New 5/2020

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
ITP 150 – PHYTHON PROGRAMMING (4 CR.)

Course Description

Entails instruction in fundamentals of object-oriented programming using Python. Emphasizes program construction, algorithm development, coding, debugging, and documentation of Python applications. Lecture 4 hours per week.

General Course Purpose

This course provides a comprehensive foundation sufficient for a student to write Python programs in order to meet the minimum programming goals of students who plan to transfer and students who take the course for employment purposes.

Course Prerequisites/Corequisites

None.

Course Objectives

Upon completing the course, the student will be able to:

a) Design, develop, code, test, and debug Python programs.
b) Use the Python shell for initial exploration of language constructs.
c) Use a Python Integrated Development Environment (IDE).
d) Use common features of the Python core language and the Python Standard Library.
e) Use data types and flow control statements that are the building blocks of all programming.
f) Use their foundation knowledge of object-oriented coding techniques to create classes that are applied appropriately in a Python program as a solution for a specific problem statement.

Major Topics to be Included

a) The Python Shell and a Python Integrated Development Environment (IDE)
b) Python data types and corresponding operators, functions, and methods
c) Input and output methods and techniques
d) Strings and corresponding operators, functions, and methods
e) If Statements
f) Loops
g) Functions
h) Lists and Tuples
i) Classes, Objects, and Methods
j) Inheritance