



K.R. MANGALAM UNIVERSITY

THE COMPLETE WORLD OF EDUCATION
(Recognized by UGC and a member of AIU)

SCHOOL OF BASIC AND APPLIED SCIENCES (SBAS)

PROGRAMS OFFERED

- **Bachelor of Science**
(Physics, Chemistry and Mathematics)
- **Master of Science**
(Physics, Chemistry and Mathematics)
- **Doctorate of Philosophy**



ABOUT | K.R. MANGALAM UNIVERSITY

“Empowering the Youth, Empowering the Nation”

K.R. Mangalam University is fast emerging as one of the top private universities in India. KRMU’s lush green campus, world class infrastructure and innovative and inclusive learning environment provide a unique value proposition in the Indian higher education space.

Our goal at KRMU is to create a safe ecosystem where students’ lives can be transformed through knowledge generation and sharing, entrepreneurship and creativity. Our qualified and experienced faculties from some of the best institutions in the world can help students achieve their full potential and become professionally and socially responsible individuals.

Students at KRMU are exposed to wide variety of academic disciplines and have opportunities to take their classroom knowledge into the real world through various activities like industry visit, internships, guest lectures, workshops, social services, and medical camps. Smart Ashram, Engineering Kitchen, Nucleus, E-Yantra Robotics Lab in collaboration with IIT Bombay are few of the many initiatives that allow students to work on live projects.

KRMU is a technologically advanced university and we have launched a pioneering, technology-based, Hybrid Educational Platform, which can robustly enable online and distance education. Our teams continue working together remotely, within the online space, and we are here to support all queries regarding our university and admissions as always. K.R. Mangalam University is fully prepared to serve the needs of our students with vigour, inspiration, and practical knowledge.



MESSAGE

FROM THE DEAN



DR. MEENA BHANDARI

Ph. D., M. Phil., M. Sc. (Organic Chemistry)

School of Basic and Applied Sciences (SBAS) started its journey in 2013. The School comprises of Department of Chemistry, Department of Physics and Department of Mathematics which offers undergraduate, postgraduate and Ph.D. program in these three disciplines. Curriculum is designed as per UGC guidelines and is also aligned with NET, GATE, JAM and other competitive examinations. Highly experienced and qualified faculties help students to achieve their goals by promoting creative and analytical thinking through project-based learning approach. Students are offered plethora of opportunities to nurture their skills and talents through participation in various societies and clubs. Post graduate students in Physics and Mathematics may be recommended for admission in Ph.D. Program to University of Houston, USA. We promote scientific fervor in students by organizing several workshops, debates/declamations, guest lectures and visits to research organizations/labs. Our students go to prestigious organizations for higher studies such as IIT Delhi, Saarlandes University, Germany etc.

KRMU EDGE

- ▶ Beautiful, lush green campus located on Sohna Road, Gurugram
- ▶ Outcome based education system
- ▶ Inter-disciplinary project based learning
- ▶ Broad range of minor options along with major fields of study – from Physiotherapy to Photography
- ▶ Tinkering lab for fueling innovation
- ▶ Qualified faculty members with international experience
- ▶ Internship and placement opportunities at leading industries and corporates
- ▶ International exposure through summer school programs and semester programs
- ▶ Industry-Institute integration through projects, industrial visits, masterclass etc.
- ▶ Scholarships on merit, means and sports excellence up to 100%
- ▶ Vibrant campus life with state-of-the-art sports, gym, hostel and other facilities
- ▶ State-of-the-art lecture theatres, laboratories and studios
- ▶ Highly subsidized transport facility from most of the places in Delhi NCR
- ▶ Mandatory ‘community service’ to provide real-world experience and instill important habits like leadership, problem-solving, and time-management
- ▶ Mangalam Achiever Score (MAS) for holistic growth of students
- ▶ Courses offered in collaboration with leading industries like IBM, Dabur, Siemens etc. in co-designed, co-delivered and co-certified mode

WHY STUDY AT SBAS?

