Copy Lists 8.8 Implement Two-Dimensional Lists 8.9 Describe and utilize Tuples.
Course Outcome 9	Learning Objectives for Course Outcome 9
9. Utilize strings.	9.1 Describe the Basic string operations 9.2 Compare Mutable vs Immutable 9.3 Implement String slicing 9.4 Test Search and Manipulate strings

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments and Quizzes	40%
Tests	60%

CICE Modifications:

Preparation and Participation

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

B. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified



so the answer will reflect a basic understanding.

3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.

4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

C. Tests will be written in CICE office with assistance from a Learning Specialist.

The Learning Specialist may:

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

D. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

E. Evaluation:

Is reflective of modified learning outcomes.

NOTE: Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

Date: October 4, 2019

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.

