



K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION



SCHOOL OF BASIC AND APPLIED SCIENCES

Academic Session 2026-27

SCHOOL HANDBOOK



INDEX

S. No.	Contents	Page No.
1.	About the School	1
2.	Vision and Mission - University	2
3.	Vision and Mission - School	2
4.	Message from Vice Chancellor	3
5.	Message from Dean	4
6.	School Boards and Committees	4
7.	Board of Studies	4
8.	School Research Committee	5
9.	Academic Coordination: Roles and Responsibilities	5
10.	List of Faculty and Staff	7
11.	School Infrastructure (Physical and learning)	9
12.	Best Practices	11
13.	School Education Philosophy	12
14.	Educational Pedagogy (Inside and outside classroom)	12
15.	Assessment and Evaluation	15
16.	Collaborations	16
17.	Programmes Offered by the School	17
18.	Internships and Projects	35
19.	School Event Calendar	36
20.	Testimonials	44
21.	Contact Details	46
22.	Appendix	46

1. About the School

K.R. Mangalam University, located on Sohna Road, Gurugram, is a rapidly growing and highly promising institution in India's higher education landscape. Established in 2013 through an act of the Haryana Legislature under the Haryana Private Universities Act (Amendment) 8 of 2013, it is recognized by the University Grants Commission (UGC) under Section 2(f) of the UGC Act, 1956. The university is dedicated to fostering excellence in basic and professional education while upholding moral and ethical values.

The School of Basic and Applied Sciences (SBAS), a constituent of K.R. Mangalam University, was established in 2013 with the launch of its inaugural programme, B.Sc. (Hons.) Chemistry. Over the years, it has expanded its academic portfolio, introducing B.Sc. (Hons.) Physics in 2014, followed by M.Sc. Physics in 2015, and subsequently B.Sc. (Hons.) Mathematics and M.Sc. Mathematics in the same year. In 2022, the school introduced B.Sc. (Hons.) Forensic Sciences, further diversifying its offerings. Aligned with the National Education Policy (NEP) 2020, SBAS launched four-year undergraduate programmes in Chemistry, Physics, and Mathematics in 2023. In 2024, the school expanded its programmes in Forensic Sciences to include a four-year B.Sc., a five-year integrated B.Sc.-M.Sc., and an M.Sc. programme. Presently, SBAS offers 10 academic programmes, enrolling 192 students, and supports robust research activities through Ph.D. programmes in Physics, Chemistry, and Mathematics with a strength of 49 research scholars.

SBAS is deeply committed to the principles of NEP 2020, striving to establish an inclusive, holistic, and forward-looking education system that equips students for the demands of the 21st century. The school emphasizes Outcome-Based Education (OBE), fostering an innovative and flexible multidisciplinary curriculum. This curriculum enables students to design their own learning trajectories by combining credit-based courses across various disciplines with value-added offerings, including Indian Knowledge Systems, vocational training, community engagement projects, environmental education, value education, and skill development.

The school adheres to the "Curriculum and Credit Framework for Undergraduate Programmes (CCFUP)," which incorporates a flexible Choice-Based Credit System (CBCS), Learning Outcome-based Curriculum Framework (LOCF), a multidisciplinary approach, and multiple entry and exit options. This framework allows students to tailor their academic paths and pursue careers aligned with their interests.

The SBAS curriculum is carefully aligned with industry and job market demands, designed to adapt to evolving trends and technologies. It integrates cross-cutting themes such as professional ethics, gender, human values, environmental sustainability, and the United Nations' Sustainable Development Goals (SDGs). Each course features clearly defined objectives and learning outcomes, enabling students to select electives that broaden their skills across sciences and interdisciplinary fields. The curriculum ensures a strong foundation in theoretical and experimental knowledge, meeting the requirements of academia and industry while preparing students for research careers. Regular syllabus updates incorporate contemporary needs, informed by feedback from stakeholders, including students, alumni, parents, faculty, employers, industry representatives, and academic experts.

2. Vision and Mission

2.1 University

Vision

K.R. Mangalam University aspires to become an internationally recognized institution of higher learning through excellence in inter-disciplinary education, research and innovation, preparing socially responsible lifelong learners who contribute to nation building.

Mission

- Foster employability and entrepreneurship through futuristic curriculum and progressive pedagogy with cutting-edge technology.
- Instill notion of lifelong learning through stimulating research, Outcomes-based education and innovative thinking.
- Integrate global needs and expectations through collaborative programmes with premier universities, research centres, industries and professional bodies.
- Enhance leadership qualities among the youth having understanding of ethical values and environmental realities.

2.2 School

Vision

To be a premier school for advanced learning and research in the field of basic and applied sciences.

Mission

- Collaborations with national, international academic & research organizations and industries for knowledge creation, advancement, and application of innovative practices in sciences.
- Create a conducive environment for lifelong learning.
- Empower students to be socially responsible and ethically strong individuals through value-based science education.

3. Messages

3.1 Vice Chancellor- Prof. (Dr.) Anil Kumar



Congratulations on your admission to K.R. Mangalam University!

Dear Student,

I welcome you for joining K. R. Mangalam University.

You have taken the first step toward one of the most exciting times in your life, and everyone on the campus is committed to making your experience at KRMU worth remembering.

Established in 2013, KRMU has been implementing and adapting the ever-changing industry trends to be germane. At KRMU, we provide its students with the opportunity to excel in academics and in activities that make them global leaders altogether.

We have developed on a mission mode a system of preparing highly talented faculty in large numbers with specializations in diverse areas (interdisciplinary and trans disciplinary areas) with more autonomy and awards for productivity in terms of pedagogy, skill enhancement, research and mentor for creativity and innovations.

Our programmes have been tailored with the help of industry/Alumni especially catering to the career paths for each student based on his STEM (Science Technology, Engineering & Math's) or STEAMM and Arts, commerce and Management with skills that match industry needs, updated curriculum, focus on employability skills, Internship Programmes, Corporate/Company Trips, Case Competitions, Consulting Field Projects, Teamwork and mentor's mentee relationships.

The curriculum is updated based on Values framework of NAAC (National Accreditation and Assessment Council) i.e., Contributing to National Development, Fostering National Global Competencies, inculcating a Value System, Promoting the Use of Technology and quest of excellence among Students. Our programmes are customized with career paths for placements with high salaried jobs and the upcoming 4th Industrial Revolution the advent of "cyber-physical systems" involving entirely new capabilities for people and machines.

Employability is being enhanced by Cross cultural programmes, International Exchange Student Programmes, Global Education/Knowledge, Global Scoring Systems, Corporate Alliances, Mentoring by Alumni, Dedicated Career Management Center and entrepreneurship programme through Innovation Ecosystem.

The endorsement of the quality of education imparted at K.R. Mangalam University and its allied schools are the trust of over 150+ companies who have visited the campus year after year to recruit our corporate-ready students.

We are pleased to offer you provisional admission to KRMU. Your admission to the university will be confirmed and you will be registered as our student when we have scrutinized your documents and eligibility as per the university policies.

Wishing you all the very best for a great academic journey at KRMU!

3.2 Dean- Prof. (Dr.) Meena Bhandari



As the Dean of the School of Basic and Applied Sciences, I'm immensely proud of our commitment to delivering immersive education since our establishment in 2013. Offering undergraduate, postgraduate, and PhD programmes in Physics, Chemistry, Mathematics, and Forensic Sciences, our aim is to equip students with the knowledge and skills to serve society and organizations effectively. Our curriculum emphasizes academic excellence, professional competence, and addressing societal and environmental challenges, fostering a culture of innovation and ethical responsibility. We cultivate a learning environment where students can drive positive change, with opportunities for industry engagement, global collaboration, and community outreach. Our faculty, with extensive industrial experience and dedicated research, are at the forefront of tackling real-world issues. Join us in our journey of lifelong learning and become part of our vibrant community.

4. School Boards and Committees

4.1 Board of Studies

The Board of Studies of SBAS consists of the following members:

S. No.	Name	Designation
1.	Dr. Meena Bhandari	Chairperson (Dean & Professor-Chemistry)
2.	Dr. Pawan Kumar	Member (Professor- Physics)
3.	Dr. Diwakar Padalia	Member (Professor- Physics)
4.	Dr. Dilraj Preet Kaur	Member (Professor- Physics)
5.	Dr. Seema Raj	Member (Professor- Chemistry)
6.	Dr. Ruby Jindal	Member (Associate Professor- Physics)
7.	Dr. Chandra Mohan	Member (Associate Professor-Chemistry)
8.	Dr. Yogendra Kr Rajoria	Member (Associate Professor- Mathematics)
9.	Dr. Komal Yadav	Member (Associate Professor- Forensic Science)
10.	Dr. Neeraj Kumari	Member (Assistant Professor Selection Grade- Chemistry)
11.	Dr. Mina Kumari	Member (Assistant Professor selection Grade- Mathematics)
12.	Dr. Pooja Vats	Member (Assistant Professor Selection Grade- Mathematics)
13.	Dr. Kriti	Member (Assistant Professor- Physics)
14.	Dr. Saba Rashid	Member (Assistant Professor- Forensic Sciences)
15.	Prof. (Dr.) Astha Pandey	External Member (Dean, School of Forensic Science, NFSU)

16.	Dr. Vikas Verma	External Member (Professor- Chemistry, Guru Jambheshwar University of Science & Technology, Hisar)
17.	Prof. C.B. Gupta	External Member (Former Professor BITS, Pilani)
18.	Dr. Pramod Kumar	External Member (Associate Professor- Department of Physics, Gurugram University)

The tenure of the Board of Studies (B.O.S.), School of Basic and Applied Sciences, K.R. Mangalam University members will be of two years from the date of the notification.

4.2 School Research Committee

The school research committee of SBAS consists of the following members:

S. No.	Name	Designation
1.	Dr. Meena Bhandari	Chairperson (Professor-Chemistry)
2.	Dr. Pawan Kumar	Member (Professor- Physics)
3.	Dr. Diwakar Padalia	Member (Professor- Physics)
4.	Dr. Dilraj Preet Kaur	Member (Professor- Physics)
5.	Dr. Seema Raj	Member (Professor- Chemistry)
6.	Dr. Chandra Mohan	Member (Associate Professor-Chemistry)
7.	Dr. Baljeet Yadav	Member (Assistant Professor- Forensic Science)
8.	Dr. Yogendra Kr Rajoria	Member (Associate Professor- Mathematics)
9.	Dr. Rupali	Member (Assistant Professor- Mathematics)
10.	Dr. Mina Kumari	Member (Assistant Professor- Mathematics)
11.	Dr. Mahipal Singh Sankhla	Member (Assistant Professor- Forensic Science)
12.	Dr. Anshul	External Member (Assistant Professor- SOET)
13.	Dr. Rajni Gautam	Member Secretary (Assistant Professor-Physics)

The tenure of the School Research Committee (SRC), School of Basic and Applied Sciences, K.R. Mangalam University members will be two years from the date of the notification.