Studying at the School of Basic & Applied Sciences is not just about acquiring a conventional degree. but, the programs are specially designed to coach & train the students in the emerging fields of physics, chemistry, & mathematics. Academics at SBAS is beyond classroom teaching. We focus on enabling students to work in laboratories, aspire to do continuous innovations & enhance their skills to prepare them for a career-oriented future.

- ▶ Hands-on practical experience
- ▶ Career-oriented curriculum
- ▶ Inter-disciplinary courses
- ▶ Lab based exercises

CAREER AVENUES:

Opportunities for the School of Basic and Applied Science students are in the field of Physics, Chemistry and Mathematics where students can apply in different sectors like teaching, research and development, and scientific process industries etc. Skills learnt at post-graduation level bridge the gap between pure sciences and engineering fields. Students pursuing M.Sc. in Physics and M.Sc. in Mathematics may get an opportunity to pursue Ph.D. in Houston University.

INTERNSHIP & PLACEMENT

Industry & International Collaborations

The School of Basic & Applied Sciences provides all the top-notch resources to the students for their academic progression. Internship and placement opportunities are accessible to them in research organizations, industries and educational establishments. We prepare them to appear in IIT-JAM, civil services & other government level examinations. We are in collaboration with Middlesex University & Houston University.

COURSE STRUCTURE

The curriculum is designed to teach students professional management skills in order to meet the demand for leadership of highly technical professionals in the workplace and also provide the students with skills for employment and positive work values needed to meet the demands of the changing the world.

B.SC. (HONS.) PHYSICS

Semester – I

Communication Skill
Disaster Management
Environmental Studies
Analog System and Applications
Analog System and Applications Lab
Physics Workshop Skill
Online Course – I (IIT Bombay spoken tutorial:
Introduction to computer)

Semester – III

Mathematical Physics - II
Thermal Physics
Digital System and Applications
Mathematical Physics - II Lab
Thermal Physics Lab
Digital System and Applications Lab

Semester – V

Quantum Mechanics and Applications
Solid State Physics
Basic Instrument Skills
Classical Dynamics
Nuclear and Particle Physics
Quantum Mechanics and Applications Lab
Solid State Physics Lab

M. SC. PHYSICS

Semester – I

Mathematical Methods of Physics - I
Electronic-I
Classical Mechanics-I
Nuclear and Particle Physics
Advanced MATLAB Programming
Electronic-I Lab
Advanced MATLAB Programming Lab

Semester – II

Mathematical Physics - I
Electricity and Magnetism
Mechanics
Electrical Circuit and Network Skills
Mathematical Physics – I Lab
Electricity and Magnetism Lab
Mechanics Lab

Semester - IV

Mathematical Physics - III
Elements of Modern Physics
Wave and Optics
Mathematical Physics – III Lab
Elements of Modern Physics Lab
Wave and Optics Lab

Semester - VI

Electromagnetic Theory
Statistical Mechanics
Applied Optics
Physics of Earth
Electromagnetic Theory Lab
Statistical Mechanics Lab
Dissertation

Semester – II

Mathematical Methods of Physics - II
Electronic-II
Classical Mechanics-II
Advanced Solid State Physics-I
Electronic-II Lab
Advanced Solid State Physics-I Lab
LaTex Lab

Semester – III

Advanced and Molecular Physics-I
Advanced Quantum Mechanics-I
Advanced Solid State Physics-II
Advanced Solid State Physics-II Lab
Electrodynamics
Thermodynamics and Statistical Physics

B. SC. (HONS.) CHEMISTRY

Semester – I

Communication Skills
Disaster Management
Environmental Studies
Organic Chemistry-I
Organic Chemistry - I Practical
Herbal Technology
Fermentation Science and Technology

Semester – III

Physical Chemistry – II
Organic Chemistry – III
Analytical Techniques of Chemistry
Physical Chemistry – II Practical
Organic Chemistry – III Practical
Analytical Techniques of Chemistry Practical

