

REFRESHER COURSE IN MATHEMATICAL SCIENCES

1-14 SEPTEMBER 2023

FOUNDATION COURSE IN VEDIC MATHEMATICS

OPEN FOR

MATHEMATICS

COMPUTER
SCIENCE

STATISTICS

OPERATIONAL
RESEARCH

PHYSICS

CHEMISTRY

ALL OTHER

Under the aegis of

PANDIT MADAN MOHAN MALAVIYA NATIONAL
MISSION ON TEACHERS AND TEACHING
Ministry of Education

SELF PACED

NO NOC
REQUIRED

BENEFICIAL
FOR CAS

E-
CERTIFICATION

DAILY
WORKSHEETS



सत्यमेव जयते
Ministry of Education
Government of India

TRAINER

Memory King
Calculator King

Dr. Himmat Bhardwaj

29 World Records &
6 National Records Holder

FOR CAPACITY BUILDING OF
TEACHERS TOWARDS
NEP-2020 BASED
VALUE ADDITION COURSES

LAST DATE
TO REGISTER
1 SEPT 2023

REGISTER NOW @

www.rcmoocs.in

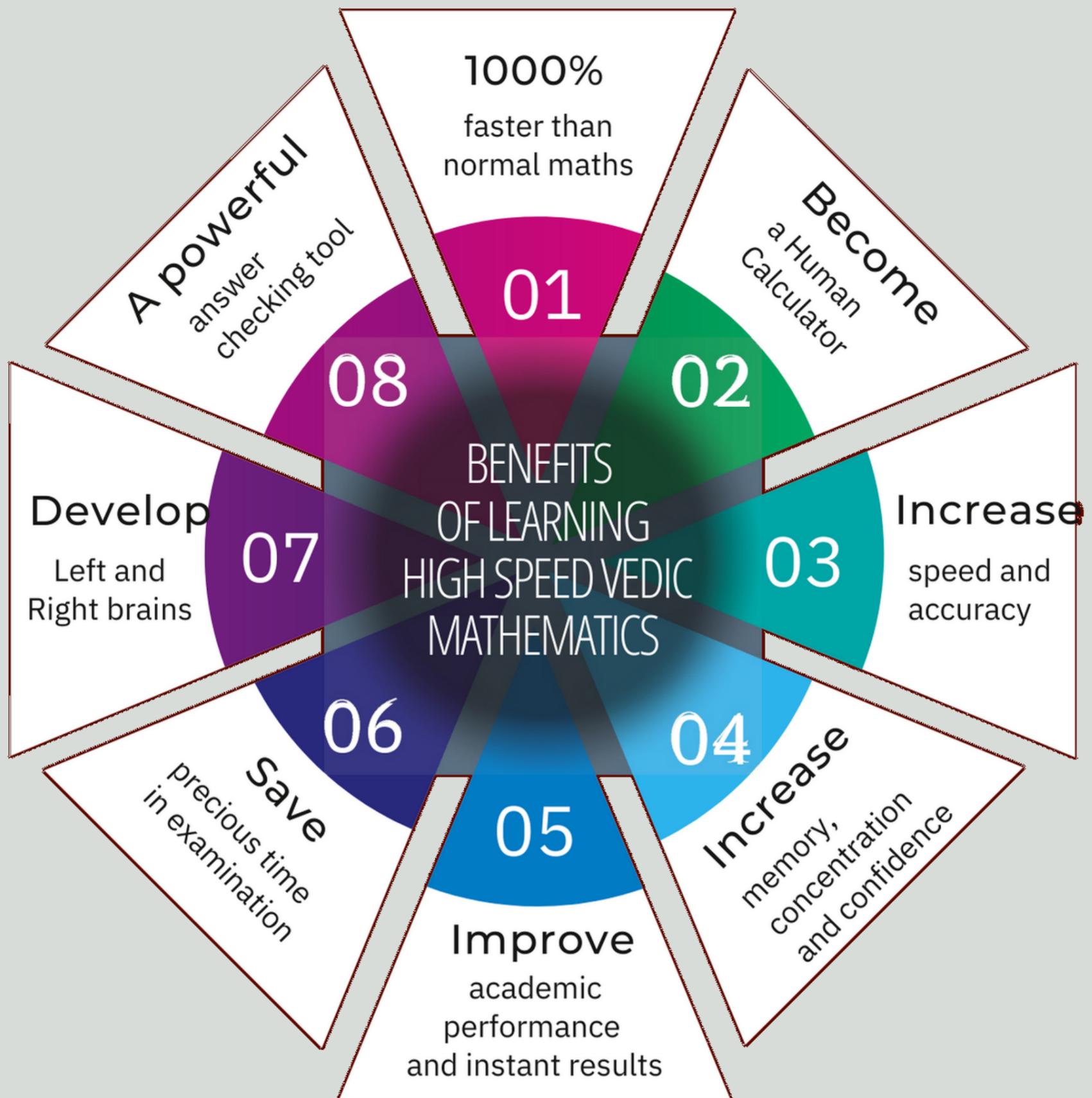


LEARNING HIGH SPEED VEDIC MATHEMATICS WILL ENABLE YOU TO CALCULATE MUCH FASTER COMPARED TO THE CONVENTIONAL SYSTEM.