4.3 Academic Coordination: Roles and Responsibilities

To achieve the vision and mission of SBAS, the school operates with a well-defined organizational structure, where every individual plays a pivotal role in ensuring the smooth functioning of academic and administrative activities. From strategic leadership to hands-on support for students, each role contributes to creating a conducive environment for learning, growth, and collaboration. Below is an outline of the key roles and responsibilities within the school.

Dean: Prof. (Dr.) Meena Bhandari is dean of School of Basic and Applied sciences. She provides strategic leadership for the school, overseeing academic, research, and administrative functions. She ensures the development, implementation, and periodic revision of academic programmes and curriculum while monitoring and enhancing the quality of education and research output. Acting as a liaison between the school and university administration, students, parents, and external stakeholders, the Dean facilitates collaborations, partnerships, and resource allocation. She manages the school's budget, oversee faculty recruitment and development, and address grievances to maintain a conducive environment for teaching and learning.

Programme Coordinator: The Programme Coordinator ensures the smooth execution of academic programmes, aligning them with university policies. They work closely with faculty to design, update, and deliver course content effectively while addressing student academic issues and monitoring their progress. Coordinating with the timetable coordinator, they ensure proper scheduling of courses and maintain records for accreditation compliance. The coordinator also fosters communication among faculty members teaching within the programme. We have in total 4 programme coordinators, one for each discipline. The list is shared below:

Dr. Ruby Jindal -Physics

Dr. Neeraj Kumari- Chemistry

Dr. Mina Kumari- Mathematics

Dr. Komal Yadav - Forensic Science

Mentor: Every student enrolled in the school is considered a mentee and will be assigned a faculty member as their mentor. The mentor's role is to guide and support the mentee, helping them grow both personally and professionally. Mentors act as coaches by giving feedback, sharing advice, and offering insights from their own experiences. They also challenge the mentee's thinking, help them make important decisions, and connect them to valuable resources and networks. Additionally, mentors provide emotional support, celebrating successes and offering encouragement during tough times. On the other hand, the mentee's role is to actively participate in the learning process by planning meetings, setting goals, and communicating openly with their mentor. Mentees should also apply what they learn, continue growing outside the mentor-mentee relationship, and stay proactive in seeking new opportunities. By staying committed and enthusiastic, mentees can make the most of this relationship and achieve their goals. Following is the list of mentors of SBAS:

Dr. Divyanshi Mangla- Chemistry

Dr. Monika Phougat- Chemistry

Dr. Pratibha Sharma- Chemistry

Dr. Pardeep Kumar- Mathematics

Dr. Mohabbat Ali- Mathematics

Dr. Rishi Ranjan Kumar- Physics

Dr. Vicky Kapoor- Physics

Dr. Ritika Khatri-Physics

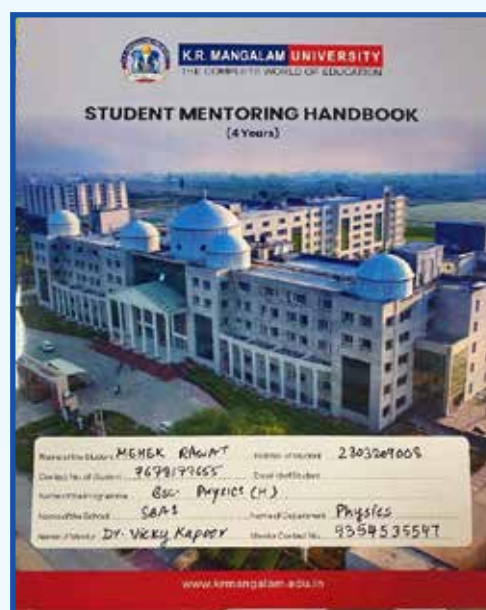
Mr. Nitin Tyagi- Forensic Science

Dr. Baljeet Yadav- Forensic Science

Dr. Shivani Sehgal- Forensic Science

Ms. Kritika Singh- Forensic Science

Ms. Anuradha Singh- Forensic Science



Glimpse of student mentoring handbook maintained by Mentors for each mentee separately.

Timetable Coordinator: The Timetable Coordinator manages the academic schedule for all programmes within the school, ensuring proper allocation of faculty and resources. They resolve scheduling conflicts, collaborate with lab supervisors for seamless lab sessions, and promptly communicate timetable updates to faculty and students. By optimizing classroom and lab usage, the coordinator ensures smooth academic operations. Dr. Mina Kumari, Dr. Nitish Yadav, Dr. Seema Raj, and Mr. Nitin Tyagi are timetable coordinators of Mathematics, Physics, Chemistry and Forensic Science, respectively.

Examination Coordinator: The Examination Coordinator organizes internal assessments, mid-semester, and end-semester examinations in coordination with the university examination cell. They oversee the preparation, submission, and confidentiality of question papers and manage the invigilation schedule. Additionally, they supervise the evaluation process, ensuring accurate and timely submission of results while adhering to university examination policies and procedures. Dr. Diwakar Padalia, Dr. Seema Raj, Dr. Mina Kumari, and Mr. Nitin Tyagi are examination coordinators of Physics, Chemistry, Mathematics, and Forensic Science, respectively.

Lab In-Charge: The Lab Supervisor is responsible for maintaining the functionality and organization of laboratories. They manage the inventory of equipment and consumables, ensure compliance with safety protocols, and assist faculty and students during lab sessions. By providing a well-equipped and safe environment for experiments, the supervisor supports effective practical learning. Lab In-charge of different Labs are listed below:

Dr. Nitish Yadav- Physics Laboratories

Dr. Sujata Kumari- Chemistry Laboratories

Dr. Saba Rashid, Dr. Sourabh Kumar- Forensic Science Laboratory

Besides the above roles and responsibilities, each faculty brings subject expertise to their teaching, research, and mentoring roles. They design and update course content to align with modern developments, conduct impactful research, and publish their findings. Teachers guide students in discipline-specific projects and research while fostering interdisciplinary collaborations. They also organize seminars, workshops, and conferences to provide students and faculty with exposure to current advancements and industry trends.

This structure promotes efficiency in academic and administrative operations while ensuring holistic student development and academic excellence.

5. Faculty and Staff

The School of Basic and Applied Sciences (SBAS) is supported by a dedicated and highly qualified faculty of 48 members, with 54% female and 46% male representation. The faculty includes 11 members in Chemistry, 12 in Forensic Science, 13 in Mathematics, and 12 in Physics. Among the total faculty, 46 have earned their doctoral degrees, and 24 are NET qualified. The faculty composition includes 7 Professors, 5 Associate Professors, and 37 Assistant Professors. Additionally, the non-teaching staff consists of 6 Lab Technicians and 1 Office Assistant. All faculty members at SBAS are experienced, motivated, and hardworking, equipped with the necessary qualifications and expertise to guide and mentor students effectively, ensuring a high-quality educational experience.

LIST OF FACULTY MEMBERS

S. No	Name of Faculty	Designation	Department
1	Dr Meena Bhandari	Professor & Dean	Chemistry
2	Dr. Chandra Mohan	Associate Professor	Chemistry
3	Dr Seema Raj	Professor	Chemistry

4	Dr Neeraj Kumari	Assistant Professor (Selection Grade)	Chemistry
5	Dr Sujata Kumari	Assistant Professor	Chemistry
6	Dr Pratibha Sharma	Assistant Professor	Chemistry
7	Dr Divyanshi Mangla	Assistant Professor	Chemistry
8	Dr. Nainy Khera	Assistant Professor	Chemistry
9	Dr. Monika Phougat	Assistant Professor	Chemistry
10	Dr. Arijit Dutta Gupta	Assistant Professor Senior Scale (Research Track Faculty)	Chemistry
11	Dr. Arush Sharma	Associate Professor Senior Scale (Research Track Faculty)	Chemistry
12	Dr. Pawan Kumar	Professor	Physics
13	Dr Dilraj Preet Kaur	Professor	Physics
14	Dr. Rajni Gautam	Assistant Professor (Selection Grade)	Physics
15	Dr Ruby Jindal	Associate Professor	Physics
16	Dr. Diwakar Padalia	Professor	Physics
17	Dr Ritika Khatri	Assistant Professor	Physics
18	Dr Kriti	Assistant Professor	Physics
19	Dr Nitish Yadav	Assistant Professor (Research Track Faculty)	Physics
20	Dr Rishi Ranjan Kumar	Assistant Professor	Physics
21	Dr Vicky Kapoor	Assistant Professor (Senior Scale)	Physics
22	Dr. Sarita Yadav	Assistant Professor (Research Track Faculty)	Physics
23	Dr. Gaurav Gupta	Assistant Professor (Senior Scale)	Physics
24	Dr. Pooja Vats	Assistant Professor (Selection Grade)	Mathematics
25	Dr. Yogendra Kumar Rajoria	Associate Professor	Mathematics
26	Dr. Mina Kumari	Assistant Professor (Selection Grade)	Mathematics
27	Ms. Sapna	Assistant Professor	Mathematics
28	Dr. Pardeep Kumar	Assistant Professor	Mathematics
29	Dr. Mohabbat Ali	Assistant Professor	Mathematics
30	Dr. Saloni Rathee	Assistant Professor	Mathematics
31	Dr. Prawar	Assistant Professor	Mathematics
32	Dr. Vishal	Assistant Professor	Mathematics
33	Dr. Manju Yadav	Assistant Professor	Mathematics
34	Dr. Arun Kumar Yadav	Assistant Professor	Mathematics
35	Dr. Pooja Bansal	Assistant Professor	Mathematics
36	Mr. Ajay Kumar	Assistant Professor	Mathematics
37	Mr. Nitin Tyagi	Assistant Professor	Forensic Sciences
38	Ms. Kritika Singh	Assistant Professor	Forensic Sciences
39	Dr. Nisha Rani	Assistant Professor	Forensic Sciences

40	Dr. Shivani Sehgal	Assistant Professor	Forensic Sciences
41	Dr. Baljeet Yadav	Assistant Professor (Selection Grade)	Forensic Sciences
42	Dr. Saba Rashid	Assistant Professor	Forensic Sciences
43	Dr. Sourabh Kumar Singh	Assistant Professor	Forensic Sciences
44	Dr. Mahipal Singh Sankhla	Assistant Professor (Research Track Faculty)	Forensic Sciences
45	Dr. Komal Yadav	Associate Professor	Forensic Sciences
46	Mr. Vaibhav	Assistant Professor	Forensic Sciences
47	Prof. Kumud Kant Awasthi	Professor (Research Track faculty)	Forensic Sciences
48	Prof. Garima Awasthi	Professor (Research Track faculty)	Forensic Sciences

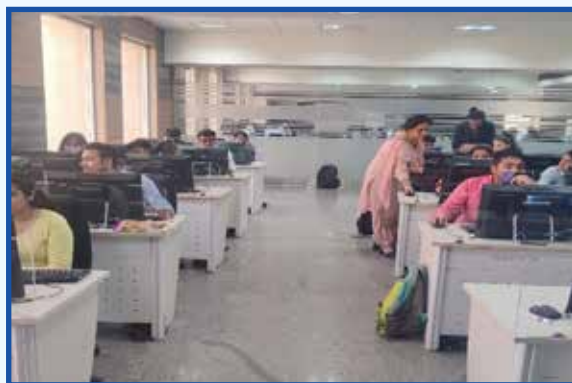
6. School Infrastructure (Physical and learning)

The School of Basic and Applied Sciences offers a comprehensive range of teaching and learning resources that enhance both the academic experience and professional preparedness of students. Its state-of-the-art infrastructure includes smart classrooms with modern teaching tools, a well-stocked library, computer labs, and six specialized laboratories-two for physics, three for chemistry, one for forensic science, and a Central Instrumentation Facility for research. The school also employs highly qualified and experienced PhD and non-PhD faculty, ensuring expert guidance in both theoretical and practical learning.

