

नेशनल इंस्टीट्यूट ऑफ इलेक्ट्रॉनिक्स एंड इंफॉर्मेशन टेक्नोलॉजी, चेन्नई

National Institute of Electronics and Information Technology, Chennai

Autonomous Scientific Society of Ministry of Electronics & Information Technology (MeitY), Govt. of India

ISTE Complex, 25, Gandhi Mandapam Road, Chennai - 600025

Course Prospectus

Online Certificate Course in Basic Data Analytics using R



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Course Prospectus

Name of the Group	:	Data Science
Course Name	:	Online Certificate Course in Basic Data Analytics using R
Duration	:	6 weeks - 30 Hours (1 Hour per Day)
Course Coordinator	:	Sanjeev Kumar Jha, Mobile: 7765803105
Start Date	:	08 - 06 - 2020

Objective of the Course:

The **Online Certificate Course in Data Analytics using R** 30 Hours program offered by NIELIT Chennai is an excellent blend of knowledge and practice in the field of Data Science and its industrial applications. The course progresses from the scratch about R to a pro-level for achieving the goal of solving critical business and Analytic problems. The Program also offers real – life analytical projects for participants to get equipped with strong analytical and programming which makes them highly demanding and employable on completion of the program. The course has been designed after proper industry survey and consultation with multiple industry leaders to ensure that participants learn exactly what employers need.

The objective of this program is to make Statistical Analysts. 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. So, it is quite obvious that existing resources along with new candidates who are interested in perusing career in this field needs to be trained. Our objective is to create a pool of talent who can meet this demand. This course is meant to sensitize students for computational statistics applications and usage as well as provide hands-on experience with solving real world data science issues.

Outcome of the Course: On completion of this Course, the Participants will learn the concept of Data Analytics using an open source statistical tools called R. They will be able to implement industry-oriented Data Analytics Project.

Prerequisite

Basic Knowledge of R

Requirements

- ✓ You will need access to a PC/Laptop with an Internet connection.
- ✓ You must have at least 8GB of free RAM on your system.
- ✓ A basic familiarity with the Linux command line will be very helpful.

Course Structure

S.no	Topic	Duration (in weeks) via Online mode
1	Module 1 : Introduction to Data Analytics and Basics of R	1 week
2	Module 2 :Statistical Distributions	1 week
3	Module 3 : Testing of Hypothesis - T Test	1 week
4	Module 4 : Testing of Hypothesis - Z Test, Anova Test	1 week
5	Module 5 : Goodness of Fit test	1 week
6	Module 6 : Regression Analysis	1 week
Total		6 weeks

Other Details:

Course Fees: Rs. 900/- (Including GST) (Non-Refundable)

However, the above Training 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 has to be paid in one instalment as given below.

Installment No	Last Date of Payment	Amount (in Rs.)
1	07 - 06 - 2020	Rs.900/-

Eligibility

- ✓ B.E./B.tech/B.C.A./M.C.A./A Level/B.Sc./Persuing BE/BTech

How to Apply

Candidates can apply online in our website <http://14.139.173.196/reg>. Payment be paid through any of the following modes:

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

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: 07 - 06 - 2020

Selection Criteria of candidates

Selection is based on the first come basis (subject to fulfilling the eligibility criteria)

Admission Procedure

All interested candidates are required to fill the Registration form with the Course fees before 21 - 06 - 2020 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.

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: 1 hours online daily (from Monday to Friday) during working hours

Mode of Training: Online

Course Contents:

Basic Concept of Data Analytics & Data Manipulation in R

Learning Objective: In this section candidate will learn the concept of Data Analysis and R. After completion of the section participants will be skilled with data manipulation techniques.

Topics: Data Analysis, process of data analysis, Basic Features of R, Installation R Studio and method of accessing through URL, Basic Data Set, Data Types, Operators, Basic Constructs, R Functions, String Handling, R Packages, Data Reshaping, Data Pipelines, Data Manipulation

Statistical Distribution using R

Topics: Random Variable, Distribution Functions (Discrete and Continuous), Measure of Central Tendency, Deviations, Central Limit Theorem, Proportions, Covariance, Correlation, Estimation, Interval Estimation

Testing of Hypothesis and Goodness of Fit Test using R

Topics: Null and Alternative Hypothesis, Critical and Acceptance Region, P Value, Type I and Type II error, Testing Mean, Chi Squared Test of Independence, Goodness of Fit Tests.

Data Mining using R

Topics:

Introduction: Basic Concepts of Data Mining with R.

Data Import and Export: Save and Load R Data, import from and Export to .csv Files, Output to and Input from EXCEL Files

Data Exploration: Explore Individual Variables, Explore Multiple Variables, More Explorations, Save Charts into Files

Regression Analysis in R: Linear Regression.

Location and how to reach: NIELIT Chennai is located at Gandhi Mandapam Road, Kotturpuram, Chennai (Landmark: Opp. To Anna Centenary Library).



Address:

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ISTE Complex, No. 25, Gandhi Mandapam Road, Chennai – 600025
E-mail: trng.chennai@nielit.gov.in/Phone: 044-24421445
Contact Person: Sanjeev Kumar Jha, Mobile: 7765803105

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.