

## TEACHING LEARNING CENTRE RAMANUJAN COLLEGE

(Accredited Grade 'A' by NAAC) UNIVERSITY OF DELHI

under the aegis of

PANDIT MADAN MOHAN MALAVIYA NATIONAL MISSION ON TEACHERS AND TEACHING MINISTRY OF EDUCATION

is organising

**ONE-WEEK FACULTY DEVELOPMENT PROGRAMME** 

# DATA ANALYSIS USING SPSS

15 - 21 February 2022



## **RAMANUJAN COLLEGE**

Ramanujan College is a constituent College of the University of Delhi (DU). It is inspired by the life and work of Srinivasa Aiyangar Ramanujan, one of the world's greatest mathematicians. The College has been accredited Grade "A" by the National Assessment and Accreditation Council (NAAC) in its First Cycle. It is located in the well-known area of Kalkaji, near Nehru Place, in South Delhi.

The College was established in 1958 as an evening college for boys with just five programmes. Since 2010, Ramanujan College has been expanding and now with the latest addition of B.Sc. Environmental Sciences (Hons) in 2020, it at present offers sixteen undergraduate programmes in different disciplines. This achievement, in alignment to the recommendations of the National Education Policy (NEP) 2020, makes the College a centre for interdisciplinary studies and research with a future focus on blended learning. It has gradually grown into a self-sufficient and self-reliant institution owing to its academic vigour and intellectual capital.

Ramanujan College was awarded the Deen Dayal Upadhyay – Knowledge Acquisition and Upgradation of Skilled Human Abilities and Livelihood (DDU KAUSHAL) Kendra in 2016 by the UGC, under which two vocational courses were started in Banking Operations and Software Development.

The College has conducted a Course on Human Rights, Environment and Ethics through its National Resource Centre (NRC), under the Annual Refresher Programme in Teaching (ARPIT) scheme of Ministry of Education (MoE). This Course was uploaded on MoE's Massive Open Online Course (MOOC) platform SWAYAM and many participants registered for it.

Ramanujan College offers various short-term diploma, certificate, and executive development programmes on contemporary and skilloriented themes. These are conceived and designed by faculty members in consultation with external experts. The courses get exceptional response from the students and are conducted throughout the academic session. They are open to alumni and students of all the colleges. Some of these courses support the curriculum, some prepare the students for higher studies and also accelerate the professional growth.

The College is the Study Centre of School of Open Learning (SOL), Non-Collegiate Women Education Board (NCWEB) and Indira Gandhi National Open University (IGNOU) for various courses. As an initiative towards students and teachers exchange programmes, the College has entered into Memorandum of Understanding(s) with foreign universities. It is also working for collaboration with other higher education institutions located in remote areas of the country, under the Vidya Vistar Scheme of the University of Delhi.

The prestigious Teaching Learning Centre was awarded to Ramanujan College in 2017 by the Ministry of Education, under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme.

In pursuit of its vision: "Discover, Empower, Transform: Building A Better World", Ramanujan College is today perceived as one of the best colleges in the country.



#### TEACHING LEARNING CENTRE, RAMANUJAN COLLEGE

Teaching Learning Centre (TLC) is mandated by the Ministry of Education (MoE) to organise Faculty Development Programmes (FDPs), Faculty Orientation and Induction Programmes (FIPs), discipline specific and interdisciplinary Refresher Courses, conferences, workshops, through offline and online modes. These programmes are based on indepth subject knowledge, quantitative and qualitative research methodologies, and on an interdisciplinary approach as is envisaged in the National Education Policy (NEP), 2020.

The TLC, Ramanujan College has been set up with the aim of "Reaching the Unreached" teachers in terms of regional diversity and geographically remote areas of the country. It has successfully conducted more than hundred learner-centric programmes since October 2017 and trained over one lakh teachers across the country in various discipline specific and interdisciplinary programmes.

In the TLC Programmes distinguished and internationally acclaimed resource persons deliver lectures and conduct sessions on wide ranging disciplines/topics of relevance in the contemporary and ever evolving global scenario to benefit the teaching fraternity, corporates and researchers. The sessions are also uploaded for larger audiences on the official YouTube Channel of the College.

Ramanujan College is a pioneer in offering offline/online courses for faculty members of higher education institutions and research scholars through the customised Learning Management System (LMS), designed by the College's Research Development and Services Cell. It is predominantly participant-friendly and incorporates evaluation methods and comprehensive feedback systems to judge learning outcomes. The LMS is hosted on CLOUD with high scalability and reliability. The College has installed its own Cloud Infrastructure to host its servers for research and data analysis.

