



TEACHING LEARNING CENTRE

Ramanujan College

(Accredited Grade 'A' by NAAC)

University of Delhi

in collaboration with

DEPARTMENT OF CHEMISTRY

Rajdhani College

University of Delhi

under the aegis of

MINISTRY OF EDUCATION

PANDIT MADAN MOHAN MALAVIYA NATIONAL
MISSION ON TEACHERS AND TEACHING

is organising an

ONLINE TWO-WEEK REFRESHER COURSE IN

NATURAL SCIENCES

20 September – 04 October 2021



**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

RAJDHANI COLLEGE

Rajdhani College, a constituent College of the University of Delhi, is a premier institution with highly qualified academicians imparting education in different fields. Established in 1964 by the Delhi Administration in Kirti Nagar, New Delhi under the name of Government College, this was renamed as Rajdhani College when the Delhi administration vested its governance in an autonomous Governing Body. A beautiful and spacious college building was constructed in 1976-77 which was inaugurated by the then President of India, Sh. Fakhruddin Ali Ahmed.

The College is situated in West Delhi on Mahatma Gandhi Marg (Ring Road) near Raja Garden, New Delhi and is accessible from all corners of Delhi. Its strategic location makes the college much sought apart from its academic excellence.

Over the years, the college has carved a niche for itself, and is known to be one of the leading colleges of University. The College today enjoys a reputation for outstanding performance not only in academics but also in sports and extra-curricular activities. We are committed to provide an enabling environment in which holistic growth of every student is possible.

The College has completed 57 years in the realm of imparting higher education, and has made significant contribution towards society by producing numerous intellectuals, scholars, journalists, singers, civil servants, and sports persons who served different provinces not only in our own country but even at international levels.



DEPARTMENT OF CHEMISTRY

The Department of Chemistry, Rajdhani College was established in 1966. It has twenty-four highly qualified eminent faculty members. In addition, the Department is supported by a dedicated and hard-working team of non-teaching staff members. The Department is committed to focus on learning and adapting new methodologies to achieve productive outcomes. The teaching faculty is well-trained with innovative ways of teaching in offline as well as online mode. The Department has three well-equipped and ventilated labs with all the necessary equipment, along with an instrumentation laboratory.

Facility of a modern computer laboratory is also available to the Department. Along with teaching, faculty members are also actively involved in research, and have presented papers and posters at various national and international conferences across the country. In recent times, Department has organized various national and international conferences, workshops, seminar in an online mode that has been attended by faculty members, research scholars and students from different parts of the country. The Rajdhani College Chemistry Department have excelled in academics, both at national and international levels. The Department frequently organises the alumni meet, and is well-connected with their alumni.



CONCEPT NOTE

Astronomy, Biology, Chemical Sciences, Earth Science, and Physics are some important fields that are in constant development, and continuous progress and research in these subjects have great importance for societal development as well for the environment. The recent developments in various disciplines of natural sciences have given new perspectives or solutions to many environmental problems. In recent years, it has been applied to medicine and healthcare for the development of nanodevices to monitor and treat lethal diseases. Promising results have also been obtained in agricultural

sectors by implementing various nanotechnological products that have enhanced crop productivity and quality, and hence, catering the needs of growing population across the world. Remarkable achievements have been obtained in detecting and cleaning environmental harmful wastes, offering energy-efficient products at the same time. Advancements in food industry, medicine and healthcare, engineering and technology, space industries, pharmaceuticals, all stem from the study of the natural sciences.

Through this refresher course, faculty members and research scientists from various institutes will be able to enhance their knowledge on the most recent developments in the field of natural sciences. Through a series of lectures that has been designed in various domains of natural sciences, a relevant and innovative skill-based learning material is expected to be obtained. The objective of this course is to enable participants to have an understanding about how the universe behaves, examining the ways in which humans affect and utilize the environment, finding new ways to protect our planet and preserve biological diversity, preparing for natural disasters, pest-management, and how they can contribute to sustainable development. It will also help faculty members to integrate the learnings of this subject into the other main subject areas.

THEMATICS

- **Climatology**
- **Cosmology**
- **Disaster Preparedness**
- **Environmental Science**
- **Food Science**
- **Geospatial Technology**
- **Nanotechnology**
- **Pest-Management**

RESOURCE PERSONS



PROF. BHAGWAN SINGH

Kurukshetra University



PROF. S.K. DHAKA

Rajdhani College, University of Delhi



PROF. JITENDER M KHURANA

Professor (Former), Department of Chemistry
University of Delhi



PROF. LIAQAT ALI KHAN RAO

Aligarh Muslim University



DR. ANIL KUMAR MISHRA

Director, Institute of Nuclear
Medicine & Allied Sciences, DRDO



DR. HIMANSHU OJHA

Senior Scientist, Institute of Nuclear
Medicine and Allied Sciences, DRDO

RESOURCE PERSONS



DR. SUMIT KUMAR MISHRA

Principal Scientist
CSIR-NPL



DR. ARUN SHRIVASTAVA JHA

Associate Professor
Jawaharlal Nehru University



DR. VINOD KUMAR

Associate Professor
Jawaharlal Nehru University



DR. JAGBIR SINGH

Associate Professor, SSN College
University of Delhi



DR. K. K. SHARMA

Network Coordinator
ICAR-Indian Agricultural Research Institute



DR. SHAKEB AHMAD

Associate Professor
Aligarh Muslim University



DR. NEERAJ PATANJALI

Scientist, Division of Agricultural Chemicals
Indian Agricultural Research Institute



DR. MUKESH KHANDELWAL

Associate Professor
Jawaharlal Nehru University

REGISTRATION PROCESS & PAYMENT DETAILS

ELIGIBILITY

Faculty members (regular/adhoc/temporary) from Physics, Chemistry, Botany, Zoology, Earth Science, Environmental science, Astronomy and allied disciplines are eligible to apply.

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: 19 September 2021

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 Refresher Course is beneficial for the Career Advancement Scheme (CAS)**

For further information, write to us at:
nsciences@ramanujan.du.ac.in

ORGANISING BOARD OF THE REFRESHER COURSE

DIRECTOR (Teaching Learning Centre, Ramanujan College)

Prof. S.P. Aggarwal

Principal, Ramanujan College, University of Delhi

PATRON

Prof. Rajesh Giri

Principal, Rajdhani College, University of Delhi

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