Prepared: Mark Allemang Approved: Corey Meunier

Course Code: Title	CSD105: PYTHON
Program Number: Name	2090: COMPUTER PROGRAMMER
Department:	COMPUTER STUDIES
Semester/Term:	17F
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
Essential Employability Skills (EES):	#3. Execute mathematical operations accurately.
Course Evaluation:	Passing Grade: 50%, D
Other Course Evaluation & Assessment Requirements:	Students must complete and pass both the test and assignment portion of the course in order to pass the entire course. 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.

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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W Student has withdrawn from the course without academic penalty.

Evaluation Process and Grading System:

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

Books and Required Resources:

Starting Out with PYTHON by Tony Gaddis
Publisher: Pearson Edition: 3rd
ISBN: 978-0-13-358273-4

Course Outcomes and Learning Objectives:

Course Outcome 1.

Introduction to Computers and Programming

Learning Objectives 1.

Differentiate between and describe the characteristics of computer Hardware and Software
Describe the Compile Link vs Interpreter systems for computer programming.
Describe what happens when you run a program.
Use the Python Interpreter and a Text Editor to create python programs.

Course Outcome 2.

Input, Processing, and Output

Learning Objectives 2.

Describe the Input, processing, and output characteristics of computer programs.
Display output with the print Function.
Write code Comments

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Describe the nature of a variables and the different types of data
Read input form the keyboard
Performing calculations
Utilize various methods for formatting the output.

Course Outcome 3.

Decision Structures and Boolean Logic

Learning Objectives 3.

Utilize the if and the if-else statements
Compare Strings
Utilize Nested Decision structures and the if-elif-else statements
Describe and utilize Logical operators
Describe and utilize Boolean Variables

Course Outcome 4.

Repetition Structures

Learning Objectives 4.

Introduction to Repetition structures
The while loop: a conditional-controlled loop
The for loop: a count-controlled loop
Describe a for loop and a while loop.
Calculating a running total utilizing a loop
Describe the purpose of Sentinels
Create Input validation loops
Solve problems involving Nested loops

Course Outcome 5.

User-Defined Functions

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Learning Objectives 5.

Describe the nature of user defined functions.
Define and call a user defined function.
Modularize a program using functions.
Differentiate Local variables from global variables and global constants.
Pass Arguments to Functions

Course Outcome 6.

Value-Returning Functions and Modules

Learning Objectives 6.

Describe how functions can both receive and return data.
Write value-returning Functions
Examine the math module as an example.
Store Functions in Modules

Course Outcome 7.

File I/O and Exceptions

Learning Objectives 7.

Describe the nature of file input/output.
Utilize loops to process files
Describe the nature of a record
Write code to Process records.
Describe the nature of exceptions and write code to handle exceptions.

Course Outcome 8.

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	Lists and Tuples **Learning Objectives 8.** Describe the nature of a list. Utilize lists consisting of various data types. Describe how lists can be sliced. Slice lists extracting sublist data. Find Items in Lists with the IN operator Compare list methods and list function. Copy Lists Implement Two-Dimensional Lists Describe and utilize Tuples. **Course Outcome 9.** Utilize strings. **Learning Objectives 9.** Describe the Basic string operations Compare Mutable vs Immutable Implement String slicing Test Search and Manipulate strings
Date:	Friday, September 1, 2017
	Please refer to the course outline addendum on the Learning Management System for further information.