# National Institute of Electronic and Information Technology, Lucknow

**Name of Group:** Training

**Name of Course:** Certificate Course in Machine Learning using Python

**Objective**: Machine Learning is broad and fast growing sub-field of Artificial Intelligence. This course introduces students to the basic concepts and techniques of Machine Learning. The objective of this course is to develop the skills required for Machine Learning Technologies with use of Python to analyze data and solving ML problems like Regression, Classification, and Clustering using machine learning algorithms.

**Duration**: 6 Weeks

**Eligibility**: BE/B.Tech (Any Branch), 3 year Diploma (Computer Science / Electronics/ IT), NIELIT O/A Level, Graduate in Science or Commerce or Statistics/Mathematics/MCA/BCA.

**Course Fees (Proposed)**: Rs.6000 + GST

**Registration Process:** Candidates have to apply in prescribed application form. The forms can be collected from NIELIT Lucknow centre. The Duly filled form along with the course fees has to be submitted at NIELIT Lucknow centre. The Fees deposited is non-refundable.

**Course Content**:

| Modules: | Duration | Contents |
|---|---|---|
| **Module 1** | **1 week** | Introduction to Machine Learning, Applications of Machine Learning, Types of Machine Learning, Python Installation with various IDEs, Simple Python Program, Python Data Types, Lists, Tuples, Dictionary in Python, |
| **Module 2** | **1 week** | Python Functions, Map and lambda functions, Object Oriented Programming Concepts, Creating Classes in Python, Constructor, Inheritance in Python Classes, Python Modules, Python Packages, NumPy in Python, Pandas in Python, |
| **Module 3** | **2 week** | Pre-processing of data for Machine Learning, Handling Null Values, Data Summarization, Regression Problem, Training and Testing Data, Applying Regression ML Algorithm, Performance Evaluation of ML Model, Deployment of ML Model, Applying ML Algorithm |
| **Module 4** | **2 week** | Deployment & Performance Evaluation of Classification Model, Confusion Matrix, Working on Images in Python, Image Classification Problem, Text Classification, Twitter Data Analysis, Mathematics behind Regression & Classification Algorithms, Visualization using matplotlib and seaborn modules, Clustering, Feature Scaling, Ensemble Learning |

1. There will be 3 Hours Session per day
2. These sessions will include Theory Classes and Practical.

**Mode of Payment**: Fees can be paid either by swiping debit/credit card.

For any queries and more details please contact to Sh Pankaj Shukla, Additional Director (7706009303)