WORLD'S FASTEST CALCULATION TECHNIQUES

BENEFITS OF THE COURSE



ABOUT THE TRAINER

Dr. Himmat Bhardwaj (29 World Records & 6 National Records Holder)

A dynamic memory trainer, inventor, and expert motivator, inspirational coach, counselor, Vedic maths expert, and leader for every age group and has won the hearts of millions of people through outstanding presentation, mesmerizing public speaking, and record-breaking skills.

Recent Projects

- Founder of PRS Bhartiya Vidya Mandir School that not only teaches the basic subjects but also help students develop sharp memory, learn Vedic maths concepts and improve their general knowledge from the primary level.
- Faculty at Indian Skill Academy
- Founder and Chief Editor of Pratihtha Books of World Records: PWR provides talented people a platform to showcase their talents. It recognizes people for their hard work and skills and guides them to achieve extraordinary success.
- Founder of Adbhut Brain: It is an online platform with various courses and webinars on Vedic maths, memory mastery, studies mastery, etc.,

Achievements in Brief

- 29 world records and 6 national records holder in the memory and calculations field.
- The one and only person on the earth who recollected all the 118 elements of the periodic table in just 21.62 seconds on November 23, 2016.
- Only person on the earth who calculated the cubes of all the numbers from 1 to 100 within 1 minute 48 seconds 84 nanoseconds without using pen, paper, or any other aid.
- Set a world record in calculation by calculating square roots of 10 randomly selected numbers up to 10 decimal places, within 54.50 seconds in India Book of Records Office, on February 11, 2013.
- Broke Limca Book of Records by calculating the powers of 2(30 times) in 32 seconds. Also, broke the records by calculating the powers of 3 (20times) in 33.97 seconds.
- Popularly known as a Human Calendar for Unlimited Years and can tell the day of the week of any date of any year from 0001 to infinity within a few seconds.
- The only one who has ever attempted and created five world records on a single day, i.e., on September 19, 2014, at Government P. G. College, Nahar, Rewari, Haryana, in the presence of a distinguished audience that included prominent personalities, bureaucrats, media and the public.

MODULES

- **Introduction of Vedic Mathematics**
- **Base & Complements**
- **Instant/Mental Subtraction**
- **General Subtractions**
- **Magic with 11**
- **Multiplication by 11 - 19**
- **General/Random Multiplication**
- **Multiplication with 99999 in less than 04 seconds (Type 1, 2 & 3)**
- **Multiplication of any number by 111**
- **Multiplication of Numbers near Bases (Type 1, 2 & 3)**
- **General Squares/ Finding Squares in One Line**
- **Interesting Mental Squares 11 - 20; 50 -60; 40 - 50; 60 -70**
- **Magical Calendar and its concept**
- **Faster Addition, Mental Addition**
- **Cubing below and above the base**
- **General Cubes (2 bases)**
- **Square roots at a glance**
- **Tables upto 100**
- **Magic Divisions**
- **Digital Root**
- **Cube Root**
- **100 years calendar**
- **200 years calendar**

Mode of Content Delivery :

ENGLISH + HINDI

Duration of High Speed
Vedic Mathematics 30-60
minutes per lecture

ABOUT THE REFRESHER COURSE

Vedic Mathematics is a system of mathematics that originated in ancient India, and it's based on the ancient texts known as the Vedas. This system offers a unique and alternative approach to solving mathematical problems, emphasizing mental calculations, simplicity, and speed. It covers various mathematical operations, including addition, subtraction, multiplication, division, square roots, cube roots, and more.

This Refresher Course on Vedic Mathematics can be a great way to introduce people to this ancient mathematical system and help them enhance their mental calculation abilities. The Course will be conducted by a renowned memory trainer and vedic mathematics expert Dr. Himmat Bhardwaj. The target audience for this course include students, teachers, and anyone interested in improving their mathematical skills.