Semester – V

Inorganic Chemistry – III
Molecular Spectroscopy and Photochemistry
Inorganic Chemistry – III Practical
Molecular Spectroscopy and Photochemistry Practical

Semester – IV

Atomic and Molecular Physics-II
Advanced Quantum Mechanics-II
Nanotechnology
Dissertation

Semester – II

Physical Chemistry - I
Inorganic Chemistry - I
Organic Chemistry-I
Physical Chemistry – I Practical
Inorganic Chemistry – I Practical
Organic Chemistry-I Practical
Intellectual Property Right and Business Skills for Chemists

Semester – IV

Physical Chemistry - III
Inorganic Chemistry – II
Introduction to Quantum Chemistry
Physical Chemistry – III Practical
Inorganic Chemistry – II Practical
Introduction to Quantum Chemistry Practical

Semester – VI

Biomolecules
Chemistry of Materials
Biomolecules Lab
Chemistry of Materials Practical
Research Project

FACULTY PROFILE

Our main strength is in our experienced and professional teaching squad, who are continuously working to turn your raw talent and enthusiasm into the specific skills and knowledge needed to succeed in your chosen career and to meet life's challenges head-on.



DR. DIWAKAR PADALIA

ASSOCIATE PROFESSOR

Qualification:

Ph.D., M. Sc.

Experience: 11 years teaching | Publications: 05

Specializations: Magnetic and Dielectric Polymer Nano Composites, Magnetic Nanoparticles, Dielectrics



DR. PAWAN KUMAR

ASSISTANT PROFESSOR

Qualification:

Ph. D., M. Sc., B. Sc. CSIR-JRF

Experience: 9 years teaching and Research | Publications: 21

Specializations: Experimental Condensed Matter Physics, Disordered Systems, Econophysics.



MS. VENUKA SANDHIR

ASSISTANT PROFESSOR

Qualification:

M. Phil., M. Sc.

Experience: 7.5 years teaching | Publications: 02

Specializations: Graph theory, Mathematical Modeling and Statistics and Data Analysis



DR. CHANDRA MOHAN

ASSISTANT PROFESSOR

Qualification:

Ph. D., M. Phil., M. Sc., B. Sc.

Experience: 8 years teaching | Publications: 22

Specializations: Inorganic Chemistry, Environmental Chemistry, Organometallic Chemistry and Catalysis



MS. POOJA VATS

ASSISTANT PROFESSOR

Qualification:

Ph. D. Perusing, M. Phil., M. Sc.

Experience: 11 years teaching | Publications: 03

Specializations: Complex Analysis, Linear Algebra, Functional Analysis, Differential Equation

WHAT STUDENTS ARE SAYING



“ The entire reason in getting quality education is to transform learning into acquiring, a current circumstance into a superior circumstance, and ability into significant living and K. R. Mangalam University give you that stagewhich upgrades you in every above thing. ”

Hema Vashistha, M. Sc. Chemistry 2018

“ KRMU offers one with a myriad range of opportunities. It is a great experience to write research papers related to mathematics, organize events and visit other places. Here I have published a research work and presented research work in international conference in my first year only. ”

Agniwesh Tiwari, B. Sc.



“ K. R. Mangalam University open an infinite amount of possibilities for research work. In KRMU teachers provides best guidance for our career. Here maths become interesting because of practical works and different kind of labs related to maths like MATLAB. ”

Kabir Chaudhary, B.Sc.



LABS AT KRMU

The School has well-equipped science laboratories (Physics, Chemistry and Computer laboratory) for the students which help them to carry out practical and project work outlined in the K. R. Mangalam University. Each laboratory is well furnished with all equipments in smart way which helps the learners to grasp the scientific concepts thus making them become young scientific thinkers and innovators.



Physics Laboratory



Chemistry Lab

EVENTS AT KRMU

School of basic and Applied Sciences organize different types of events like guest lecture, scizone, science olympiad, poster competition, debate competition etc. which help the students to engage themselves with peers. This kind of involvement can become be a launching pad for lifelong friendships, professional development, networking, and career paths.