In addition to physical infrastructure, the school provides a robust virtual environment with tools like an LMS (Moodle) for coursework management, virtual labs for remote experimentation, and 24/7 Wi-Fi access, fostering a flexible and technology-driven learning experience. The integration of Massive Open Online Courses (MOOCs) and experiential learning opportunities ensures that students are well-prepared for academic success and professional excellence. The curriculum is carefully designed to engage students across all levels of Bloom's Taxonomy, promoting not only cognitive development but also emotional, social, and ethical growth. Continuous feedback from stakeholders, including faculty, industry experts, students, and alumni, ensures that the curriculum remains current, relevant, and aligned with the evolving needs of academia and industry.



Smart Classrooms



LAB facilities in SBAS

Research Facility (CIF): The School of Basic and Applied Sciences is equipped with a Central Instrumentation Facility (CIF), providing cutting-edge research tools for faculty, graduate students, and Ph.D. scholars. This facility enables advanced research in various scientific fields, offering access to sophisticated instruments for materials characterization, spectroscopy, microscopy, and other high-precision analyses. The CIF supports interdisciplinary research, allowing users to conduct in-depth experiments and gather critical data for their projects. By fostering a collaborative environment and offering top-tier resources, the CIF plays a vital role in enhancing the research capabilities of the school, contributing to scientific advancements and innovation.



Central Instrumentation Research Facility in SBAS.

Engineering Kitchen:



Glimpses of faculty and students doing research work in The Idea Kitchen.

7. Best Practices

The School of Basic and Applied Sciences (SBAS) at K.R. Mangalam University fosters a dynamic and holistic learning environment by integrating various best practices into its educational framework. These practices combine academic rigor with real-world applications, ensuring that students not only acquire theoretical knowledge but also develop practical skills, critical thinking, and a sense of social responsibility. SBAS emphasizes the importance of experiential learning, encouraging students to engage with community-driven initiatives and sustainability projects that bridge the gap between classroom education and societal needs.

One of the primary approaches at SBAS is the incorporation of social outreach programmes that provide students with opportunities to apply their academic learning to address real-world issues. Through service-learning components, students engage in projects such as health awareness programmes, environmental sustainability efforts, and educational outreach in local communities. These activities not only enhance academic understanding but also cultivate critical skills like teamwork, project management, and communication. Students actively participate in case studies, community surveys, and awareness campaigns that focus on important social issues, fostering a sense of civic responsibility and community engagement. This hands-on involvement allows students to gain valuable experience while contributing positively to their surroundings.

Parallel to this, SBAS promotes innovation in environmental sustainability through a variety of practical initiatives. Students are encouraged to engage in sustainability-focused projects, such as waste reduction, water conservation, and the development of eco-friendly solutions. These initiatives are embedded within the curriculum and are further supported by research opportunities that explore cutting-edge environmental challenges. Faculty members collaborate with environmental organizations and guide students through real-world case studies, where they apply their academic knowledge to solve complex environmental problems. The integration of environmental studies into the curriculum ensures that every student is equipped with the knowledge and skills to contribute to sustainability efforts, making them well-prepared for careers in the growing field of environmental science and sustainability.

Together, these best practices at SBAS create a comprehensive learning experience that combines academic learning with community involvement and environmental responsibility. Through these initiatives, students not only develop cognitive and psychomotor skills but also learn the importance of innovation, critical thinking, and active citizenship. The combination of classroom knowledge with real-world applications enhances students' academic engagement while promoting a deeper connection between education and its impact on society. This holistic approach ensures that graduates from SBAS are not only academically proficient but also responsible, ethical professionals ready to make meaningful contributions to the world.



Students taking oath to preserve environment on June 5, 2018.

8. School Education Philosophy

The educational philosophy of the School of Basic and Applied Sciences is built on fostering intellectual curiosity, critical thinking, and the practical application of scientific knowledge. Emphasizing a student-centric approach, SBAS integrates foundational science with real-world challenges, preparing students for leadership roles in both academia and industry. Through collaborations with national and international institutions, research organizations, and industries, the school provides cutting-edge resources and hands-on experiences that bridge the gap between theory and practice. SBAS is committed to empowering students with technical expertise while instilling ethical values, social responsibility, and a lifelong commitment to learning. The aim is to nurture well-rounded, innovative, and responsible individuals ready to contribute to scientific advancement and societal betterment.



Students of SBAS participating in Extracurricular activities

9. Educational Pedagogy (Inside and outside classroom)

The School of Basic and Applied Sciences (SBAS) at K.R. Mangalam University has adopted an outcome-driven learning pedagogy that ensures a balanced focus on both cognitive and psychomotor development, promoting the overall intellectual and emotional growth of students. This structured approach is designed to cover all aspects of learning—cognitive, psychomotor, and affective—ensuring that students not only master the academic content but also develop essential life and professional skills.

Inside the classroom, SBAS emphasizes cognitive development by employing student-centric learning techniques such as detailed demonstrations, interactive workshops, guest lectures by industry experts, and hands-on practical in well-equipped laboratories. These methods ensure that students engage deeply with the subject matter, building strong foundational knowledge and critical thinking skills. The practical aspect of learning allows them to directly observe an experiment with scientific principles, reinforcing theoretical knowledge and fostering a deeper understanding of complex concepts.



Outside the classroom, SBAS provides numerous opportunities for the development of psychomotor skills and affective growth. Students engage in conferences, internships, real-world projects, industry visits, and case studies, which offer practical exposure to industry trends and challenges. These activities not only hone their technical and problem-solving abilities but also cultivate interpersonal and teamwork skills, leadership, and a sense of responsibility. By working on projects and internships, students learn to apply their academic knowledge in real-world settings, bridging the gap between theoretical education and practical application.

Through this holistic, outcome-oriented pedagogy, SBAS ensures that its students are well-prepared for the demands of both academic and professional life. By integrating cognitive and psychomotor learning, the school fosters not just academic excellence but also personal and professional development, equipping students to meet future challenges confidently and competently.



B. Sc. (H) Forensic Science 2nd Year bagged first prize in Summer Internship Competition held at Sushant University



Educational Visit to Forensic Science Laboratory, New Delhi on 30th October 2025



Students having discussion with Head of the department during Industrial visit to NDTL, Delhi on 11 November 2025



Student volunteers conduct an awareness drive on child nutrition and malnutrition in Abheypur village, engaging with school children and displaying informative posters to promote healthy practices and community well-being.



Industrial visit of B.Sc. Forensic Science students at A.I.I.M.S, New Delhi.

10. Assessment & Evaluation

a. Evaluation scheme for theory courses

Evaluation Component	Weightage
Internal Marks (Theory): - I) Continuous Assessment (40 Marks) (All the components to be evenly spaced) Projects/ Quizzes/ Assignments and Essays/ Presentations/ Participation/ Case Studies/ Reflective Journals (minimum of five components to be covered)	40 Marks
Mid Term Exam	20 Marks
External Marks (Theory): - End Term Examination	40 Marks

Overview of Internal Evaluation (40 Marks) –

Internal evaluation is designed to assess students' ongoing learning and application of course materials through diverse assessment methods. Instructors have full autonomy within the 40 marks to employ assessment strategies that best align with the course's learning objectives.

Recommended Assessment Types: -

Projects: - Individual or group projects focusing on research, analysis, and practical application of concepts.

Quizzes: - Regular, short assessments to evaluate understanding of the material.

Assignments and Essays: - In-depth tasks to assess critical thinking and problem-solving skills.

Presentations: - Assessing knowledge dissemination and communication skills.

Participation: - Evaluation of engagement and contributions to class activities.

Case Studies: - Application of theoretical knowledge to real-world scenarios.

b. Evaluation scheme for practical courses

Particular	Weightage
Internal Marks (Practical): - I) Conduct of Experiment II) Lab Records III) Lab Participation IV) Lab Project	10 Marks 10 Marks 10 Marks 20 Marks
External Marks (Practical): - End Term Practical and Viva Voce	50 Marks

*** (It is compulsory for a student to secure 40% marks in End Term Practical's and Viva Voce to secure minimum passing grade).**

c. Evaluation scheme for research project

Particular	Weightage
Internal Marks: - (Punctuality, Performance, Work Ethics, Efforts and Research Output)	50 Marks
External Marks (Practical): - Presentation Report Writing Viva Voce	50 Marks 20 10 20

***(It is compulsory for the student to provide an internship certificate issued by the relevant institution or organization where they completed their internship during the evaluation process.)**

d. Evaluation scheme for Internship

Particular	Weightage
Internal Marks: - Internship completion certificate obtained from supervisor from host institute.	30 Marks
External Marks (Practical): - Presentation Report Writing Viva Voce	70 Marks 25 25 20

e. Grading System

Based on the performance in all evaluation components of a Course, each student will be awarded a final grade in the Course registered, at the end of the semester. The total marks obtained by a student in the Course will be converted to a corresponding letter grade as described below:

Marks Range (%)	Letter Grade	Grade Points	Description of the Grade
% marks > 90%	O	10.0	Outstanding
80 < %marks ≤ 90	A+	9.0	Excellent
70 < %marks ≤ 80	A	8.0	Very Good
60 < %marks ≤ 70	B+	7.0	Good
55 < %marks ≤ 60	B	6.0	Above Average
50 < %marks ≤ 55	C	5.5	Average
40 ≤ %marks ≤ 50	P	5.0	Pass
%marks < 40	F	0	Fail
-	AB	0	Absent
%marks ≥ 50	S	-	Satisfactory
%marks < 50	U	-	Unsatisfactory
-	W	0	Withdrawal

11. Collaborations

The School of Basic and Applied Sciences (SBAS) actively engages in collaborations through Memorandums of Understanding (MoUs) with various educational, research, and industrial institutions. These partnerships facilitate a range of activities designed to promote the academic and professional growth of both students and faculty. Under these MoUs, SBAS organizes student internship programmes, offering practical industry exposure, and educational visits that broaden students' understanding of real-world applications. Collaborative research efforts often result in joint publications and patents, enhancing the school's contribution to scientific advancements. Additionally, workshops, seminars, and Faculty Development Programmes (FDPs) are conducted regularly, providing opportunities for skill development, knowledge sharing, and networking with experts from diverse fields. These initiatives help students and faculty stay updated with the latest trends and advancements, fostering overall progress in their academic and professional journeys.