The course will start with an overview of the history and origins of Vedic Mathematics, explaining its connection to the ancient Indian scriptures, the Vedas. Participants will be introduced to various Vedic Sutras (aphorisms) and techniques, which are short, elegant, and efficient methods for solving mathematical problems. Examples of these Sutras are "Vertically and Crosswise" and "All from 9 and the last from 10." The focus of the course will be on improving mental calculation abilities. Participants will learn how to perform calculations quickly without the need for pen and paper. Participants will be given hands-on exercises to practice the techniques they have learned, allowing them to gain confidence and proficiency in applying Vedic Mathematics. The facilitator will discuss the benefits of learning Vedic Mathematics, such as improved mathematical abilities, increased speed, and reduced calculation errors. A dedicated day wise discussion forum will be created which will allow participants to discuss their opinion, doubts or queries they may have.

Overall, Vedic Mathematics workshops provide a unique opportunity for individuals to explore an ancient mathematical system, develop mental math skills, and gain a deeper appreciation for the rich mathematical heritage of India.

ELIGIBILITY

The Refresher Course is open to Faculty members (regular/ adhoc/ temporary/ Contractual/ Guests) from any University/ College, registered M.Phil./ Ph.D. research scholars, students and anyone interested in improving their mathematical skills.

REGISTRATION PROCESS

- Registration Fee : INR 1450/- (Non-Refundable)
- Last Date for Registration : 1 September 2023
- All those who meet the eligibility criterion are required to register and pay registration fee of INR 1450/- by visiting 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 1st September 2023. 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 PMMMNMTT 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 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**

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.

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 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.

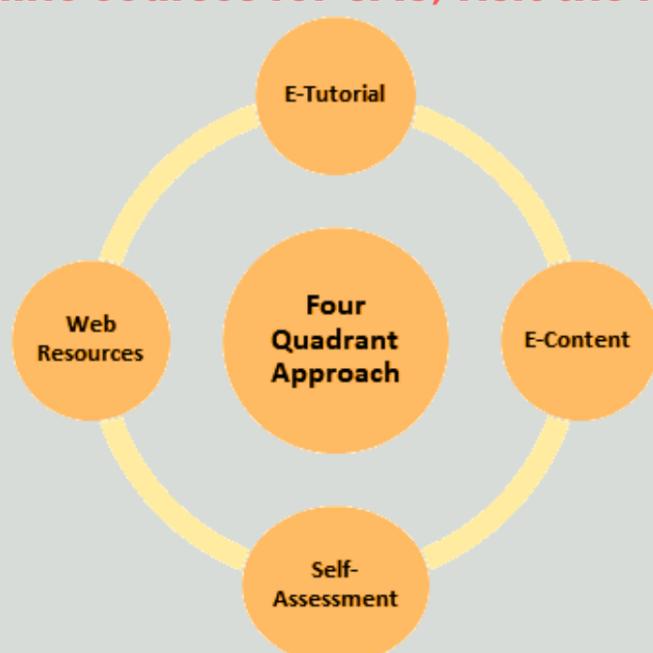
In the TLC Programmes distinguished and internationally acclaimed resource persons deliver lectures and conduct sessions on wide ranging disciplines/topics of relevance in the contemporary and ever evolving global scenario to benefit the teaching fraternity, corporates and researchers. The sessions are 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 <https://bit.ly/3NCKEkb>.



TLC Programmes adhere to the MoE and UGC Four Quadrant Approach

ABOUT DEPARTMENT OF MATHEMATICS RAMANUJAN COLLEGE

The Department of Mathematics, Ramanujan College is well known for its dedication towards excellence in teaching and research. Named after the great Indian Mathematician Srinivasa Ramanujan, the Department upholds his spirit of Mathematical Excellence and Innovation.

The department offers undergraduate programme in Mathematics, providing students with a comprehensive understanding of various branches of mathematics, including algebra, analysis, geometry, number theory, and statistics.

The faculty members of the Department of Mathematics at Ramanujan College are highly qualified and experienced professionals who are committed to imparting quality education and nurturing the intellectual growth of their students. They are actively engaged in research activities, contributing to the advancement of mathematical knowledge and its applications.

The department encourages a vibrant academic environment, fostering collaboration, discussion, and critical thinking among students. It organizes seminars, workshops, and guest lectures by renowned mathematicians and researchers to expose students to cutting-edge developments in the field of mathematics.

Apart from the regular academic programs, the department actively engages in community outreach initiatives, promoting the importance of mathematics and its relevance in everyday life. It encourages students to participate in mathematical competitions, conferences, and research projects to enhance their skills and broaden their horizons.

The Department of Mathematics, Ramanujan College is equipped with modern facilities, including well-equipped classrooms, a dedicated library, and computer laboratories with specialized mathematical software. These resources enable students to apply theoretical concepts to practical problem-solving scenarios and explore mathematical concepts through computational methods.

