



FACULTY OF ENGINEERING

TEERTHANKER MAHAVEER UNIVERSITY

Delhi Road, Bagarpur, Moradabad (U.P)

(E-Mail: dir.engg@tmu.ac.in)

Ref. TMU/FOE/MATHS/ODD-2022-23/01

Date: 18.07.2022

Short Term Certification Courses-Mathematics

Department of Mathematics, Faculty of Engineering is offering the **short-term course** of 4 weeks in offline mode during the summer vacation of students for their skill enhancement & knowledge in the respective domain which will be helpful for their career development.

Details of short-term course:

Title: Statistical data analysis using R-Programming

Expert Faculty: (1) Dr Kamesh Kumar
(2) Dr. Ashendra Kumar Saxena
(3) Mr. Ashok Kumar
(4) Mr. Rupal Gupta

Registration Date: 19 July 2022 onwards

Registration Closed: 25 July 2022

Course Starting Date: 26 July 2022

Course Closed Date: 25 August 2022

Result Declared for certificate: 31 August 2022

Offline class venue: Smart class Room (Room No. 3131)

Lecture Timing: 9:30 am onwards

Registration Process:

Student of any stream can register through the Google form:

<https://forms.gle/wFffnwdbbRMP9npi8>

Course Completion Process:

Course expert will provide the assignment at the end of every week (Saturday) through google form. Student will have to revert the same within 3 days (Sunday, Monday, Tuesday) of next week. Each Assignments having 10 MCQs with the 10 marks.

: Syllabus:

Statistical data analysis using R-Programming

Unit-1: Mathematical and Statistical concepts

- Introduction
- Maximum and Minimum

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- Frequency Distribution
- Measure of Central Tendency
- Measure of Dispersion
- Correlation

Unit-2: Hypothesis Testing

- Introduction
- Null and Alternative Hypothesis
- Test Statistics
- Analysis of Variance (ANOVA)
- F-Test
- T-Test

Unit-3: Different Statistical Distribution

- Introduction
- Statistical Distribution in R
- Binomial Distribution
- Poisson Distribution

Unit -4: Regression

- Introduction
- Linear Regression
- Multiple Regression
- Generalised Linear Regression

Unit-5: Time Series Analysis

- Introduction
- Time Series Data in R
- Linear Filtering on Time Series
- Time Series Decomposition
- Time Series Forecasting
- Time Series Classification



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