



TEACHING LEARNING CENTRE

Ramanujan College
(Accredited Grade 'A' by NAAC)
University of Delhi

in collaboration with

K.L.E. Society's

S.K. ARTS COLLEGE & H.S.K. SCIENCE INSTITUTE
Vidyanagar, Hubballi, Karnataka

under the aegis of

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

is organising an

ONLINE TWO-WEEK REFRESHER COURSE IN

PHYSICS

10 - 24 April 2022

**CALL FOR REGISTRATION
AND PARTICIPATION**

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 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 (PMMMNTT) 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 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
- 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

KLE SOCIETY

Karnatak Lingayat Education Society, Belagavi was established in 1916, by seven dedicated and highly educated eternal visionary founders.

The seed of education sown by these visionaries has grown into Asia's best consortium with many traditional and professional institutions under the unique leadership and unflinching determination of Dr. Prabhakar B. Kore, Chairman, KLE Society, Belagavi. The Society has collaborations with many reputed foreign universities. Over the years, the Society has grown into a virtual knowledge movement and presently encompasses as many as 282 institutions, 18,000 employees, 1,38,000 students and KLE Health University and KLE Technology University.

Each of the institutions, like the honey bee, siphons knowledge from far and wide and converts it into redefined educational curricula that benefits the knowledge seekers. The pinnacle success of KLE Society is due to the cumulative efforts and selfless strivings of many dedicated personalities.

S.K. ARTS COLLEGE & H.S.K. SCIENCE INSTITUTE

K.L.E. Society's Shri Kadasiddheshwar Arts College and H. S. Kotambri Science Institute is the premier institute, situated at the heart of Hubballi city of North Karnataka. Since inception its prime focus is to provide an ideal ambience to stimulate the teaching-learning process, helping in bringing out skilled and disciplined students. The students support systems like NSS, NCC, YRC, ICC and Women Empowerment Cell cater to the overall holistic development of the students.

College is accredited by NAAC with 'A' Grade for 3 consecutive Cycles and is striding towards 4th Cycle with focus on quality sustenance. The College has the credit of being a participating institute of UBA 2.0.

Proud Alumni Shri. Pralhad Joshi, Union Minister of Coal. Late Shri. Ananthkumar, Former Union Minister of Chemicals and Fertilizers. Shri. Shankar Patil Munenakoppa, Minister of Textiles and Sugarcane, Shri. Basavaraj S. Horatti, Chairman, Karnataka Legislative Council, Dr. C.V. Yelamaggad, FRSC, Young Scientist Awardee, selected for CRSI Bronze Medal 2021 and many other eminent personalities serving in IAS, IRS, KAS cadre have left an indelible foot print.

Institution Participation

- Unnat Bharat Abhiyan, MHRD, Govt. of India
- SWAYAM – NPTEL Local Chapter
- Spoken Tutorial – IIT Bombay, MHRD, Govt. of India
- Institution's Innovation Council, MHRD
- Energy Swaraj Foundation, IIT Bombay
- Nodal Centre – Virtual Lab Under NITK, Suratkal



CONCEPT NOTE

Physics is a core field of research with enormous applications in basic and applied sciences. Concepts of physics are dispersed from the heart of atoms' nuclei to giants of the celestial world. The understanding of fundamentals of various potential fields of physics and critical analysis of concurrent research has a pivotal role for individuals working in the area of physics for lab-to-industry implementations. The study of different fields of theoretical and experimental physics assists in the development of the scientific temper for conducting outstanding research work that may significantly contribute to developing new concepts, technologies and for enhancing the existing ideas. Such concurrent knowledge also helps in developing innovative teaching pedagogy.

This refresher course has been designed to address the needs of theory, experimentations, and industrial applications. The proposed training program would help researchers, faculties in formulating appropriate strategies to face the upcoming challenges.

THEMES

- **Liquid Crystals**
- **Space Physics**
- **Plasma Physics**
- **Nanomaterials**
- **Atmospheric and Space Sciences**
- **Quantum Physics**
- **Thin Films**
- **Solar Cells, Solar Photo thermal and Photovoltaic devices**
- **Spectroscopy**
- **Fluorescence spectroscopy**
- **Molecular Spectroscopy**
- **Fiber Optics**
- **Applications in Medical Physics**
- **Nuclear and Particle Physics**
- **Condensed Matter Physics/Materials Science**
- **Superconductors**
- **Mathematical Physics- Theoretical studies and Simulation techniques**

REGISTRATION PROCESS & PAYMENT DETAILS

ELIGIBILITY

Faculty members (regular/adhoc/temporary) and research scholars from Physics and allied disciplines 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 1450/- by visiting**

rcmoocs.in

REGISTRATION DEADLINE: 09 April 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 are mandatory, and each participant should score a **minimum of 50% in total** to avail of the programme 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.
- 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**
- **The Course is beneficial for the Career Advancement Scheme (CAS)**

For further information, write to us at:

physics@ramanujan.du.ac.in

or contact us through WhatsApp:

+91 - 7011863335

+91 - 7011527088

ORGANISING BOARD OF THE PROGRAMME

PATRONS

Prof. S.P. Aggarwal
Principal and Director, TLC
Ramanujan College

Dr. Nerle Umadevi V
Principal, KLE Society's SK Arts College,
& HSK Science Institute, Hubballi

PROGRAMME DIRECTOR

Dr. Nikhil Kumar Rajput
Ramanujan College

CONVENOR

Mr. Vipin Kumar Rathi
Ramanujan College

PROGRAMME COORDINATORS

Dr. Ashish Shukla
Ramanujan College

Ms. Jayashree Biradar
Principal, KLE Society's SK Arts College,
& HSK Science Institute, Hubballi

ORGANISING TEAM

Dr. Sachin Tomer
Ramanujan College

Ms. Shipra Yadav
Ramanujan College