

## Short Term Course

**Topic : Data Analysis using R**

**Duration : May 04, 24 - June 09, 24**

**Place : Durgapur Regional  
Centre, NSOU**

NETAJI SUBHAS OPEN  
UNIVERSITY (NSOU)

CENTRE FOR PROPAGATION OF  
SCIENTIFIC KNOWLEDGE (CPSK)



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**COURSE**

**BROCHURE**

## Salient Features

- 48 Hours of hands on
- Duration : 4 Weeks
- Weekend Classes
- Online Doubt Clearance Sessions
- Weekly Assignments
- Case Study from different domains
- State of the art laboratory
- Participation Certificate



## Centre for Propagation of Scientific Knowledge (CPSK), NSOU:

The Centre for Propagation of Scientific Knowledge organizes different Educational Programmes in the frontier areas of Science, and Technology to disseminate scientific knowledge by stimulating and supporting scientific interactions and communications between the faculties and different interested stakeholders under the aegis of School of Sciences, NSOU.

## About Netaji Subhas Open University (NSOU):

Netaji Subhas Open University is the only open university (grade A by NAAC) in west Bengal, delivers to build up the quality human resource base of the State and moves towards the improvement of the quality of open distance education,



## SHORT-TERM COURSE ON “Data Analysis using R” at NSOU Reginal Centre - Durgapur

**4<sup>th</sup> May – 9<sup>th</sup> June 2024**

### Call for Registration and Participation

#### Coordinator

Mrinal Nath

Assistant Professor of Computer Science  
School of Sciences, NSOU

#### Assistant Coordinator

Dr. Chandan Kr. Mondal

Assistant Professor of Mathematics  
School of Sciences, NSOU

#### Advisor

Dr. Soumen Nandi

Associate Professor of Computer Science  
School of Sciences, NSOU

**All laboratory sessions of the course will be organized at Durgapur Regional Centre, NSOU. The complete address is:**

Durgapur Regional Centre, NSOU  
Jawahar Lal Nehru Road,  
Durgapur, Paschim Bardhaman - 713 214.  
(adjacent to Durgapur Govt. Degree College)

### Detailed Schedule:

Week No	Offline Laboratory Session		Online Doubt Clearance session	
	Date	Time	Date	Time
Week - 1	May 04 (Sater Day)	10 - 30 am - 5 - 30 pm Break: 1-30 pm - 2-30 pm.	May 08 (Wednesday)	7 pm - 9pm
	May 05 (Sun Day)	10 am - 5 pm Break: 1 pm - 2 pm		
No offline/online sessions between May 11 - May 17 due to assembly election in Durgapur.				
Week - 2	May 18 (Sater Day)	10 - 30 am - 5 - 30 pm Break: 1-30 pm - 2-30 pm.	May 22 (Wednesday)	7 pm - 9pm
	May 19 (Sun Day)	10 am - 5 pm Break: 1 pm - 2 pm		
Week - 3	May 25 (Sater Day)	10 - 30 am - 5 - 30 pm Break: 1-30 pm - 2-30 pm.	May 29 (Wednesday)	7 pm - 9pm
	May 26 (Sun Day)	10 am - 5 pm Break: 1 pm - 2 pm		
No offline/online sessions between June 1 - June 07 due to assembly election in Kolkata.				
Week - 4	June 08 (Sater Day)	10 - 30 am - 5 - 30 pm Break: 1-30 pm - 2-30 pm.	June 12 (Wednesday)	7 pm - 9pm
	June 09 (Sun Day)	10 am - 5 pm Break: 1 pm - 2 pm		



## Overview of the short term course:

This course aims to equip participants with the fundamental knowledge and practical skills necessary to perform data analysis tasks efficiently using R.

### Objective:

- Introduce participants to the fundamentals of R programming language.
- Familiarize participants with statistical analysis techniques and methods using R.
- Enable participants to generate visualizations to communicate data insights effectively.
- Provide hands-on experience with practical data analysis using real-world datasets from diverse domains such as Social Science, Biological Science, Economics, Finance, etc.

### Course Content:

W1

Introduction to R environments, Basic Syntax, Vector, Matrix, Sequence, Import-Export, Data Cleaning and pre-processing

W2

dplyr package and different verbs for data analysis, ggplot2 package and building graphs like Box Plot, Scatter Plot, Contour Plot etc, Building probability distribution in R.

W3

Hypothesis Test, Case study problems - t - test, anova, Post hoc analysis, chi-square, F-test etc and their implementation in R.

W4

•Corelation and its use in R, Case study- Simple Linear regression, Multiple Linear Regression and their implementation in R. Introduction to advance methods of statistical learning.

## Resource Persons:

### Mrinal Nath

Assistant Prof. of Comp Sc., NSOU  
M.C.A. (JU), NET(CS), GATE(CS),  
9 Years of teaching exp. in UG and PG Level,  
10 Years of industrial exp. of handling large data and complex programming problems in MNCs.

### Dr. Soumen Nandi

Associate Prof. of Comp. Sc., NSOU  
M.Sc., M.C.A., M.Tech, Ph.D.(ISI)  
17 Years of teaching exp. in UG and PG Level  
12 Years of research exp. in theoretical computer science.

### Dr. Chandan Kumar Mondal

Assistant Prof. of Mathematics., NSOU  
M.Sc., Ph.D.(University of Burdwan)  
5 Years of teaching exp. in UG and PG Level  
8 Years of research exp. in Differential Geometry, Functional Analysis, Linear Algebra .

### Registration is open for:

- Undergraduate students (Honours or general) in science, social science, commerce, engineering seeking to grasp data analysis principles and methods for their future careers.
- Master's degree students across disciplines aiming to pursue careers in Data Science or Analytics.
- Research scholars requiring data analysis skills to support their research.
- Working professionals looking to enhance their data analysis abilities for current or prospective job roles

## Registration Fee:

**Course Fee:  
(Payable at the time of  
Admission)**

**Rs. 2500/-**

Participants will receive certificate after competing the course..

### How to apply:

Eligible candidates may apply for admission to the course using following link before 30th April 2024.

## Admission Form.

Upon submission of the admission form, interested candidates will receive details of the bank account and IFSC code through their registered email IDs.

**Last Date for submitting  
Admission form :  
3rd May 2024**

### Confirmation on Participation:

After submitting the admission fee, participants will receive a confirmation email and message on their registered email and phone number. Due to the laboratory-based nature of the course, seats are limited, and admission will be granted on a first-come, first-served basis.