राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, चेन्नई
National Institute of Electronics & Information Technology, Chennai

Ministry of Electronics & Information Technology
Government of India

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

PG Diploma in Data Science

&

Analytics

Mode: ONLINE (Blended)

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Course Prospectus

Name of the Group: Data Science

Course Name: PG Diploma in Data Science & Analytics

Course Code: DS 600

NSDA CODE: (2020/ITES/NIELIT/03605)

NSQF LEVEL: 08

Duration: 840 Hours, 6 Months

Last Date of Registration: 31-01-2021

Display of Provisional Selection List: 03-02-2021

Payment of first instalment fee: 04-02-2021 to 09-02-2021

Course Start Date: 11-02-2021

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.

Objective of the Course:

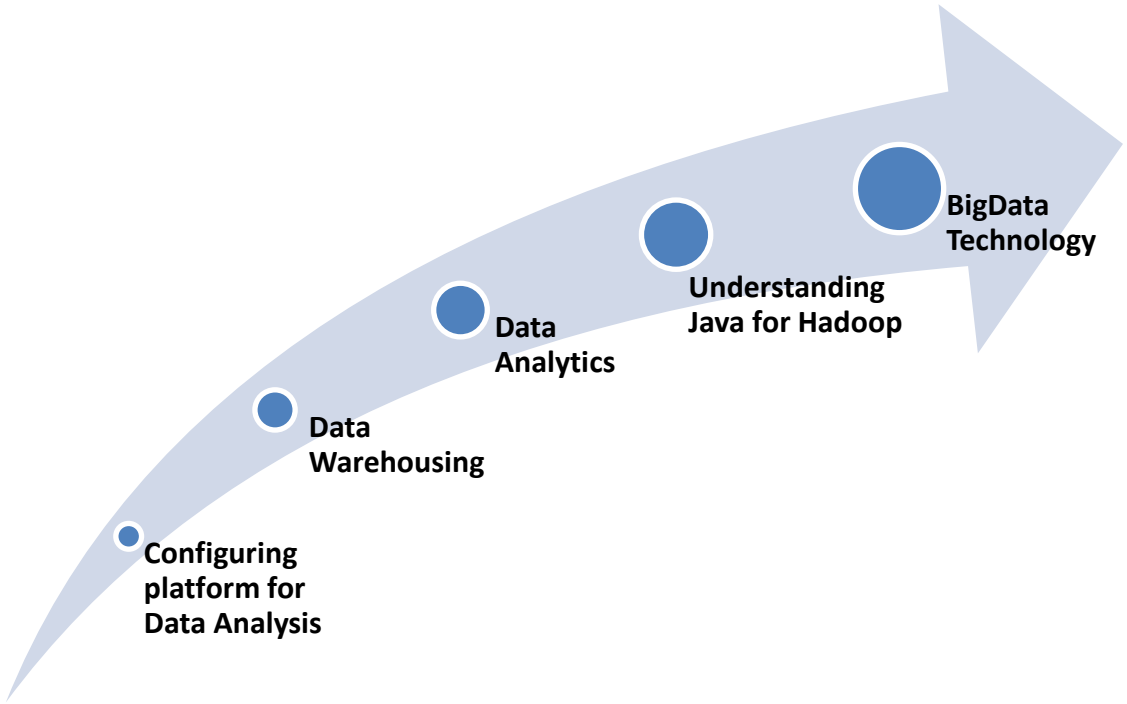
The **Post Graduate Diploma in Data Science & Analytics** a unique 6-month (840 Hours) program offered by NIELIT Chennai is an excellent blend of knowledge and practice in the field of Data Science and its industrial applications. The course is NSQF aligned with Level 8. The program is targeted for creating qualified Data Science professionals. The course progresses through the Operating System, concepts of Data and its storage, programming for data science, Big Data Technology and its implementation. Various advanced tools such as R and Python, along with MySQL, MongoDB, Java Programming and Hadoop Framework are used for

achieving the goal of solving critical business and Analytic problems. The Program also offers six weeks of hands-on 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, Data Scientists, Data Analysts, Big Data Engineer, Hadoop Developer. There is a huge demand for resources skilled in Data Science. 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 the Course, the Participants will learn the concept of Data Analytics using open source statistical tools like R, Python and some very good visualization tools and techniques. They will be able to implement industry-oriented Data Analytics Project.

Full Flow of Course



Course Structure

This course contains total six modules. After completing the first five modules, the students have to do a 120 Hours project using any of the topics studied to earn the PG Diploma.

DS 600	Module Name	Duration (in Hours)
DS 601	Basics of Linux Operating System & Cloud	120
DS 602	Data Warehousing using MySQL and MongoDB	120
DS 603	Data Analytics using R & Python	120
DS 604	Fundamentals of Java for Hadoop Framework	120
DS 605	Hadoop Eco System	240
DS 606	Mini Project (Implementation of Data Analytics)	120
Total Duration		840

Course Fees

Course fee is Rs. 21,000/- +GST as applicable. (Can be paid as a single instalment of Rs. 24,780/- or in 2 instalments as given below)

Registration Fee	**Rs. 1000/- for SC-ST Adjustable against advance security deposit.**	**Rs. 1000/- for others**	
Instalment No.	SC-ST Candidates (Fee including GST in Rs.)	General Candidates (Fee including GST in Rs.)	Last Date
1	2,500.00*	11,890.00	09-02-2021
2		11,890.00	09-04-2021
Total		23,780.00	

*** Tuition Fees are waived for eligible SC/ST students. However, they are required to remit an amount of Rs. 2,500/- as advance security deposit. This amount will be considered as security deposit and will be refunded after successful completion of the course. If the student fails to complete the course successfully this amount along with any other security deposits will be forfeited.**

**GST is Applicable as per Govt. Norms GST (currently it is 18%).*

Apart from above fee, following fee to be paid by all selected candidates (excluding SC-ST) directly while applying for registration/NSQF examination:

1. *NSQF registration fee of Rs. 200+GST=Rs. 236/- after admission during registration at the time of NSQF registration*
2. *NSQF Examination fee of Rs. 2600/- while registering for examination.*

Registration Fee (non-refundable if candidate is selected for admission but refused)

SC/ST: Rs. 1000/- for SC-ST, adjustable against advance security deposit.

