

DATE: 01/16/17

ROWAN COLLEGE AT BURLINGTON COUNTY

COURSE INFORMATION FORM

This form must be completed, using MS Word, for all new and modified courses offered for credit, including experimental courses. (Form expands to allow full details in each category.)

I. Course Prefix and number: CIS 139

II. Course Title: Introduction to Python

III. Lecture Hrs. 3 Clinical Hrs. Credit Hrs. 3 3/0/0
Studio Hrs. Lab Hrs. Recitation Hrs.

IV. Course Fee: N/A

V. Prerequisite(s): N/A

VI. Co-Requisite(s): N/A

VII. Division Dean Approval: _____ Edem Tetteh _____ Date: 3/31/17

VIII. Is this eligible for Perkins Funding? Yes ☐ No ☐

IX. New Course: ☐ Modified Course: ☒ Experimental Course: ☐

(if modified course explain changes and list old course designator and number)

Course modification: Name Change, programming language change

X. Semester and Year Course will first be Offered (or, if a modified course, semester and year when revised course will first be offered): FA 2017

XI. Relation of Course to Curriculum(s): ☒ Program requirement
 ☐ General Education requirement
 ☐ Elective
 ☐ Developmental course requirement

XII. General Education Designator (if course is intended to satisfy a general education requirement check appropriate designator):

☐ **GCOM** = Communications ☐ **GMAT** = Mathematics
☐ **GDIV** = Global and Cultural Awareness ☐ **GSCL** = Science
☐ **GHIS** = History ☐ **GSOC** = Social Science
☐ **GHUM** = Humanities ☐ **GTEC** = Technological Competency

XIII. Catalog Description:

This course introduces programming and developing Graphical User Interfaces (GUIs) using Python. Students design, code, test, debug, and run applications using variables, decision and control structures, functions, files, lists, classes and objects. It emphasizes the fundamentals of programming, problem solving, software engineering techniques, and algorithm design and development. The assignments provide hands-on programming experience for beginning programmers and computer science students.

Rev: 10/12/10

XIV. Course Objectives (Learning Outcomes):

- Perform language-independent analysis and problem-solving
- Develop software using elementary coding skills in a programming language
- Analyze low to medium complexity operations and design logical algorithms including coding, compiling, testing and debugging the software solution
- Effectively break down problems into sub-problems utilizing logical thinking and flow of control, to develop efficient algorithms and the programmed solutions
- Utilize an integrated development environment to write, compile and test programs.
- Write code using elementary constructs such as loops and conditionals to control sequence
- Develop graphical user interfaces (GUIs) for input and output
- Design and implement classes and functions
- Use lists, strings, and files in programs to perform specific tasks
- Employ Computer Science terms and concepts as they apply to developing computer based algorithms

XV. Textbook(s): Starting Out With Python, Fourth Edition, Tony Gaddis,
Pearson, ISBN: 978 - 013 – 444432-1

XVI. Other Course Materials to be supplied by Student: Flash Drive

XVII. Grading Policy (number and weight of papers, quizzes, examinations, and rubrics)

Assignments	70%
Exam #1	15%
<u>Exam #2</u>	<u>15%</u>
	100%

XVIII. Detailed Description of Project Final Examination (if applicable): N/A

XIX. Schedule of topics to be covered in Course:

- Introduction to Computers and Programming
- Python Application Programming
- Input, Processing, Output, and Variables
- Repetition and Control Structures, and formulating algorithms
- Functions, Files, and Exceptions
- Lists, Tuples, and Strings
- Classes and Object Oriented programming
- Inheritance
- GUI Programming

XX. Schedule lab exercises (if applicable): N/A

IAC Chair Approval Signature _____ Date: _____