Scizone - 2019



Guest Lecture



Awareness Session of E-Waste Management



Prize Distribution in Scizone



An Event Organized by APJ Abdul Kalam Science Club

ELIGIBILITY & FEE STRUCTURE

ELIGIBILITY

Program	Eligibility
Under Graduate B. Sc. (Batchelor of Science in Physics, Chemistry and Mathematics)	10+2 or equivalent (CBSE, ISC, State Boards, IB, Cambridge, and other Government Recognized Boards) in Science with minimum 50% Marks in aggregate
Post Graduate M. Sc. (Master of Science in Physics, Chemistry and Mathematics)	B.Sc. (Hons.) / B.Sc. with Physics / Mathematics / Chemistry as a major subject, from a recognized University or equivalent with minimum 50% marks in aggregate.
Doctor of Philosophy	Post Graduate degree or its equivalent from a recognized university, in respective discipline, with minimum 55% marks or minimum CGPA of 5.5 on a 10 point scale.

FEE STRUCTURE (2021 – 2022)

Program		Fee for Semester I (in ₹)	Fee for Semester II (in ₹)	Total Fee Per Year (in ₹)
Under Graduate B.Sc. (Hons.) Physics B.Sc. (Hons.) Chemistry B.Sc. (Hons.) Maths	With preparation for Competitive Exam (UPSC/ Banking/ Insurance/ Railways/ SSC) for Central and State Govt. Jobs	53,000	50,000	1,03,000
Post Graduate M.Sc. (Hons.) Physics M.Sc. (Hons.) Chemistry M.Sc. (Hons.) Maths		40,000	35,000	75,000
M.Sc. (Hons.) (Part Time)		25,000	25,000	50,000
Ph.D. (All Disciplines)		40,000	40,000	80,000

Note: Fee may increase up to 10% each year.

MODE OF PAYMENT: By Cash/DD/Online Transfer/Credit Card/Debit Card

DD should be made in favour of "K.R. Mangalam University", payable at New Delhi.

Fee can be paid online through www.krmangalam.edu.in.



2021-22
ADMISSION
OPEN NOW



- 65+ UG and PG Programs
- 400+ National and International Recruiters
- 10+ Awards in Academic, Research and Innovation
- 3000+ Students

ADMISSION COUNSELLING:

We invite you to have a personal interaction with our counsellor in order to know more about K.R. Mangalam University and the Program.

University Campus:

Sohna Road, Gurugram, Delhi-NCR Landline No.: 0124-2867800 Mob: 08800697010-15
Helpline No.: 011-48884888 Email: admissions@krmangalam.edu.in

Bihar Office:

103, 1st Floor, G.V. Mall, Boring Road, Patna- 800001
Mob: 8800697016-17-19, Landline No.: 0612-2540888
Email: bihar@krmangalam.edu.in

Jharkhand Office	: Mob: 8800697019	Email: jharkhand@krmangalam.edu.in
Himachal Office	: Mob: 9311256334	Email: himachal@krmangalam.edu.in
J & K Office	: Mob: 9311256334	Email: jk@krmangalam.edu.in
Punjab Office	: Mob: 9311256334	Email: punjab@krmangalam.edu.in
West Bengal Office	: Mob: 9311256335	Email: westbengal@krmangalam.edu.in
North East Office	: Mob: 9311256335	Email: northeast@krmangalam.edu.in
Uttarakhand Office	: Mob: 9311256336	Email: uttarakhand@krmangalam.edu.in
Uttar Pradesh Office	: Mob: 9311256337	Email: uttarpradesh@krmangalam.edu.in

HOW TO APPLY

For application form, eligibility & Program details, visit www.krmangalam.edu.in or collect a copy from the admission office.



K.R. MANGALAM UNIVERSITY

Campus: Sohna Road, Gurugram, Delhi – NCR, Pin : 122103

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