At present, the School of Basic and Applied Sciences (SBAS) has signed 12 Memoranda of Understanding (MoUs) with various esteemed institutions, fostering collaborations and enhancing academic and research opportunities. The institutions involved include National Forensic Sciences University (NFSU) Delhi, RJ Forsec Solution Pvt Ltd, Shivaji College (University of Delhi), Deshbandhu College (University of Delhi), the Council for Teacher Education, Sherlock Institute for Forensic Science, Hawk Eye Forensic,

Ramjas College (University of Delhi), Hansraj College, Normi Research Foundation, Gargi College (University of Delhi), and J M Environet Pvt Ltd. These partnerships contribute to a robust network of academic exchange, internships, and collaborative research, enriching the educational experience for students and faculty alike.

12. Programmes Offered by the School

12.1 About the Programme: Bachelor of Sciences (Honours / Honours with Research) Physics

The B.Sc. (Hons. / Hons. with Research) Physics is an undergraduate academic programme designed to provide students with a comprehensive foundation in the fascinating world of physics. This programme offers a rigorous and engaging curriculum that covers diverse areas such as classical mechanics, electromagnetism, quantum mechanics, thermodynamics, and more. Students in this programme will study fundamental principles of the universe, engage in complex problem-solving, and enhance their analytical and critical thinking skills. Combining hands-on lab work with theoretical learning, they'll gain practical experience and a solid grasp of scientific research methods. The B.Sc. (Hons. / Hons. with Research) Physics programme prepares students for exciting career opportunities in scientific research, technology, education, and various other fields that require a strong grasp of physics principles and applications.

- **Nature of B.Sc. (Honours / Honours with Research) Physics Programme**

Taking the NEP-2020 as an opportunity to review our existing academic programmes and redesign them for a more holistic, multidisciplinary and inclusive education, SBAS, K.R. Mangalam University, is transforming its academic structure in a phased manner. School of Basic and Applied Sciences is offering Four Year Undergraduate Degree programme B.Sc. (Hons. / Hons. with Research) Physics with Multiple Entry- Multiple Exit option from the academic session 2023-24. Through multiple entry/exit options, students will be able to enter and exit the programme at various stages. This course emphasized hands on practice, innovative thought process and project-based learning.

- **Aims of B.Sc. (Honours / Honours with Research) Physics Programme**

The aims of the B.Sc. (Hons. / Hons. with Research) Physics programme, in accordance with the National Education Policy (NEP), are multifaceted and comprehensive. The programme aims to cultivate a strong foundation in physics principles and foster a deep understanding of the subject. It seeks to promote critical thinking, analytical skills, and problem-solving abilities among students, enabling them to address real-world challenges effectively. The B.Sc. (Hons. / Hons. with Research) Physics programme also encourages research-oriented thinking and provides opportunities for students to engage in scientific inquiry and exploration. By emphasizing hands-on laboratory work and practical applications, the programme aims to equip students with the necessary skills for conducting experiments and analyzing data. Moreover, the programme seeks to foster an interdisciplinary approach, enabling students to connect physics with other scientific disciplines and societal issues. Overall, the B.Sc. (Hons. / Hons. with Research) Physics programme aspires to produce well-rounded graduates with a passion for learning and a strong foundation in physics, ready to make significant contributions to the scientific community and society at large.

- **Programme Educational Objectives (PEOs)**

These are deferred outcomes measured a few years after completion of the programme, where:

PEO1: Graduates will become globally competent professionals, suitable for careers in government, corporate, and research sectors, while also possessing skills for entrepreneurial ventures in multidisciplinary fields.

PEO2: Graduates will demonstrate strong technical knowledge in physics and will be able to think critically and creatively to develop practical solutions to scientific and technological challenges.

PEO3: Graduates will be ethical professionals who can lead and collaborate effectively in teams, contributing to both their own growth and the success of their organizations.

PEO4: Graduates will engage in lifelong learning and professional development, applying their expertise to benefit society and make meaningful contributions.

PEO5: Graduates will be well-equipped to pursue higher education and advanced research in physics and related disciplines.

- **Programme Outcomes (POs)**

At the time of graduation, students will be able:

PO1: To apply physics principles and mathematical techniques to effectively solve complex real-world problems.

PO2: To develop strong critical thinking skills, enabling them to analyze and evaluate evidence, arguments, and methodologies in physics research and applications.

PO3: To promote teamwork and collaborative learning, enabling students to contribute to and lead interdisciplinary research.

PO4: To build strong interpersonal skills to navigate diverse professional environments, collaborate effectively, and take on leadership roles.

PO5: To communicate complex scientific ideas and research findings clearly in both writing and presentations to scientific and non-scientific audiences.

PO6: To learn independently and stay updated with scientific advancements throughout their careers.

PO7: To acquire a strong commitment to ethical standards, responsible conduct in research, and professionalism in academic and industry settings.

PO8: To understand the impact of physics research on the environment and society and show a commitment to using sustainable and ethical practices in work.

- **Programme Specific Outcomes (PSOs)**

At the time of graduation, students of undergraduate degree programme will be:

PSO1: Understanding fundamental concepts, laws, theories, tools and techniques in the field of physics.

PSO2: Applying mathematical techniques, theoretical models, and physical laws to solve complex scientific problems.

PSO3: Analyzing various real-life situations, problems, and challenges related to physics.

PSO4: Evaluating the validity of scientific arguments, theories, and experimental results, making reasoned judgments about the quality and reliability of research findings in physics.

PSO5: Operating laboratory instruments and experimental setups with accuracy, demonstrating skill in measuring, observing, and manipulating equipment to gather precise data.

PSO6: Exhibiting coordinated manual skills in conducting physics experiments, ensuring safe and efficient handling of materials, tools, and equipment while following detailed procedural steps.

- **Career Avenues**

Graduates can pursue careers in research and development (R&D) in industries, work as research scientists or assistants in academic and research institutions, or continue with higher education (M.Sc., PhD) leading to academic or specialized roles in physics. Opportunities also exist in sectors like govt. jobs, defense services, data science, finance, and competitive examinations.

- **Duration**

The duration of this programme is four years (eight semesters) with multiple entry/exit options.

- **Criteria for award of certificates and degree**

Name of Degree	Credits requirement	Completion Year
UG Certificate Physics	46	First Year
UG Diploma Physics	92	Second Year
B.Sc. Physics	133	Third Year
B.Sc. (Hons. / Hons. With Research) Physics	169	Fourth Year

12.2 About the Programme: Bachelor of Sciences (Honours / Honours with Research) Chemistry

The B.Sc. (Hons. / Hons. with Research) Chemistry is a four-year undergraduate programme designed to provide students in the captivating realm of chemistry. This programme features a comprehensive and dynamic curriculum that delves into essential areas such as organic chemistry, inorganic chemistry, physical chemistry, and analytical chemistry. Students will investigate fundamental chemical principles, engage in complex problem-solving, and refine their analytical and critical thinking skills. The programme seamlessly integrates hands-on laboratory work with theoretical study, offering practical experience alongside a deep understanding of scientific research methods. By the end of the programme, students will be well-prepared for a range of career opportunities in scientific research, technology, education, and other fields that demand a deep comprehension of chemistry principles and applications. The B.Sc. (Hons. / Hons. with Research) Chemistry equips graduates with the knowledge and skills to excel in diverse professional environments and contribute meaningfully to advancements in the chemical sciences.

- **Nature of B.Sc. (Hons. / Hons. with Research) Chemistry Programme**

Taking the NEP-2020 as an opportunity to review our existing academic programmes and redesign them for a more holistic, multidisciplinary and inclusive education, SBAS, K.R. Mangalam University is transforming its academic structure in a phased manner. School of Basic and Applied Sciences is offering Four Year Undergraduate Degree programme B.Sc. (Hons. / Hons. with Research) Chemistry with Multiple Entry- Multiple Exit option from the academic session 2023-24. Through multiple entry/exit option, students will enter and exit the programme at various stages. This course emphasized hands on practice, innovative thought process and project-based learning.

- **Aims of B.Sc. (Hons. / Hons. with Research) Chemistry Programme**

The aims of the B.Sc. (Hons. / Hons. with Research) Chemistry programme, in accordance with the National Education Policy (NEP), are multifaceted and comprehensive. The

programme aims to cultivate a strong foundation in chemistry principles and foster a deep understanding of the subject. It seeks to promote critical thinking, analytical skills, and problem-solving abilities among students, enabling them to address real-world challenges effectively. The B.Sc. (Hons. / Hons. with Research) Chemistry programme also encourages research-oriented thinking and provides opportunities for students to engage in scientific inquiry and exploration. By emphasizing hands-on laboratory work and practical applications, the programme aims to equip students with the necessary skills for conducting experiments and analysing data. Moreover, the programme seeks to foster an interdisciplinary approach, enabling students to connect chemistry with other scientific disciplines and societal issues. Overall, the B.Sc. (Hons. / Hons. with Research) Chemistry programme aspires to produce well-rounded graduates with a passion for learning and a strong foundation in chemistry, ready to make significant contributions to the scientific community and society at large.

- **Programme Educational Objectives (PEOs)**

These are deferred outcomes measured a few years after completion of the programme, where:

PEO1: Graduates will become globally competent chemistry professionals, ready for careers in government, industry, and research sectors, and equipped with skills for entrepreneurial initiatives in multidisciplinary fields.

PEO2: Graduates will demonstrate strong technical knowledge in chemistry, utilizing critical and innovative thinking to solve complex scientific and technological challenges.

PEO3: Graduates will act as ethical professionals, capable of leading and collaborating effectively within teams, contributing to their growth and the success of their organizations.

PEO4: Graduates will engage in lifelong learning, continuously developing their expertise to make meaningful contributions to society and the field of chemistry.

PEO5: Graduates will be well-prepared to advance to higher education and research opportunities in chemistry and related disciplines.

- **Programme Outcomes (POs)**

At the time of graduation, students of undergraduate degree programme will be able:

PO1: To apply chemistry principles and analytical techniques to solve real-world problems related to chemistry.

PO2: To develop strong critical thinking skills to analyse and evaluate scientific evidence and methods in chemistry research and applications.

PO3: To promote teamwork and collaborative learning for interdisciplinary research projects.

PO4: To build strong interpersonal and leadership abilities to collaborate effectively in diverse professional environments.

PO5: To communicate scientific ideas and research findings clearly to scientific and general audiences.

PO6: To learn the ability to work independently or in team and stay updated with scientific advancements.

