



# REFRESHER COURSE IN APPLICABLE MATHEMATICS

26 JULY - 08 AUGUST 2022

ORGANIZED BY

TEACHING LEARNING CENTRE  
**RAMANUJAN COLLEGE**  
NAAC A++ ACCREDITED  
UNIVERSITY OF DELHI

in collaboration with

**JSS MAHAVIDYAPEETHA**  
**JSS SCIENCE AND TECHNOLOGY**  
**UNIVERSITY**  
**SRI JAYACHAMARAJENDRA COLLEGE OF**  
**ENGINEERING**  
JSS TECHNICAL INSTITUTIONS CAMPUS, MYSURU - 570-006

**SELF PACED**

**NO NOC  
REQUIRED**

**BENEFICIAL  
FOR CAS**

**E-  
CERTIFICATION**

FOR REGISTRATION VISIT  
**[RCMOOCS.IN](http://RCMOOCS.IN)**

**LAST DATE  
26 JULY 2022**

Under the aegis of  
**PANDIT MADAN MOHAN MALAVIYA NATIONAL  
MISSION ON TEACHERS AND TEACHING**  
**Ministry of Education**

# **ABOUT 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++" with CGPA 3.71 by the National Assessment and Accreditation Council (NAAC) in its Second Cycle. The score is the highest amongst the colleges of University of Delhi. The college 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 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 skill-oriented 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 (PMMNMTT) 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.

## **ABOUT 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 in-depth 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.

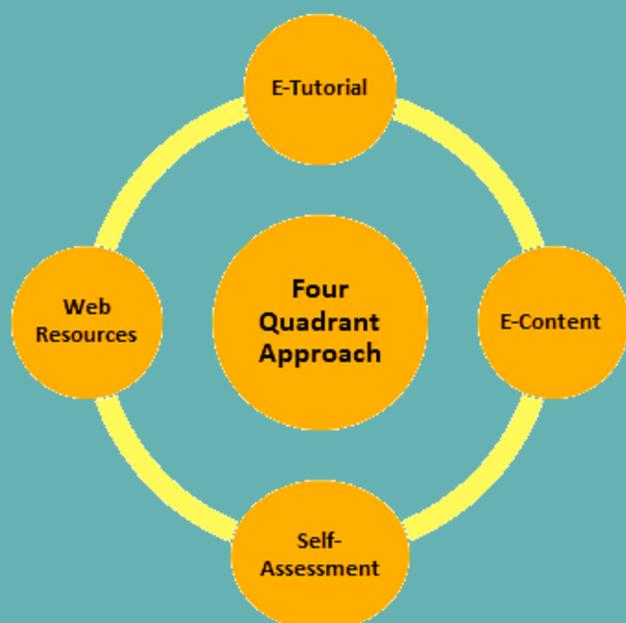
In the TLC Programmes distinguished and internationally acclaimed resource persons deliver lectures and conduct sessions on wide ranging disciplines/topics of relevance in the contemporary and ever evolving global scenario to benefit the teaching fraternity, corporates and researchers. The sessions are 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
- 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

For the notification regarding recognition of the programmes conducted by TLC Ramanujan College for Career Enhancement Scheme (CAS) and the sanctity of the online courses for CAS, visit the [link](#) .



**TLC Programmes adhere to the MoE and UGC Four Quadrant Approach**

# **ABOUT JSS SCIENCE AND TECHNOLOGY UNIVERSITY**

JSS STU is a renowned private university in Mysuru administered by JSS Mahavidyapeetha, which is passionately committed for providing education in Science, Technology, Engineering, Management & Humanities. This university is built upon a strong reputation of Sri Jayachamarajendra College of Engineering (SJCE), which is one among the premier institutions in India, established in 1963, with a sprawling 102 acres campus equipped with state-of-the-art facilities, JSS Science and Technology University envisions to create a world class learning environment and a desired student centric eco-system and transform into a futuristic global university. It offers various undergraduate, postgraduate, and Ph.D. programs with multiple specializations under every discipline. The University is accredited by the All India Council for Technical Education (AICTE) and UGC.

## **ABOUT SRI JAYACHAMARAJENDRA COLLEGE OF ENGINEERING**

Sri Jayachamarajendra College of Engineering (SJCE), conceived in 1963, is the dream child of Jagadguru Dr. Sri Shivarathri Rajendra Mahaswamigalavaru, the 23rd pontiff of Sri Suttur Mutt. It comes under the aegis of JSSMVP. As one of the leading institutes in India, SJCE has been recognized under the TEQIP and also accredited by National Board of Accreditation (NBA). The Institution also has the reputation of academic, excellence in professionally oriented programs and equal proficiency in extracurricular activities, which makes it a lucrative option for students from all over the country. SJCE has entered the 60th year of its inception. To celebrate its 60th anniversary, the SJCE, Mysuru is celebrating Diamond Jubilee with year-long celebrations from June 2022 to June 2023.

