

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



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## Course Prospectus

**Name of the Group:** Data Science

**Course Name:** PG Diploma in Data Science & Analytics

**Course Code:** DS 500

**Duration:** 840 Hours, 6 Months (08Hours per day)

**Last Date of Registration:** 04-02-2020

**Display of Provisional Selection List:** 05-02-2020

**Payment of first instalment fee:** 19-02-2020

**Counselling & Admission:** 19-02-2020

**Start Date:** 20-02-2020

**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.

### **Objective of the Course:**

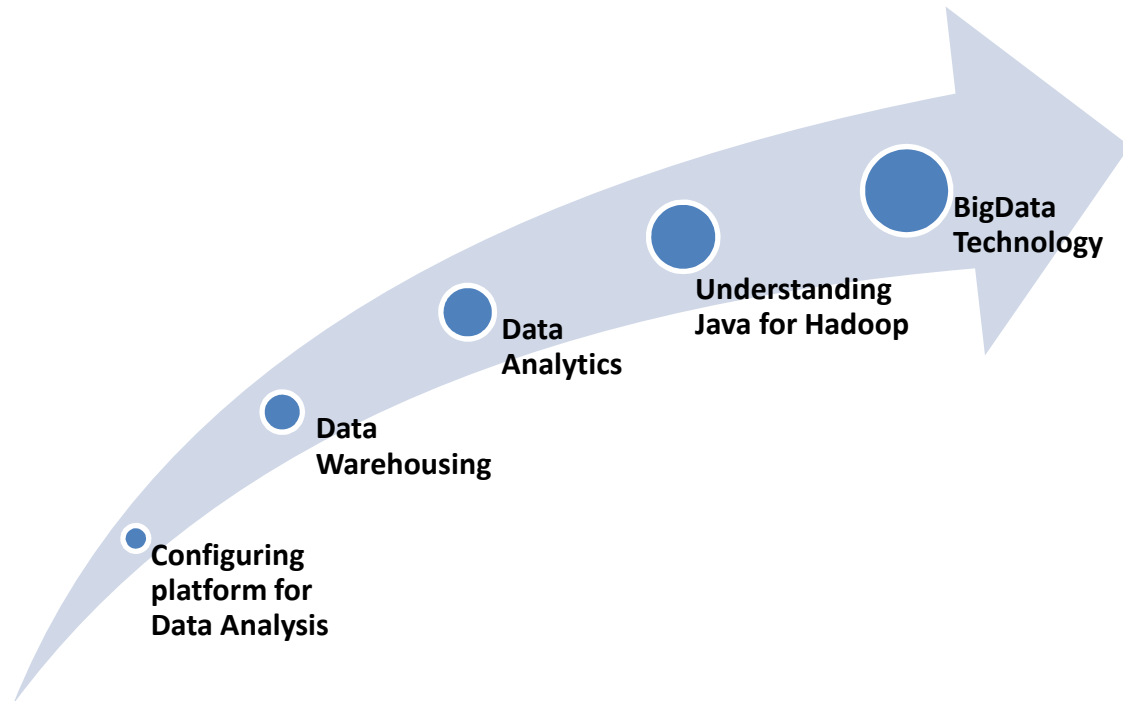
The **Post Graduate Diploma in Data Science & Analytics** a unique 6-month (840 Hours) program offered by NIELIT Chennai is an excellent blend of knowledge and practice in the field of Data Science and its industrial applications. The program is targeted for creating qualified Data Science professionals. 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 500	Module Name	Duration (in Hours)
DS 501	Basics of Linux Operating System & Cloud	120
DS 502	Data Warehousing using MySQL and MongoDB	120
DS 503	Data Analytics using R & Python	120
DS 504	Fundamentals of Java for Hadoop Framework	120
DS 505	Hadoop Eco System	240
DS 506	Mini Project (Implementation of Data Analytics)	120
<b>Total Duration</b>		<b>840</b>

## Course Fees

Course fee is Rs. 70,000/- +GST as applicable. (Can be paid as a single instalment of Rs. 82,600/- or in 3 instalments as given below)

Instalment No.	General Candidates (Fee including GST in Rs.)	Last Date
1	10,000.00 Rs	19-02-2020
2	36,300.00 Rs	06-03-2020
3	36,300.00 Rs	09-04-2020
<b>Total</b>	<b>82,600.00 Rs</b>	

*GST is Applicable GST (currently it is 18%).*

## Registration Fee (non-refundable): 1,000 Rs

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

- ✓ Course postponed and new date is not convenient for the student.
- ✓ Course cancelled.

## Eligibility

- ✓ M.E./M.Tech/B.E./B.Tech/DOEACC B Level/Any Master Degree with Knowledge of Mathematics/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.
- ✓ On the date of counselling/admission, the candidate must produce the original mark lists up to the last semester/year of examination.

## Number of Seats: 30 (Thirty) - Total

Category	No. of Seats
<b>SC (15%)</b>	4
<b>ST (7.5%)</b>	2
<b>GENERAL</b>	24
<b>Total</b>	<b>30</b>

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

## How to Apply

Candidates can apply online in our [website http://14.139.173.196/reg](http://14.139.173.196/reg). 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.
- ✓ 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:** 04<sup>th</sup> February, 2020

## Registration Procedure

All interested candidates are required to fill the Registration form online with registration fees before 04<sup>th</sup> February, 2020 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](http://www.nielit.gov.in/chennai)) on 05-02-2020 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 be present personally for document verification on 18-02-2020 from 9:30 am to 4:00 pm.
- ✓ Outstation Candidate may complete document verification on 19-02-2020 also.
- ✓ After document verification selected candidates have to pay first instalment of Rs. 10,000/- on or before 19-02-2020 by any one of the payment modes mentioned above. Selected candidates are requested to send the proof of remittance of fee as email to [trng.chennai@nielit.gov.in](mailto:trng.chennai@nielit.gov.in).

