**Python Programming Fundamentals**

Course Number-177927



**Course Description:**

The course is intended for students who have had previous exposure to programming or experience with the basics of Python. The goal of this course is to learn object-oriented programming (OOP) essentials using Python, advanced Python concepts, and exposure to various Python third-party libraries.

**Course Objectives:**

The first objective is to equip students with an ability to use understand the fundamentals of programming by using Python as well as some advance techniques and tools for multidisciplinary fields. Some techniques you will learn are:

* Understand Python advanced programming concepts
* Understand Inheritance and Composition
* Use the Python standard library modules and third party libraries
* Install Python packages into a project and how to use them
* Understand how to interact with files, network applications and data
* Learn advanced Python libraries and programming techniques

**Course Scope:**

Python is now used in many different areas given its large user base and popularity. Python is used in area such as:

* Data Science
* Artificial Intelligence
  + Machine Learning
  + Computer Vision
* Internet of things (IOT)
* Robotics
* Web design
* And many more

Lecture topics include learning the basics so you can later incorporate any of the libraries focusing on any specialized field of study. You will learn the skills needed to write fully functional code that will help you in learning any other Object Oriented programming language whether it be C++ or Java.