## **ABOUT DEPARTMENT OF MATHEMATICS**

The Department of Mathematics of JSS Science and Technology University, Mysuru has established in the year 1963 in Sri Jayachamarajendra College of Engineering, Mysuru. The department initially catered to the needs of the UG and PG Engineering Mathematics and subsequently, in 2019-20, introduced the PG programme in Mathematics, namely, the M.Sc.(Mathematics). The department of Mathematics has 12 distinguished and committed faculty members with research interests in diverse areas of Mathematics. Seven faculties are with Ph.D. degree. Our faculty members are actively engaged in diverse fields of mathematical research in pure and applied, namely, Number Theory, Complex Analysis-Univalent function theory, Discrete Mathematics, Algebraic Graph Theory, Differential Geometry and Real Functions. Faculty together possess more than 200 publications in diverse international and national Scopus/Web of science indexed journals. The senior faculty are serving as reviewers and editorial board members in several prestigious national & international journals. Many faculties have collaboration with other reputed institute faculties in India and abroad.

# **ABOUT THE REFRESHER COURSE**

**This two week Online Refresher Course on Applicable Mathematics will focus on the mathematical techniques which has its applications in diverse fields such as engineering, medicine, biology, physics, finance, computer science, business, and industry.**

**Applicable mathematics is primarily a combination of mathematical science and specialized knowledge. The term “Applicable Mathematics” specifically describes the professional practice in which mathematicians work on real-world problems by formulating and studying mathematical models. Over the past decades, practical applications have inspired the expansion of mathematical theories, which then became the topic of study in pure mathematics where abstract concepts are studied for their own sake. The task of Applicable Mathematics is thus intimately connected with research in pure mathematics. Applicable mathematics comprised principally of applied analysis, most notably differential equations; approximation theory, and numerical analysis, and applied probability theory. Presently, the term “Applicable Mathematics” is utilized in a wider sense including the typical areas mentioned above as well as other areas that have become increasingly important in applications. Even fields such as number theory that are part of pure mathematics are now important in applications (such as cryptography), though they are not generally considered to be part of the field of Applicable Mathematics as such.**

**This programme will cover the basic concepts of the Applicable Mathematics together with a wide variety of applications, both to other branches of mathematics and to real-world problems. The main aim of this programme is to bring together the faculty members and researchers in the field of Applicable Mathematics. With this Refresher Course to be held in an Online Mode, we hope to stimulate research and foster new exciting interdisciplinary collaborations between researchers with different background and expertise in Applicable Mathematics.**

## **ELIGIBILITY**

**The Refresher Course is open to Faculty members (regular/ad-hoc/temporary/Contractual/Guests) from any University/College, registered M.Phil./Ph. D. research scholars and interested Post Graduate Students in the disciplines of Mathematics, Statistics, Computer Science, Physical Sciences and its allied fields.**

# REGISTRATION PROCESS

- **Registration Fee : INR 1450/- (Non-Refundable)**
- **Last Date for Registration : 26 July 2022**
- **All those who meet the eligibility criterion are required to register and pay registration fee of INR 1450/- by visiting [rcmoocs.in](http://rcmoocs.in)**
- **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

- **The Refresher Course begins on 26th July 2022. The detailed day-wise Programme schedule will be communicated only to the registered participants before the start of Refresher Course.**
- **The sessions on various themes of the Refresher Course will be conducted either live or through pre-recorded videos via. Ramanujan College Web portal.**
- **As this Refresher Course is being organized under the prestigious PMMMNTT scheme of the Ministry of Education, we at TLC, Ramanujan College, give prime importance to willing and serious participants who are eager to learn.**
- **Attempting and submitting all the quizzes and assignments are mandatory to avail of the programme completion certificate. The average score of all the quizzes must be at least 40%. Graded certificates on the basis of performance will be awarded to the participants.**
- **As a part of the Ministry of Education's requirement under the PMMMNTT scheme, all participants need to submit online feedback for each session.**
- **Failing to meet any of the above conditions will result in denial of a certificate of completion to the participants.**

**No Objection Certificate (NOC) or Leave is NOT REQUIRED  
to participate in the Programme**

**Note : The participants who want relieving letter from Ramanujan College after successfully attending the course need to take leave from their college and submit an NOC. Link for submission of NOC will be shared during the programme.**

**For further queries, please mail us at:  
[mathrefresher@ramanujan.du.ac.in](mailto:mathrefresher@ramanujan.du.ac.in)**

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