MAHARSHI DAYANAND UNIVERSITY, ROHTAK
(A State University under Haryana Act No. XXV of 1975)
NAAC Accredited 'A+' Grade
Email: hod.economics@mdurohtak.ac.in
DEPARTMENT OF ECONOMICS

No: ECO/24/316
Date: 01.05.2024

TWO DAYS WORKSHOP ON R SOFTWARE

The Department of Economics will organize a two days workshop on R Software. R is open source software, which is used by the researchers for data entry and analysis. This workshop will be organized on 2nd and 3rd May 2024 at SWARAJ SADAN, MDU Rohtak.

The session will cover topics on basics of statistics and R, Data Entry and Analysis using R, Importing and Exporting Data file, R studio, Univariate, Bivariate and Multi-variate Analysis

Dr. Preeti Dabas, an alumni of the Department of Economics who is working as faculty at SRM University Sonipat, has been requested to conduct the workshop sessions.

The research scholars from Social Sciences Faculty and other faculties are invited to participate in the workshop. Participants are encouraged to come with laptops if available for hands on training. The timing of workshop is 10:00 AM to 04:00 PM.

The registration/course fee: **NIL**

The registration link for participants is given below:

https://forms.gle/WPCS3PxRxeMyeKvc6

Rajesh Kumar
Head, -cum-
Coordinator, Research & Development
Faculty of Social Sciences

Two-Day Workshop

Hypothesis Testing and Data Analysis using R

DAY-1

- **Branches of Statistics** (Descriptive and Inferential) **(20 minutes)**
- **Levels of Measurement**(Nominal, Ordinal, Interval, Ratio) **(20 minutes)**
- **Hypothesis Testing:** Meaning, Types and the Associated Errors **(20minutes)**
- **Key Concepts Related to Hypothesis Testing:**
    - Probability Value (p-Value) **(20 minutes)**
    - Level of Significance **(20 minutes)**
    - Understating the meaning of statistically significant **(20 minutes)**

======== Break ========

    - Connecting the Dots: *p*-Value and Level of Significance **(20 minutes)**
    - Does the Insufficiency of Evidence to Reject the Null Hypothesis Imply its Acceptance? **(20 minutes)**
    - Confidence Level and Confidence Interval **(20 minutes)**
    - Power of a Test **(10 minutes)**
- **Difference between Statistical Significance and Practical Significance** **(15 minutes)**
- **Hypothesis Testing: Formulation and Decision Rules** **(20 minutes)**
- **Key Assumptions of Statistical Tests including Concept of Normality**(15 minutes)

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DAY-2

- **Interface of RStudio** **(30 minutes)**
- **Data Analysis using R and Interpreting Results**
    - Univariate Analysis **(20 minutes)**
    - Bivariate Analysis:
        - testing the association between two categorical variables**(30 minutes)**
        - testing the impact of independent variable (categorical/continuous) on dependent variable **(40 minutes)**

======== Break ========

        - testing the difference between two or more groups (paired and unpaired)**(20 minutes)**
    - Multi-variate Analysis: with continuousdependent variable **(20 minutes)**
- **How to take forward the learning from here** **(1 hour)**