PO7: To acquire a strong commitment to high ethical standards, responsible research, and professionalism in academic and industry settings.

PO8: To demonstrate environmental and social consciousness by integrating sustainable practices and responsible decision-making into scientific work.

- **Programme Specific Outcomes (PSOs)**

At the time of graduation, students of undergraduate degree programme will be:

PSO1: Understanding fundamental concepts, reactions, principles, and theories in organic, inorganic, physical, and analytical chemistry.

PSO2: Analyzing experimental data, chemical reactions, issues, and problems related to chemistry.

PSO3: Evaluating the validity and reliability of experimental results in chemistry.

PSO4: Applying chemistry principles and equations to solve problems, design experiments, and conduct research in various subfields of chemistry.

PSO5: Observing existing experimental methods by integrating new techniques and skills to improve the accuracy and efficiency of chemical research.

PSO6: Exhibiting coordinated manual skills in conducting chemistry experiments, ensuring safe and efficient handling of chemical, tools, and equipment while following detailed procedural steps.

- **Career Avenues**

- Research Scientist
- Academic Researcher
- Pharmaceutical Industry
- Chemical Analyst
- Materials Scientist
- Environmental Scientist
- Forensic Scientist
- Quality Control Specialist
- Science Communication
- Consulting
- Government Agencies
- Industrial Research
- Product Development
- Health and Safety Officer
- Entrepreneurship

These career avenues highlight the versatility and breadth of opportunities available to graduates with a B.Sc. in Chemistry and a research focus. Tailoring your skills and interests to these options can lead to a fulfilling and impactful career.

Graduates can pursue above careers, or continue with higher education (M.Sc., PhD) leading to academic or specialized roles in chemistry. Opportunities also exist in sectors like govt. jobs, defence services, data science, finance, and competitive examinations.

- **Duration**

The duration of this programme is four years (eight semesters) with multiple entry/exit options.

- **Eligibility Criteria for Award of Degree**

Name of Degree	Credits requirement	Completion Year
UG Certificate Chemistry	41	First Year
UG Diploma Chemistry	95	Second Year
B.Sc. Chemistry	137	Third Year
B.Sc. (Hons.) in Chemistry	173	Fourth Year
B.Sc. (Hons. with Research) in Chemistry	173	Fourth Year (Students who secure 75% marks and above in the first six semesters and wish to undertake research at the undergraduate level)

12.3 About the Programme: Bachelor of Science (Honours / Honours with Research) Mathematics

The B.Sc. (Hons. / Hons. with Research) Mathematics programme is an undergraduate academic course designed to provide students with a strong and versatile foundation in mathematics while offering a complementary focus in Data Science. This rigorous and dynamic curriculum covers essential areas of pure and applied mathematics, including algebra, calculus, statistics, analysis, and more.

Students will also explore foundational Data Science as well as AI/ML concepts through minor papers that cover topics such as data analytics using SQL, R programming, machine learning, and Data driven applications. This interdisciplinary approach equips students with the mathematical tools and data-driven skills essential for solving complex problems in today's data-centric world.

Throughout the programme, students will develop critical thinking, analytical abilities, and problem-solving skills, preparing them for a wide range of career opportunities in academia, research, technology, finance, and industries where mathematics and data science converge.

This programme is ideal for those looking to pursue advanced research in mathematics while acquiring the practical skills needed to navigate the evolving landscape of data science.

- **Nature of B.Sc. (Hons. / Hons. with Research) Mathematics Programme**

Taking the NEP-2020 as an opportunity to review our existing academic programmes and redesign them for a more holistic, multidisciplinary and inclusive education, SBAS, K.R. Mangalam University is transforming its academic structure in a phased manner. School of Basic and Applied Sciences is offering Four Year Undergraduate Degree programme B.Sc. (Hons. / Hons. with Research) Mathematics with Multiple Entry- Multiple Exit option from the academic session 2023-24. Through multiple entry/exit option, students will be able to enter and exit the programme at various stages. This course emphasized hands on practice, innovative thought process and project-based learning.

- **Aims of B.Sc. (Hons. / Hons. with Research) Mathematics Programme**

The aims of the B.Sc. (Hons. / Hons. with Research) Mathematics programme, in accordance with the National Education Policy (NEP), are multifaceted and comprehensive. The programme aims to cultivate a strong foundation in Mathematics principles and foster a deep understanding of the subject. It seeks to promote critical thinking, analytical skills, and problem-solving abilities among students, enabling them to address real-world

challenges effectively. The B.Sc. (Hons. / Hons. with Research) Mathematics programme also encourages research-oriented thinking and provides opportunities for students to engage in scientific inquiry and exploration. By emphasizing hands-on laboratory work and practical applications, the programme aims to equip students with the necessary skills for conducting experiments and analysing data. Moreover, the programme seeks to foster an interdisciplinary approach, enabling students to connect Mathematics with other scientific disciplines and societal issues. Overall, the B.Sc. (Hons. / Hons. with Research) Mathematics programme aspires to produce well-rounded graduates with a passion for learning and a strong foundation in Mathematics, ready to make significant contributions to the scientific community and society at large.

- **Programme Educational Objectives (PEOs)**

These are deferred outcomes measured a few years after completion of the programme, where:

PEO1: Graduates will develop a strong foundation in mathematical principles, empowering them to excel in careers across academia, government, industry, and research, and to respond to evolving challenges in mathematics and interdisciplinary fields.

PEO2: Graduates will commit to continuous learning and self-improvement, adapting their knowledge and skills to keep pace with advancements in mathematics and to make meaningful contributions to society.

PEO3: Graduates will integrate ethical practices, human values, and a sense of responsibility toward environmental sustainability in their professional and personal lives, fostering a positive societal impact.

PEO4: Graduates will be equipped with problem-solving and critical thinking skills in mathematical modelling, programming, and data analysis, enhancing their employability in diverse sectors.

PEO5: Graduates will be prepared to pursue advanced studies and research in mathematics and related fields, contributing to the development of new mathematical knowledge and applications.

- **Programme Outcomes (POs)**

At the time of graduation, students of undergraduate degree programme will be able:

PO1: To understand the impact of mathematical research on the environment and society and show a commitment by using sustainable and ethical practices in work.

PO2: To apply mathematical techniques, modern tools, software and programming languages to identify and solve complex mathematical problems.

PO3: To analyze and evaluate mathematical arguments and solutions with a keen, logical approach.

PO4: To use mathematical knowledge in research that connects with other fields like physics, computer science, engineering, economics, and social sciences

PO5: To clearly present and explain mathematical concepts and research findings to both specialized and general audiences.

PO6: To collaborate effectively with peers and professionals, contributing positively to team settings and academic environments.

PO7: To understand and follow ethical standards in research and practice, ensuring integrity and social responsibility in the use of mathematical knowledge.

PO8: To stay dedicated to ongoing learning and keep up with new developments in mathematics and related fields. Programme Specific Outcomes (PSO)

- **Programme Specific Outcomes (PSOs)**

At the time of graduation, students of undergraduate degree programme will be:

PSO1: Understanding fundamental concepts, theories, principles and their applications in different areas of mathematics.

PSO2: Applying mathematical methods and tools to model, simulate, and solve mathematical problems, enhancing research capabilities and practical applications.

PSO3: Analyzing complex mathematical problems and research data to determine patterns, relationships, and underlying principles.

PSO4: Evaluating mathematical models, algorithms and tools for solving mathematical problems.

PSO5: Operating mathematical software tools like Mathematica, MATLAB, and LaTeX to *organize, demonstrate, and present* mathematical solutions with accuracy, preparing them for research and industry applications that require computational expertise.

- **Career Avenues**

Graduates with a B.Sc. (Hons. / Hons. with Research) Mathematics have a diverse range of career avenues to explore. This combination of mathematics and data science skills equips them to thrive in various industries and professions where data-driven decision-making and analytical expertise are highly sought-after. Some potential career avenues for such graduates include:

1. **Data Analyst:** Data analysts are responsible for collecting, cleaning, and analyzing data to extract valuable insights that inform business decisions and strategies.
2. **Data Scientist:** Data scientists apply mathematical and statistical techniques to large datasets to develop predictive models and make data-driven recommendations.
3. **Business Analyst:** Business analysts use data analysis to identify trends, opportunities, and potential areas for improvement within organizations.
4. **Financial Analyst:** Financial analysts apply mathematical and statistical techniques to analyze financial data, assess investment opportunities, and make informed financial decisions.
5. **Market Research Analyst:** Market research analysts gather and analyze data to help companies understand market trends, consumer preferences, and competitive landscapes.
6. **Operations Research Analyst:** Operations research analysts use mathematical modelling and optimization techniques to improve operational efficiency in various industries.
7. **Actuarial Analyst:** Actuarial analysts assess risk and uncertainty in insurance and finance industries, using mathematical and statistical methods to estimate future events' probabilities.

8. **Quantitative Analyst:** Quantitative analysts, or quants, develop and implement mathematical models for financial and investment strategies.
9. **Data Engineer:** Data engineers design, build, and maintain data infrastructure and systems for efficient data processing and storage.
10. **Research Scientist:** Graduates can pursue research roles in academia, government, or private organizations, contributing to the advancement of mathematical and data science knowledge.
11. **Consultant:** Graduates can work as data science or analytics consultants, helping businesses and organizations optimize their operations and decision-making processes.
12. **Machine Learning Engineer:** Machine learning engineers develop and deploy machine learning models for various applications, such as natural language processing, image recognition, and recommendation systems.
13. **Healthcare Analyst:** In the healthcare sector, graduates can work on analyzing medical data, improving patient outcomes, and conducting research in medical data analysis.
14. **Academic and Teaching Careers:** Graduates can pursue further studies and research in mathematics or data science and build careers as educators and professors in academic institutions.
15. **Government and Public Sector:** Graduates may find opportunities in government agencies and public sectors, where data analysis and policy making go hand in hand.

- **Duration**

The duration of this programme is four years (eight semesters) with multiple entry/exit options.

- **Criteria for award of certificates and degree**

Name of Degree	Credits requirement	Completion Year
UG Certificate Mathematics	43	First Year
UG Diploma Mathematics	90	Second Year
B.Sc. Mathematics	129	Third Year
B.Sc. (Hons. / Hons. with Research) Mathematics	166	Fourth Year

12.4 About the Programme: Bachelor of Sciences (Honours / Honours with Research) Forensic Science

The B.Sc. (Hons. / Hons. with Research) Forensic Science is an undergraduate academic programme designed to provide students with a comprehensive foundation in the fascinating world of Forensic Science. This programme offers a rigorous and engaging curriculum that covers diverse areas of basic and applied sciences. Students in this programme will study fundamental principles of forensic science, engage in complex problem-solving, and enhance their analytical and critical thinking skills. Students in this programme will study fundamental principles of forensic science, engage in complex problem-solving, and enhance their analytical and critical thinking skills. Combining hands-on lab work with theoretical learning, they'll gain practical experience and a solid grasp of scientific research methods. The B.Sc. (Hons. / Hons. with Research) Forensic Science programme prepares students for exciting career opportunities in scientific research,

technology, education, and various other fields that require a strong grasp of Forensic Science principles and applications.