Overall, the Department of Mathematics provides a stimulating learning environment for students interested in pursuing a career in mathematics. It nurtures their passion for the subject and equips them with the necessary skills and knowledge to excel in academia, research, and various professional fields where mathematics plays a vital role.

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.

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 13 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 DEPARTMENT OF COMPUTER APPLICATIONS

The Department of Computer Applications has been established to design and offer courses in MCA and BCA with the objective of producing the best computer professionals to keep swiftness with the R&D activities in this fast-emerging field of Computer Applications. Since its inception in 1986, the department strives to meet the computing needs of different sectors and offer specially designed courses to its students. The department consistently updates the curriculum as per the changing requirements of the industry by considering suggestions from a qualified board of studies committee involving efficient members from the field of industry, research, and academia. The department has witnessed around 70 percent placements in reputed companies and has also seen students opting for promoting start-ups and higher studies. The department is always getting constant encouragement and support for uplifting the quality of education from the management with the divine blessings of His Holiness Swamiji.

ORGANIZING BOARD FROM RAMANUJAN COLLEGE

PATRONS

PROF. S. P. AGGARWAL
PRINCIPAL & DIRECTOR TLC
RAMANUJAN COLLEGE

CONVENOR

DR. RAJESH SINGH
DEPARTMENT OF MATHEMATICS
RAMANUJAN COLLEGE

CO-CONVENOR

DR. VIRENDRA TRIPATHI
DEPARTMENT OF MATHEMATICS
RAMANUJAN COLLEGE

TECHNICAL TEAM

DR. NIKHIL RAJPUT
DEPT. OF COMPUTER SCIENCE
RAMANUJAN COLLEGE

MR. VIPIN RATHI
DEPT. OF COMPUTER SCIENCE
RAMANUJAN COLLEGE

DR. ASHISH SHUKLA
DEPT. OF STATISTICS
RAMANUJAN COLLEGE

Ramanujan College

(Accredited Grade 'A' by NAAC)

University of Delhi

H Block, Kalkaji, New Delhi - 110019

Website: <http://www.ramanujancollege.ac.in>,
<https://rcmoocs.in/>

ORGANIZING BOARD FROM JSS SCIENCE AND TECHNOLOGY UNIVERSITY

Chief Patrons

**His Holiness Jagadguru
Sri Shivarathri Deshikendra Mahaswamigalavaru**

Patrons

**Dr. C.G. Betsurmath, Executive Secretary, JSS MVP, Mysuru
Sri. S.P. Manjunath, Secretary-I, JSS MVP, Mysuru
Prof. M.H. Dhananjaya, Advisor, TED, JSS MVP, Mysuru
Dr. B. Suresh, Pro.Chancellor, JSS AHER & Director, TED, JSS MVP
Dr. A.N. Santhosh Kumar, Vice Chancellor, JSS STU, Mysuru
Prof. Dr. S.A. Dhanaraj, Registrar, JSS STU, Mysuru**

Advisory Committee

**Dr. C. Nataraju, Principal & Dean (E & T), SJCE, JSS STU
Dr. Manoj Kumar, Dean (Academics), JSS STU
Dr. P. Mallu, Dean (Science), JSS STU
Dr. B. Nagesh, Dean (Management), JSS STU
Dr. N. Haraprasad, Dean (QAA), JSS STU
Dr. B. S. Harish, Deputy Registrar, JSS STU, Mysuru**

Convenors

**Dr. P. S. K. Reddy, Professor & Head
Dept. of Mathematics
JSS STU, Mysuru**

**Dr. V. N. Manjunath Aradhya
Professor, Dept. of Computer Applications
JSS STU, Mysuru**

Co-Convenors

**Dr. Madhu Chennabasappa, Dept. of Physics, JSS STU, Mysuru
Prof. Tejaswi. K, Dept. of Computer Applications, JSS STU, Mysuru
Prof. B. J. Manjunatha, Dept. of Mathematics, JSS STU, Mysuru**

Organizing Team

**Dr. R. K. Bharthi, Dept. of Computer Applications, JSS STU, Mysuru
Dr. Siddesha.S, Dept. of Computer Applications, JSS STU, Mysuru
Dr. Veerasha R. G., Dept. of Mathematics, JSS STU, Mysuru
Dr. B. Prashanth, Dept. of Mathematics, JSS STU, Mysuru
Dr. Saritha G. P., Dept. of Mathematics, JSS STU, Mysuru
Prof. Akshay H. K., Dept. of Mathematics, JSS STU, Mysuru
Prof. Mohan N., Dept. of Physics, JSS STU, Mysuru**