#### Enrichment Spectrum at the TLC, Ramanujan College

- Transforming teachers into knowledge-creators
- Emphasis on creating self-learning space for participants
- Interaction with eminent scholars and academicians
- Four Quadrant Approach (e-tutorial, e-content, Self-Assessment and Web Resources).
- Regular follow-up with the participants through Google Classroom/Telegram/Discussion Forum.
- Adaptation skills for the dynamic contemporary environment
- Augmentation of professional capabilities and research-based knowledge
- Inter and cross-disciplinary methodologies of study
- Co-creation and mutual contribution between participants and facilitators
- Formation of knowledge capital
- Online certificates using the Blockchain Technology to ensure authenticity and verifiability

## **CONCEPT NOTE**

Research is a continuous process which leads to new ideas, improvements and development. An efficient researcher needs to be informed about the different methods and tools of research. One such aspect is quantitative analysis of data collected. In dribs and drabs, acceptability of research across disciplines has become conditional on its backing by empirical studies so as to make a strong case for proposed arguments. Data analysis tools and methods are useful not only in finding stochastic relationships in mathematical format, but are significant in explaining the relationships among variables. These procedures are used to explain and predict the levels of variables in interest as well as to test hypotheses about their relationships, and the results are often used as evidence in a wide range of policy settings. SPSS (Statistical Package for the Social Sciences) is a software program used by researchers in various disciplines for quantitative analysis of complex data. SPSS is one of the most popular software used by researchers widely as it has enabled academicians and researchers to obtain valuable information from the data. Basic knowledge of SPSS is vital for all users before they proceed to surveys and data analyses.

Using this as a reference point, the current course is an endeavor to bridge the gap between humanities and science by complementing 'thick data' with 'big data'. In other words, the course emphasizes on the use and application of quantitative and computational methods to make better sense of the information at hand. The current course has been designed using the insights from the emergent disciplines of Digital Humanities and Data Science and Public Policy. The objective is to integrate the techniques of Data Science, which are majorly focused on the interpretability of information through Machine Learning models, with a human centred approach. The course, therefore, will use primary data sets from the fields of social sciences and further it through computationally innovative methods and technologies.

With this framework, the course will be useful for improving quantitative skills of teaching faculty and research scholars in both sciences and social sciences. It will also equip the participants across disciplines to work in a new environment by providing them with knowledge about the tools, methods, and theoretical issues central to the field of Digital Humanities. Participants of this faculty development program will learn about the different techniques of data collection and cleansing, data management and visualization, and will also receive training needed to apply these tools to humanistic questions.

SPSS

With this programme, the participants will be able to explore the usage of online courses for learning, teaching and professional development and also build their capability to plan, design and implement online courses that are in tune with international standards. This will help them to manage their curriculum and also in extending effective support to the students in terms of improved learning and communication. Overall, the FDP aims to facilitate inter-disciplinary engagements, which can lead to collaboration between institutions, educators and learners locally and internationally.

## THEMATICS

Introduction to Quantitative Research Methods

Fundamentals and Advanced functions of SPSS

Developing an understanding about Descriptive Statistics

Inferential Statistics for Parametric comparison of means (ttests, ANOVA) and co-relational regression

Non – parametric statistical analysis

# **EXPECTED LEARNING OUTCOMES**

After successful completion of the FDP, participants will be able to:

- Use the advanced features of SPSS to assist them in their research endeavors
- Comprehending new trends and techniques in using appropriate statistical and computational tools for inter – disciplinary research
- Effectively analyze and present their data and research outcomes

#### **REGISTRATION AND PAYMENT PROCESS**

#### ELIGIBILTY

Faculty members (regular/adhoc/temporary) in teaching profession and research scholars are eligible to apply for this programme.

All those who meet the eligibility criterion are required to register and pay a **Non-Refundable fee of INR 950/- by visiting** <u>rcmoocs.in</u>

#### **REGISTRATION DEADLINE: 14 February 2022**

After successful registration & payment, the participants will receive a confirmation via email. Please keep checking the spam folder of the email as the bulk email sent may end up in the spam folder.

An official group has been made for communication with the participants on "Telegram." You are therefore requested to install the Telegram App either from the Play Store or App Store. The link to join the official group will be provided in the confirmation mail.

#### **IMPORTANT:**

- Registration is mandatory for participation.
- Attempting and submitting all the quizzes and assignments is mandatory, and each participant should score atleast 50% aggregate to be eligible for the completion certificate.
- Graded certificates on the basis of performance will be awarded to the participants.
- As part of the Ministry of Education's requirement under the PMMMNMTT scheme, all participants need to submit online feedback for each session.

- No Objection Certificate (NOC) or Leave is NOT REQUIRED to participate in the Programme
- Failing to meet any of the above conditions will result in the denial of completion certificate.

For further information, write to us at: <u>spssfdp@ramanujan.du.ac.in</u>

or contact us through WhatsApp: +91 - 7011863335 +91 - 7011527088

#### **ORGANISING BOARD OF THE PROGRAMME**

DIRECTOR, (TEACHING LEARNING CENTRE, RAMANUJAN COLLEGE)

**Prof. S.P. Aggarwal** Principal, Ramanujan College

#### **ORGANISING TEAM**

Dr. Nikhil Kumar Rajput Mr. Vipin Rathi Dr. Ashish Kumar Shukla Dr. Sachin Tomer Ms. Shipra Yadav

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