- **Nature of B.Sc. (Hons. / Hons. with Research) Forensic Science Programme**

Taking the NEP-2020 as an opportunity to review our existing academic programmes and redesign them for a more holistic, multidisciplinary and inclusive education, SBAS, K.R. Mangalam University is transforming its academic structure in a phased manner. School of Basic and Applied Sciences is offering Four Year Undergraduate Degree programme B.Sc. (Hons. / Hons. with Research) Forensic Science with Multiple Entry- Multiple Exit option from the academic session 2023-24. Through multiple entry/exit option, students will be able to enter and exit the programme at various stages. This course emphasized hands on practice, innovative thought process and project-based learning.

- **Aims of B.Sc. (Hons. / Hons. with Research) Forensic Science Programme**

The aims of the B.Sc. (Hons. / Hons. with Research) Forensic Science programme, in accordance with the National Education Policy (NEP), are multifaceted and comprehensive. The programme aims to cultivate a strong foundation in Forensic Science principles and foster a deep understanding of the subject. It seeks to promote critical thinking, analytical skills, and problem-solving abilities among students, enabling them to address real-world challenges effectively. The B.Sc. (Hons. / Hons. with Research) Forensic Science programme also encourages research-oriented thinking and provides opportunities for students to engage in scientific inquiry and exploration. By emphasizing hands-on laboratory work and practical applications, the programme aims to equip students with the necessary skills for conducting experiments and analysing data. Moreover, the programme seeks to foster an interdisciplinary approach, enabling students to connect Forensic Science with other scientific disciplines and societal issues. Overall, the B.Sc. (Hons. / Hons. with Research) Forensic Science programme aspires to produce well-rounded graduates with a passion for learning and a strong foundation in Forensic Science, ready to make significant contributions to the scientific community and society at large.

- **Programme Educational Objectives (PEOs)**

These are deferred outcomes measured a few years after completion of the programme, where:

PEO1: Graduates will evolve into proficient professionals, well-suited for roles in government, corporate, and research arenas, while also possessing the acumen for entrepreneurial pursuits in various interdisciplinary areas of forensic science.

PEO2: Graduates will demonstrate robust technical expertise to think critically and conduct thorough and accurate forensic analyses, interpreting results, and presenting findings effectively.

PEO3: Graduates will adhere to the ethical guidelines and legal frameworks governing the field, ensuring the responsible and unbiased application of forensic methodologies.

PEO4: Graduates will pursue lifelong learning and engage in advanced research, staying updated with emerging technologies and methodologies in forensic science.

PEO5: Graduates will demonstrate acumen for pursuing higher education and taking on roles in forensic laboratories, academic institutions, research or related industries, contributing to advancements in forensic science and public safety.

- **Programme Outcomes (POs)**

At the time of graduation, students of undergraduate degree programme will be able to:

PO1- To develop high order critical thinking skills to address and resolve real world forensic issues.

PO2- To develop problem solving skills and employ innovative approaches for effectively investigating and reconstructing crime scene, handling evidence, scientific instruments and legal reports.

PO3- To develop strong communication skills including reading, writing, listening, and speaking, to effectively express ideas and viewpoints.

PO4- To apply ethical principles and commit to professional ethics, responsibilities, and norms in academic and industrial environment.

PO5- To interact wisely and smartly within the society at personal and professional levels with a focus on achieving their target without affecting the societal harmony.

PO6- To practice and abide by processes required for a sustainable, healthy and safe environment and maintain contextual understanding of current environmental issues.

PO7- To foster self-confidence, leadership and collaborative skills to navigate between multicultural and multidisciplinary environments.

- **Programme Specific Outcomes (PSOs)**

At the time of graduation, students of undergraduate degree programme will be:

PSO1: Understanding basic principles, concepts, techniques and theories in forensic science to build a strong foundational knowledge.

PSO2: Applying appropriate forensic methodologies and techniques to analyze physical, biological, chemical and digital evidence in real-life crime scenarios and laboratory settings.

PSO3: Analyzing complex civil and criminal cases to develop critical thinking and problem-solving skills, enabling the formation of well-informed conclusions while upholding ethical standards and legal compliance.

PSO4: Evaluating the validity and efficacy of various forensic approaches and modify them to enhance the accuracy and reliability of forensic analyses.

PSO5: Observing and applying spatial awareness to reconstruct crime scenes, using technical skills to accurately position evidence and illustrate potential event sequences effectively.

PSO6: Creating innovative strategies to address and tackle complex challenges during forensic investigations and provide expert testimony in court.

- **Career Avenues**

Graduates can pursue careers in research and development (R&D) in industries, work as research scientists or assistants in academic and research institutions, or continue with higher education (M.Sc., PhD) leading to academic or specialized roles in Forensic Science. Opportunities also exist in sectors like govt. jobs, defence services, data science, finance, and competitive examinations.

- **Duration**

The duration of this programme is four years (eight semesters) with multiple entry/exit options.

- **Eligibility Criteria for Award of Degree**

Name of Degree	Credit Requirement	Completion Year
UG Certificate Forensic Science	42	First Year
UG Diploma Forensic Science	96	Second Year
B.Sc. Forensic Science	140	Third Year
B.Sc. (Hons. / Hons. With Research) Forensic Science	175/175	Fourth Year (Students who secure 75% marks and above in the first six semesters and wish to undertake research at the undergraduate level)

12.5 About the Programme: Master of Science Forensic Science

The Master of Science in Forensic Science (M.Sc. Forensic Science) is a postgraduate academic programme designed to provide students with a comprehensive foundation in the fascinating world of Forensic Science. This programme offers a rigorous and engaging curriculum that covers diverse areas such as Forensic Serology, Forensic Chemistry, Questioned Documents Examination, Fingerprint Examination, and more. Students enrolled in this programme will explore the fundamental principles that govern the universe, delve into complex problem-solving, and develop strong analytical and critical thinking skills. Students will gain practical experience and a deep understanding of scientific research methodologies through hands-on laboratory work. The M.Sc. Forensic Science programme prepares students for exciting career opportunities in scientific research, technology, education, and various other fields that require a strong grasp of Forensic Science principles and applications.

- **Programme Educational Objectives (PEOs)**

These are deferred outcomes measured a few years after completion of the programme, where:

PEO1: Graduates will become proficient forensic science professionals, capable of working in various sectors such as law enforcement, legal consultancy, corporate security, and research institutions, while also possessing the skills to pursue entrepreneurial opportunities in forensic technology.

PEO2: Graduates will demonstrate a strong foundation in forensic science principles and practices, enabling them to critically analyze evidence and apply innovative problem-solving skills to address complex investigative challenges.

PEO3: Graduates will uphold ethical standards in their professional practice, collaborating effectively in multidisciplinary teams to ensure justice and integrity in forensic investigations while contributing to the advancement of the field.

PEO4: Graduates will commit to lifelong learning and continuous professional development, staying abreast with advancements in forensic science and applying their knowledge to enhance public safety and contribute positively to society.

PEO5: Graduates will be well-prepared to pursue advanced studies and research opportunities in forensic science and related fields, furthering their expertise and contributing to the evolution of forensic methodologies.

- **Programme Specific Outcomes (PSOs)**

At the time of graduation, students of undergraduate degree programme will be:

PSO1: Understanding and mastering advanced forensic techniques across multiple specializations, by utilizing modern instrumentation and methodologies to solve complex forensic cases.

PSO2: Applying interdisciplinary knowledge from various fields to enhance forensic investigations and comprehend solutions to real world forensic issues.

PSO3: Analyzing and interpreting diverse types of forensic evidence, including physical, biological, chemical, and digital evidence, utilizing scientifically validated techniques to support investigations and legal proceedings.

PSO4: Evaluating the efficacy of legal framework and ethical standards governing the use of forensic evidence in courts with clarity and professionalism.

PSO5: Observing and handling forensic evidence meticulously, applying technical skills to package and preserve evidence accurately, ensuring minimal contamination and maximum integrity.

PSO6: Creating pioneering strategies to confront and resolve intricate challenges in forensic investigations, while delivering authoritative expert testimony in court.

PSO7: Conducting independent research to develop innovative forensic solutions, contribute to scientific advancements, and address emerging challenges in criminal investigations.

- **Career Avenues**

Opportunities exist in academics, forensic science laboratories and administration besides all the opportunities applicable to any other graduate like UPSC examinations, defence services and other govt. jobs. After completion of master's and clearing UGC NET/JRF exam one can pursue career in academics and research organizations as Assistant Professor and Research Associate respectively.

- **Duration**

We have designed a flexible CBCS, LOCF, multidisciplinary approach for the duration of 2025-2027. The minimum period required for M.Sc. degree in forensic science is two years.

- **Eligibility Criteria**

Bachelor's degree in science / forensic science/ medicine / engineering / pharmacy/Dentistry/ Ayush with at least 55% for General/OBC/EWS category candidates and 50% or equivalent for SC/ST and PwD category candidates.

- **Eligibility Criteria for Award of Degree**

Name of Degree	Credits requirement	Completion Year
PG Diploma in Forensic Science	42	First Year
M.Sc. Forensic Science	80 (total)	Second Year

12.6 About the Programme: B.Sc.-M.Sc. (Integrated) Forensic Science

The B.Sc.-M.Sc. (Integrated) Forensic Science is a 5-year academic programme designed to provide students with a comprehensive foundation and advanced studies in the fascinating world of Forensic Science. This programme offers a rigorous and engaging curriculum that covers

diverse areas of basic and applied sciences. Students in this programme will study fundamental principles of forensic science, engage in complex problem-solving, and enhance their analytical and critical thinking skills. Students in this programme will study fundamental and advanced principles of forensic science, engage in complex problem-solving, and enhance their analytical and critical thinking skills. Combining hands-on lab work with theoretical learning, they'll gain practical experience and a solid grasp of scientific research methods. The B.Sc.-M.Sc. (Integrated) Forensic Science programme prepares students for exciting career opportunities in scientific research, technology, education, and various other fields that require a strong grasp of Forensic Science principles and applications.

- **Nature of B.Sc.-M.Sc. (Integrated) Forensic Science Programme**

Taking the NEP-2020 as an opportunity to review our existing academic programmes and redesign them for a more holistic, multidisciplinary and inclusive education, SBAS, K.R. Mangalam University is transforming its academic structure in a phased manner. School of Basic and Applied Sciences is offering Five Year Undergraduate Degree programme B.Sc.-M.Sc. (Integrated) Forensic Science with Multiple Entry- Multiple Exit option from the academic session 2023-24. Through multiple entry/exit option, students will be able to enter and exit the programme at various stages. This course emphasized hands on practice, innovative thought process and project-based learning.

