National Institute of Electronics and Information Technology, Chennai

COURSE PROSPECTUS

Name of the Group:	VLSI/ES/AE
Name of the Course:	Certificate course on **Python programming for Data Science**
Course Code:	ST102
Starting Date:	23rd March 2020
Duration:	80 Hrs
Course Coordinator:	Mr.Ishant Kumar Bajpai (Scientist-C)
Last date of Registration:	20th March 2020

Preamble:

Data Science refers to extraction of knowledge from large volumes of data that are structured or unstructured, which is continuation of data mining and predictive analytics. It involves different categories of analytical approaches for modelling various types of business scenarios and arriving at solution and strategies for optimal decision- making in marketing, finance, operations, organizational behaviour and other managerial aspects. This new field of study breaks down into a number of different areas, from constructing big data infrastructure and configuring the various server tools that sit on top of the hardware, to performing the analysis and developing the right transformations to generate useful results.

The MCKINSEY Global Institute has predicted that in forthcoming years, the world will face a shortage of more than 38-40 million highly skilled manpower with deep analytical skills that can leverage data analysis to make effective decisions for their organizations. The objective of this program is to create a pool of talent who can leverage this huge demand for resources skilled in Data Science.

Python emerged as a leading programming language used in the Booming areas like Artificial Intelligence (AI), Internet of Things (IoT) and Data analytics. Currently available academic curriculum is not much enough to fulfil the requirement of Skills needed to program in Python language for Data Analytics. Because of lack of hands-on experience among professionals, there is a huge demand in providing skill-based training in Data Analytics using Python language which will bridge the skill-gap of the engineering graduates.

Objective of the Course:

To develop and skill the engineering graduates in Data Analysis using Python Programming language to Clean ,Analyse the data and Visualise the data using Powerful Analytic Tools.

Outcome of the Course: After successful completion of this Course, students can able to:

1. Explore Python language fundamentals, including basic syntax, variables, and Data types.
2. Create and manipulate regular Python lists.
3. Use functions and import Numpy & Panda packages.
4. Build Numpy arrays, and perform interesting calculations.
5. Create and customize plots on real data.

Course Structure:

S. No	Topics	Duration (in Week/Hrs.)
	Module 1:Python Programming	
1	An Introduction to Python	1 Week
2	Beginning Python Basics	
3	Python Program Flow	
4	Functions& Modules	
5	Exceptions Handling	
6	File Handling	
7	Classes in Python	
	Module 2:Data Science and Analytics	
8	An Introduction to Data Science and Analytics.	1 Week
9	Data Analysis Using NumPy Package	
10	Data Analysis Using Pandas Package	
11	Data Visualization – Pandas, Matplotlib, Seaborne, Plotly and Cufflinks	
	Total	**2 Weeks/80 Hrs.**

Other Details:

Course Fees: Rs.4, 500/-(Including GST)

Registration Fee :(Non-refundable) **Rs.500/-.(Including GST)**

However the above registration fee shall be refunded on few special cases as given below:

1. If course postponed and new date is not convenient for the student.
2. If course cancelled.

Payment schedule: The Fee is to paid in one instalment as given below.

Instalment No.	Last Date for Payment	Amount (in Rs.)
1.	20-03-2020	4,500/-

Eligibility: Pursuing & Graduates of B.E/B.Tech/MCA/B.Sc/M.Sc/B.Com

National Institute of Electronics and Information Technology, Chennai

Number of Seats: 30

How to apply:

Candidates can apply online in our website. http://14.139.173.196/reg/ or download the Registration from our Website www.nielit.gov.in/chennai.After filling the form with all documents and fees, it can be submitted to NIELIT Chennai office in person or through post before staring of the course. Payment towards non-refundable Registration and Course fee canbe paid through any one of the following modes:

- ✓ DD drawn from a nationalized bank (preferably SBI) in favour of "NIELIT Chennai" payable at Chennai.
- ✓ Online transaction: Account No: 31185720641 Branch: Kottur (Chennai), IFS Code: SBIN0001669.
- ✓ Pay through Nationalized Bank Debit Card (Service charges applicable)

  Note: The Institute will not be responsible for any mistakes done by either the bank concerned or by the depositor while remitting the amount into our account.

Last date of Registration: 20th March 2020

Selection of candidates: Selection is based on the merit list.

Admission Procedure:

All interested candidates are required to fill the Registration form with the fees (Registration and Course fees) on or before 20th March 2020 and report to NIELIT Chennai on 23rd March 2020 at 9:30 AM with all the necessary following documents.

- Original and self-attested Copies of Proof of Age, Qualifying Degree (Consolidated Mark sheet & Degree Certificate/Course Completion Certificate), etc.
- One passport size photograph and one stamp size photograph for identity card.
- Self-attested copy of Govt. issued photo ID card

Note: Working days are from Monday to Friday. Admission timings are from 9.00 am to 5.30 pm.

Discontinuing the course: No fees under any circumstances shall be refunded in case of a student discontinuing the course. No certificate shall be issued if discontinued.

Course Timings: 9:30 am to 5:30 pm (Monday to Friday)

Location: NIELIT Chennai is located at Gandhi Mandapam Raod, Kotturpuram, Chennai (Landmark: Opp. To Anna Centenary Library)

National Institute of Electronics and Information Technology, Chennai

Address: National Institute of Electronics and Information Technology Chennai Centre,
ISTE Complex, No. 25, Gandhi Mandapam Road,Chennai – 600025
E-mail: training.chennai@nielit.gov.in / Phone: 044-24421445
Contact Person: Mr.Ishant Kumar Bajpai (Scientist-C), Mobile: 9958016673

Course enquiries: Students can enquire about the various courses either on telephone or by personal contact between 9.15 A.M. to 5.15 P.M. (Lunch time 1.00 pm to 1.30 pm) Monday to Friday.

Annexure

Detailed Syllabus of the Course:

Module 1: Python Programming

- An Introduction to Python
- Beginning Python Basics
- Python Program Flow
- Module 4: Functions& Modules
- Module 5: Exceptions Handling
- Module 6: File Handling
- Module 7: Classes in Python

Module 2: Data Science and Analytics

- An Introduction to Data Science and Analytics.
- Data Analysis Using NumPy
- Data Analysis Using Pandas
- Data Visualization – Pandas, Matplotlib, Seaborne, Plotly and Cufflinks