Others: Rs. 1,000/-. (Adjustable with Total fee for candidates.)

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

- ✓ Candidates are not selected for admission.
- ✓ Course postponed and new date is not convenient for the student.
- ✓ Course cancelled.

Eligibility

- ✓ ME/M.Tech/ BE/B.Tech/MCA/M.Sc/DOEACC B Level with Knowledge of Statistics and Computer Programming.
- ✓ Candidates who have appeared in the final semester examination and awaiting results may also apply. However, they have to submit proof of passing all semester

examination/final degree at the time of completion of the course. Otherwise no certificate will be issued.

Number of Seats: 100 (One Hundred) - Total

Category	No. of Seats
SC (15%)	15
ST (7.5%)	08
OTHERS	77
Total	**100**

Note: Seats are allocated based on the merit of the Qualification.

How to Apply

Candidates can apply online in our website http://reg.nielitchennai.edu.in. Payment towards non-refundable registration fee can be paid through any of the following modes:

- ✓ Online transaction: Account No: 31185720641 Branch: Kottur (Chennai), IFS Code: SBIN0001669.

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: 31st January, 2021

Registration Procedure

All interested candidates are required to fill the Registration form online with registration fees before **31st January, 2021** with all the necessary information.

Selection Criteria of candidates

The selection to the course shall be based on the following criteria:

Selection of candidates will be based on their marks in the qualifying examination subject to eligibility and availability of seats.

- ✓ The first list of Provisionally Selected Candidates will be published on NIELIT Chennai website (www.nielit.gov.in/chennai) on **03-02-2021** by **5:00 PM**. In case of vacancy, an additional selection list will be prepared and the selection will be intimated by email only.

- ✓ Provisionally selected candidate has to upload there document on registration portal for online verification.
- ✓ After document verification selected candidates have to pay first instalment of Rs. ***11,890/-*** on or before **09-02-2021** by payment mode mentioned above. Selected candidates are requested to upload the proof of remittance of fee on registration portal and also send the proof of remittance of fee as email to skjha@nielit.gov.in/trng.chennai@nielit.gov.in.

Admission: All provisionally selected candidates whose documents are verified and paid the fees (full or first instalment) and verified by accounts section of NIELIT Chennai will get a welcome message in his login id provided during registration. The credential and url for online portal will be shared through WhatsApp or email.

Discontinuing the course

- ✓ No fees (including the security deposit) under any circumstances, shall be refunded in the event of a student who have completed the process of admission or discontinuing the course in between. No certificate shall be issued for the classes attended. Only Grade Sheet will be issued.

Course Timings: This program is a practical oriented one and hence there shall be more lab than theory classes. The classes and labs are online cloud based from 9.30 am to 5:30 pm and Monday to Friday.

Address:

National of Electronics and Information Technology
ISTE Complex, No. 25, Gandhi Mandapam Road, Chennai – 600025
E-mail: trng.chennai@nielit.gov.in/Phone: 044-24421445

Contact Person: Dr. 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.

Placement: Placement assistance is provided to students who qualify our courses.

Important Dates

- **Last Date of Registration:31-01-2021**
- **Display of Provisional Selection List:** 03-02-2021
- **Payment of first instalment fee: 09-02-2021**
- **Course Start Date:** 11-02-2021

Examination & Certification

- ✓ Certification Body: Examination Section, NIELIT Chennai
- ✓ PG Diploma Certificates will be issued after successful completion of all the modules including mini project. For getting PG Diploma certificate a candidate has to pass with minimum required marks.

Examination

Examination scheme is as follows:

Theory **(Each Question will carry 1 mark)** **Duration (in Min): 90**		**Practical**			**Internal Assessment (Marks)**	**Project / Presentation/ Assignment (Marks)**	**Major Project/ Dissertation**		**Total**
Papers	**No. of Questions/Paper**	**Papers**	**Duration (in Min)**	**Marks/Paper**			**No. Of Projects**	**Marks**	
3	100	2	180	90	60	60	1	100	700

Module Name		Means of Assessment					
	Total Marks	Written		Practical		Internal Assessment	Assignments/ Projects
DS 601: Basics of Linux Operating System & Cloud	**100**	50	Module1	30	P1	10	10
DS 602: Data Warehousing using MySQL and MongoDB.	**100**	50		30		10	10
DS 603: Data Analytics using R & Python	**100**	50	Module2	30		10	10
DS 604: Fundamentals of Java for Hadoop Framework	**100**	50		30	P2	10	10
DS 605: Hadoop Eco System	**200**	100	Module3	60		10	20
DS 606: Mini Project	**100**	NA		NA		60	100
Total	**700**	**300**		**180**		**60**	**160**

Grading Scheme

Following Grading Scheme (on the basis of total marks) will be followed:

Grade	S	A	B	C	D	Fail
Marks Range (in %)	**85 to 100**	**75 to 84**	**65 to 74**	**55 to 64**	**50 to 54**	**Below 50**

Final Grading as per above grading scheme will be given on the basis of total marks obtained in all modules. For last module (DS606) grade will be given on the basis of project demonstration.