- **Aims of B.Sc.-M.Sc. (Integrated) Forensic Science Programme**

The aims of the B.Sc.-M.Sc. (Integrated) Forensic Science programme, in accordance with the National Education Policy (NEP), are multifaceted and comprehensive. The programme aims to cultivate a strong foundation in Forensic Science principles and foster a deep understanding of the subject. It seeks to promote critical thinking, analytical skills, and problem-solving abilities among students, enabling them to address real-world challenges effectively. The B.Sc. (Hons. / Hons. with Research) Forensic Science programme also encourages research-oriented thinking and provides opportunities for students to engage in scientific inquiry and exploration. By emphasizing hands-on laboratory work and practical applications, the programme aims to equip students with the necessary skills for conducting experiments and analysing data. Moreover, the programme seeks to foster an interdisciplinary approach, enabling students to connect Forensic Science with other scientific disciplines and societal issues. Overall, the B.Sc.-M.Sc. (Integrated) Forensic Science programme aspires to produce well-rounded graduates with a passion for learning and a strong foundation in Forensic Science, ready to make significant contributions to the scientific community and society at large.

- **Programme Educational Objectives (PEOs)**

These are deferred outcomes measured a few years after completion of the programme, where:

PEO1: Graduates will evolve into proficient professionals, well-suited for roles in government, corporate, and research arenas, while also possessing the acumen for entrepreneurial pursuits in various interdisciplinary areas of forensic science.

PEO2: Graduates will demonstrate robust technical expertise to think critically and conduct thorough and accurate forensic analyses, interpreting results, and presenting findings effectively.

PEO3: Graduates will adhere to the ethical guidelines and legal frameworks governing the field, ensuring the responsible and unbiased application of forensic methodologies.

PEO4: Graduates will pursue lifelong learning and engage in advanced research, staying updated with emerging technologies and methodologies in forensic science.

PEO5: Graduates will demonstrate acumen for pursuing higher education and taking on roles in forensic laboratories, academic institutions, research or related industries, contributing to advancements in forensic science and public safety.

- **Programme Outcomes (POs)**

At the time of graduation, students of undergraduate degree programme will be able to:

PO1- Critical Thinking: Develop high order critical thinking skills to address and resolve real world forensic issues.

PO2- Problem Solving: Develop problem solving skills and employ innovative approaches for effectively investigating and reconstructing crime scene, handling evidence, scientific instruments and legal reports.

PO3- Effective communication: Develop strong communication skills including reading, writing, listening, and speaking, to effectively express ideas and viewpoints.

PO4- Ethics: Apply ethical principles and commit to professional ethics, responsibilities, and norms in academic and industrial environment.

PO5- Interpersonal skills: Interact wisely and smartly within the society at personal and professional levels with a focus on achieving their target without affecting the societal harmony.

PO6- Environment and Sustainability: Practice and abide by processes required for a sustainable, healthy and safe environment and maintain contextual understanding of current environmental issues.

PO7- Team building and Leadership: Foster self-confidence, leadership and collaborative skills to navigate between multicultural and multidisciplinary environments.

- **Programme Specific Outcomes (PSOs)**

At the time of graduation, students of undergraduate degree programme will be:

PSO1: Understanding basic principles, concepts, techniques and theories in forensic science to build a strong foundational knowledge.

PSO2: Applying appropriate forensic methodologies and techniques to analyze physical, biological, chemical and digital evidence in real-life crime scenarios and laboratory settings.

PSO3: Analyzing complex civil and criminal cases to develop critical thinking and problem-solving skills, enabling the formation of well-informed conclusions while upholding ethical standards and legal compliance.

PSO4: Evaluating the validity and efficacy of various forensic approaches and modify them to enhance the accuracy and reliability of forensic analyses.

PSO5: Observing and applying spatial awareness to reconstruct crime scenes, using technical skills to accurately position evidence and illustrate potential event sequences effectively.

PSO6: Creating innovative strategies to address and tackle complex challenges during forensic investigations and provide expert testimony in court.

- **Career Avenues**

Graduates can pursue careers in research and development (R&D) in industries, work as research scientists or assistants in academic and research institutions or continue with higher education (PhD) leading to academic or specialized roles in Forensic Science. Opportunities also exist in sectors like govt. jobs, defence services, data science, finance, and competitive examinations.

- **Duration**

The duration of this programme is five years (ten semesters) with multiple entry/exit options.

- **Eligibility Criteria for Award of Degree**

Name of Degree	Credits requirement	Completion Year
UG Certificate Forensic Science-	42	First Year
UG Diploma Forensic Science-	96	Second Year
B.Sc. Forensic Science-	140	Third Year
B.Sc. (Hons.) Forensic Science & PG Diploma in Forensic Science-	175	Fourth Year
Integrated Degree Programme (B.Sc. + M.Sc.) Forensic Science	213	Fifth Year

12.7 About the Programme: Doctor of Philosophy (Ph.D.)

The School of Basic and Applied Sciences (SBAS) offers doctoral research programmes in the disciplines of Physics, Chemistry, Mathematics, and Forensic Sciences. The Ph.D. programme is designed to develop advanced research skills, promote innovation, and contribute to the generation of new knowledge in frontier areas of science and technology.

The programme provides scholars with opportunities to undertake original research under the guidance of experienced faculty members and research supervisors. Scholars are encouraged to engage in interdisciplinary research, publish in reputed journals, participate in conferences, and contribute to societal and industrial challenges through scientific inquiry.

Disciplines Offered

- Ph.D. in Physics
- Ph.D. in Chemistry
- Ph.D. in Mathematics
- Ph.D. in Forensic Sciences

Eligibility Criteria

Candidates seeking admission to the Ph.D. programme must possess:

- A master's degree in the relevant discipline or an allied subject from a recognized university.
- A minimum of 55% marks in aggregate or equivalent grade in the qualifying postgraduate degree, or as prescribed by the University and UGC regulations from time to time.
- Candidates belonging to reserved categories shall be eligible for relaxation in marks as per applicable UGC/Government norms.

- Candidates who have qualified national-level examinations such as CSIR-NET, GATE, JRF, or equivalent examinations, wherever applicable, may be considered according to the University's admission regulations.

Admission Process

Admission to the Ph.D. programme is based on:

1. Submission of an online/offline application.
2. Entrance examination conducted by the University, wherever applicable.
3. Personal interview/presentation before the School Research Committee (SRC) or the designated admission panel.
4. Evaluation of the candidate's research aptitude, subject knowledge, and proposed area of research.

Candidates exempted from the entrance test, as per University/UGC regulations, may directly appear for the interview process.

Duration of the Programme

- **Minimum Duration:** 3 years (including coursework).
- **Maximum Duration:** As prescribed under the prevailing University and UGC regulations.
- Extensions, if any, shall be governed by the University's Ph.D. regulations and applicable statutory guidelines.

Course Work

All admitted research scholars are required to complete the prescribed Ph.D. coursework during the initial phase of the programme. The coursework is intended to strengthen research methodology, subject-specific knowledge, academic writing, ethics in research, and related skills necessary for doctoral research.

Successful completion of coursework is mandatory for progression to the research phase of the programme.

Research Supervision

Each research scholar is assigned a supervisor and, where necessary, a co-supervisor. The research work is periodically monitored through the Research Advisory Committee (RAC), which reviews the scholar's progress and provides academic guidance.

Research Areas

The school encourages research in diverse areas, including but not limited to:

Physics

- Materials Science and Nanotechnology
- Semiconductor Physics
- Energy Materials
- Photonics and Optoelectronics
- Computational Physics
- Radiation Physics

Chemistry

- Organic and Medicinal Chemistry
- Inorganic and Coordination Chemistry
- Physical Chemistry
- Environmental Chemistry
- Materials and Polymer Chemistry
- Green and Sustainable Chemistry

Mathematics

- Pure Mathematics
- Applied Mathematics
- Differential Equations
- Mathematical Modelling
- Computational Mathematics
- Statistics and Data Analytics

Forensic Sciences

- Forensic Biology and DNA Analysis
- Forensic Chemistry and Toxicology
- Digital and Cyber Forensics
- Questioned Document Examination
- Crime Scene Investigation
- Forensic Instrumentation and Analysis

Evaluation and Award of Degree

The Ph.D. degree is awarded upon:

- Successful completion of coursework requirements.
- Approval of periodic progress reviews.
- Submission of the doctoral thesis.
- Evaluation of the thesis by external examiners.
- Successful defence of the research work through an open viva-voce examination.

The degree is awarded in accordance with the regulations and standards prescribed by K.R. Mangalam University and the University Grants Commission (UGC).

Facilities and Research Support

Research scholars have access to:

- Well-equipped laboratories and research facilities.
- Central library and digital resources.

- Advanced analytical and computational tools.
- Research seminars, workshops, and conferences.
- Opportunities for publications, patents, and collaborative research projects.

The School of Basic and Applied Sciences is committed to fostering a vibrant research environment that promotes academic excellence, innovation, ethical research practices, and societal impact.

13. Internships and Placement (Training, Apprenticeship, Projects)

Undergraduate students at the School of Basic and Applied Sciences (SBAS) are required to complete one month summer internship during the first and second years of their degree programme, each carrying a weightage of 2 credits. This mandatory component is designed to provide hands-on experience and practical exposure, which are essential for obtaining their degree. Many students undertake internships at prestigious institutions with which SBAS has signed Memorandums of Understanding (MoUs), ensuring access to quality learning environments. Additionally, with the guidance and support of faculty members, students secure internships at renowned research institutes and industries, further enriching their academic and professional experiences. These internships enable students to bridge the gap between theoretical knowledge and real-world applications, preparing them for future challenges in academia and the workplace.



B.Sc. (Hons.) Physics 2nd year students completing one month Internship at Deshbandhu College, New Delhi under MoU.

Graduates from the School of Basic and Applied Sciences (SBAS) at K.R. Mangalam University have excelled in diverse roles across various industries, showcasing the quality of education and training provided by the institution.



Krish Mehta (B.Sc. (Hons.) Forensic Science) has been placed as an Operation Executive at Rajta Golden Transport Company in 2025.



Mehek (B.Sc. (Hons.) Physics) has been placed as an Academic Counsellor at Pregrad Pvt. Ltd. in 2025.



Priyanshu Saxena (B.Sc. (Hons.) Forensic Science) has got internship at Forfra Solutions for a period of six months in 2025.



Amrit Anand (B.Sc. (Hons.) Physics) Roll No. 2203090006 has cleared Combined Defence Services exam conducted by Union Public Service Commission in 2025.



Anjali Pokhariyal (B.Sc. (Hons.) Forensic Science) has been placed as a Sales Executive at Tutorx Educational Services Private Limited in 2025.



Agnivesh Tiwari (B.Sc. (Hons.) Mathematics) Roll No. 1903110001 has worked as Assistant Sale Manager at RETINAI ELECTRONICS INDIA PVT. LTD. from 12/23 to 03/25.