**Admission:** All provisionally selected candidates whose documents are verified and paid the fees (full or first instalment) will have to be present **personally** for admission on same day 19-02-2020 with all the necessary documents (original and self-attested copies). Working days are from Monday to Friday. Admission timings are from 9.30 am to 4.00 pm. After that admission will be treated as confirmed.

**Spot Admission:** Unfilled/vacant seats are filled through spot admission. Spot admission (if open) will close within 05 (five) days of start of a particular course.

**Admission Procedure:** Students who have been selected for admission are required to report to the Institute on the prescribed day by 9:30 hrs along with the following documents:

- ✓ Original and self-attested Copies of Proof of Age, Qualifications, etc.
- ✓ One passport size photograph and one stamp size photograph for identity card.
- ✓ Self-attested copy of Govt. issued photo ID card.
- ✓ Self-attested copy of community certificate (if availing SC/ST **reservation**).

**Note:** Working days are from Monday to Friday (9.00 am to 5.30 pm.)

### Discontinuing the course

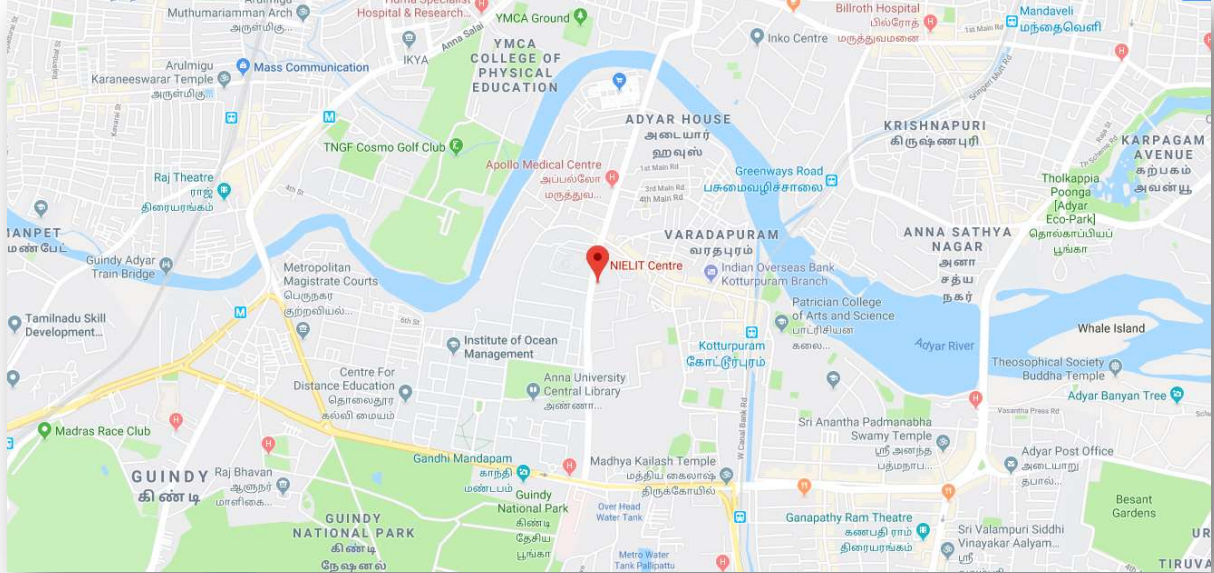
- ✓ No fees (including the security deposit) under any circumstances, shall be refunded in the event of a student who have completed the process of admission or discontinuing the course in between. No certificate shall be issued for the classes attended. Only Grade Sheet will be issued.

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

**Accommodation:** Private PGs and hostels are available nearby.



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



**Address:**

National of Electronics and Information Technology  
ISTE Complex, No. 25, Gandhi Mandapam Road, Chennai – 600025  
E-mail: [trng.chennai@nielit.gov.in](mailto: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.

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

## Important Dates

- **Last Date of Registration: 04-02-2020**
- **Display of Provisional Selection List: 05-02-2020**
- **Document Verification:18-02-2020(for local candidate),**
- **Document Verification:19-02-2020(for outstation candidate)**
- **Payment of first instalment fee: 19-02-2020**
- **Admission: 19-02-2020**
- **Course Start Date: 20-02-2020**

## 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 each module individually with minimum required marks. At least 75% attendance is essential for appearing in examination.



## Examination

Examination scheme for each module is as follows:

Module Name	Means of Assessment			
	Total Marks	Written	Practical	Assignment s/Projects
<b>DS 501: Basics of Linux Operating System &amp; Cloud</b>	100	50	25	25
<b>DS 502: Data Warehousing using MySQL and MongoDB.</b>	100	50	25	25
<b>DS 503: Data Analytics using R &amp; Python</b>	100	50	25	25
<b>DS 504: Fundamentals of Java for Hadoop Framework</b>	100	50	25	25
<b>DS 505: Hadoop Eco System</b>	200	80	60	60
<b>DS 506: Mini Project</b>	100	NA	NA	100
<b>Total</b>	<b>700</b>	<b>280</b>	<b>160</b>	<b>260</b>

## Grading Scheme

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

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

Final Grading as per above grading scheme will be given on the basis of total marks obtained in all modules. For last module (DS506) grade will be given on the basis of project demonstration.