These alumni exemplify the diverse career opportunities available to SBAS graduates, highlighting their preparedness for professional and academic pursuits.

14. School Event Calendar

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
1	Industrial Visit to Rohini Forensic science Laboratory	12-Sep-25	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Dr. Shivani Sehgal, Dr. Mahipal and Ms. Nisha Rani	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
2	Industrial Visit National Doping and Testing Laboratory	09-Oct-25	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Dr. Baljeet Yadav, Dr. Shivani Sehgal	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
3	Industrial Visit to AIIMS (Autopsy)	23-Sep-25	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Dr. Saba Rashid, Dr. Baljeet Yadav	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
4	Industrial Visit to National Physical Laboratory	23-Sep-25	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Dr Rishi Ranjan and Dr Vicky Kapoor	To help students develop practical skills related to their field of study and improve employability.	Students will gain the exposure about innovative processes and practices that are not typically covered in textbooks or classroom settings.

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
5	Seminar -Intellectual Property Rights in collaboration with National Intellectual Property Awareness Mission NIPAM	12-Sep-25	SDG 9 Industry, Innovation, and Infrastructure: IPR encourages innovation and R&D. SDG 4: Quality Education: Enhances knowledge and skills in legal and innovation fields.	Dr Mahipal and Dr Baljeet Yadav	To equip students and researchers with a comprehensive understanding of Intellectual Property Rights (IPR), its significance in innovation and entrepreneurship, and how it contributes to economic growth and sustainability	Increased awareness of how to protect innovative ideas and research outputs.
6	International Conference on nextgen forensic: interdisciplinary strategies for criminal investigation	November 7-8, 2025	SDG 9 Industry, Innovation, and Infrastructure: IPR encourages innovation and R&D. SDG 4: Quality Education: Enhances knowledge and skills in legal and innovation fields.	Dr Mahipal and Dr Baljeet Yadav, Mr. Nitin Tyagi, Dr. Saba Rashid	To highlight best practices and innovative approaches to teaching and learning.	Potential publication of conference proceedings, and journal articles
7	Research Paper/ Project/ Field Project under New MoU (Activity -1)	Dec-25	SDG 4/9 4.3.1: Participation rate of youth and adults in formal and non-formal education and training 9.5.1: Research and development expenditure as a proportion of GDP	Mathematic / Forensic Science/ Chemistry (Dr Baljeet and Dr Mahipal, Dr Mina Kumari, Dr Neeraj Kumari)	To enhance the research capabilities, analytical skills, and professional development of the students	Development of research skills, methodologies, and interdisciplinary collaboration capabilities among students
8	Research Paper/ Project/ Field Work under New MoU (Activity -2)	Dec-25	SDG 4/9 4.3.1: Participation rate of youth and adults in formal and non-formal education and training 9.5.1: Research and development expenditure as a proportion of GDP	Mathematic / Forensic Science/ Chemistry (Dr Baljeet and Dr Mahipal, Dr Mina Kumari, Dr Neeraj Kumari)	To enhance the research capabilities, analytical skills, and professional development of the students	Development of research skills, methodologies, and interdisciplinary collaboration capabilities among students
9	Capacity Development Program on the Power of Soft Skills: Shaping Professional and Personal Excellence	03-09-2025-30-9-2025	SDG 4 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.	Dr Kanchan Jangra, Mr. Nitin Tyagi and Dr. Saba Rashid, Dr. Mehak and Dr. Pratibha	To raise awareness about the significance of soft skills such as communication, teamwork, adaptability, and leadership in career development.	Participants gain insights and strategies for leveraging soft skills to advance their careers and achieve professional goals.

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
10	Capacity Development Program: Latest Trends, Technology and Computational Tools in Science (Co-Pilot for documentation, Dashboard and Excel, Origin etc.)	03-09-2025-30-9-2025	SDG 4 and 9: Quality education (SDG 4) builds a skilled workforce capable of innovation.	Dr. Chandra Mohan, Dr. Deepak, Dr. Rupali, Dr. Ruby Jindal, Dr. Prawar	To explore how technological advancements are transforming scientific research and innovation.	Enhanced awareness and understanding of emerging technologies shaping the future of science.
11	Capacity Development Program: on Awareness Digital Analysis and Forensic Science Technology	10/6-10/2025	SDG 4 and 9: Quality education (SDG 4) builds a skilled workforce capable of innovation.	Ms. Kritika and Dr. Sourabh Singh, Dr. Shivani, Ms. Nisha, Mr. Nitin Tyagi	To explore how technological advancements are transforming scientific research and innovation.	Enhanced awareness and understanding of emerging technologies shaping the future of science.
12	FUSE 2.0 (Workshop on Crime Scene Management, Seminar on Inter-disciplinary approach of forensic science, Moot-Court Competition: : Advocating Justice, Fostering Excellence, Model Making Competition, Crime Scene investigation)	15-19 September 2025	SDG 3.6.1: Reduction in incidence of crime-related injuries or deaths	Ms. Kritika Singh, Ms. Saloni, Ms. Nisha and Mr. Nitin Tyagi	To enhance students' understanding of forensic science and its relevance in solving real-world problems.	Enhanced interdisciplinary learning, networking, and practical exposure among forensic science students.
13	Inter-University Event - Innovate & Integrate: Interdisciplinary Science Challenge	17-Oct-25	SDG 4 and 9: Quality education (SDG 4) builds a skilled workforce capable of innovation.	Dr. Ruby Jindal, Dr Pooja Vats	To foster innovation and collaboration among students from diverse scientific disciplines through problem-solving and research.	Enhanced scientific thinking, teamwork, and development of practical, interdisciplinary solutions to real-world problems.
14	Faculty Development Program '21st Century Education: Ensuring Quality through Innovation and Inclusion' collaboration with IQAC	June/July 2026	SDG 16.3: Ensure equal access for all participants to affordable and quality education.	Dr. Rupali, Dr. Yogendra Kumar Rajoria and Dr Mamta Raj	Enhance teaching competencies by incorporating 21st-century pedagogies such as ICT, flipped classrooms, and blended learning.	Strengthened implementation of NEP 2020 values and SDG-aligned curriculum

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
15	Orientation Session on Quality of Education in collaboration with IQAC (Director IQAC of Collaborating College)	08-Nov-25	SDG 4.1/ 4.5: Ensure education is accessible and inclusive for all children and youth	Dr Vicky Kapoor and Dr Ritika Khatri	To enhance awareness among faculty members about the importance of quality assurance in higher education.	Participants will gain a clear understanding of the importance of quality assurance in enhancing academic and administrative standards.
16	A Seminar on Comprehensive Orientation Program for Enhancing Quality Education and Student Preparedness with IQAC	09-Oct-25	SDG 4.1: Ensure education is accessible and inclusive for all children and youth	Dr. Divyanshi and Dr. Kanchan	To equip students with essential skills and knowledge for academic excellence and holistic development.	Improved student readiness, engagement, and enhanced quality of education delivery.
17	Seminar on 'Fostering Tolerance and Cultural Sensitivity in Higher Education'	16-Oct-25	4.7: Ensure that all learners acquire knowledge and skills needed to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity.	Dr Kriti and Dr Pooja	To promote understanding, respect, and appreciation for diverse cultures and perspectives in higher education institutions.	Enhanced cultural awareness and strengthened inclusive practices among students and faculty.

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
18	Fostering Constitutional Values and Responsibilities Among Students and Employees	18-Oct-25	Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity.	Dr. Mehak Ahuja and Dr Rajni	To instil awareness and respect for constitutional values and fundamental duties among students.	Enhanced civic sense, ethical responsibility, and commitment to democratic principles.
19	Training Program on 'Code of Conduct' for students	Induction Program,	Students gained a clear understanding of the importance and relevance of the code of conduct in maintaining discipline and fostering a positive academic environment.	Dr Neeraj Kumari	To familiarize students with the institution's Code of Conduct and instil ethical, respectful academic and social behaviour.	Enhanced student awareness and adherence to conduct guidelines, fostering a disciplined, respectful learning community.
20	'Training Program on Professional Ethics' for students	Induction Program,	SDG 4.4, 4.7: promote skills development and education for sustainable development.	Mr Vishal and Dr Deepak	To instil ethical values and professional responsibility among students.	Enhanced understanding of ethical conduct and decision-making in professional settings.
21	Training Program on 'Professional Ethics' for Teachers and Staff	22-Nov-25	SDG 4.4, 4.7: promote skills development and education for sustainable development.	Dr Yogendra Kumar Rajoria and Dr. Mohabbat Ali	To enhance teachers' understanding and practice of ethical standards in the teaching profession.	Teachers gained a deeper understanding of the core principles of professional ethics, including integrity, responsibility, respect, fairness, and care.
22	Students Immersion Program at MNIT, Jaipur/ IISER Mohali	Nov-25	SDG 4.4: Increase the number of youth and adults with relevant skills, including technical and vocational skills, for employment and entrepreneurship.	Chemistry/ Physics/ Forensic Science Faculties	To facilitate hands-on activities that promote problem-solving, teamwork, and innovation and code of conduct for teaching and non-teaching staff	Students relate academic concepts to real-world scenarios, leading to deeper learning.

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
23	Training Program on 'Code of Conduct for Teachers and Staff'	27-Sep-25	SDG 4.4, 4.7: promote skills development and education for sustainable development.	Prof Varuna Tyagi	To enhance teachers' understanding and practice of ethical standards in the teaching profession.	Teachers gained a deeper understanding of the core principles of professional ethics, including integrity, responsibility, respect, fairness, and care.
24	In Continuation with Odd 24-25 -Exploring Causes and Management of Malnutrition in Pediatric Populations: Case Studies in Nearby Village	August to November 2025	SDG 3.9: By 2030, substantially reduce the number of deaths and illnesses due to malnutrition and	Dr. Kriti, Dr. Rishi Kumar, Dr. Deepak, Dr. Mamta Raj, Ms Sapna, Dr Pratibha, Dr Saurabh, Dr Mohabbat Ali, and Dr. Saba	To assess the nutritional status of different population groups (children, pregnant women, elderly) in the village	Obtain a comprehensive understanding of the causes, types, and severity of malnutrition prevalent in the village.
25	Industrial Visit to RCB, Faridabad	29-Jan-26	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Ms Kritika and Dr. Nisha	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
26	Industrial Visit CFSL, Delhi	27-Mar-25	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Mr. Nitin Tyagi, Dr. Sourabh and Dr. Vaibhav	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
27	Industrial Visit	30-Jan-26	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Dr. Ritika, Dr. Rishi Ranjan and Dr. Kriti	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
28	Conference	13-14 March 2026	SDG 9 Industry, Innovation, and Infrastructure: IPR encourages innovation and R&D. SDG 4: Quality Education: Enhances knowledge and skills in legal and innovation fields.	Dr. Mina Kumari, Dr. Prawar, Dr. Arun Kumar and Dr. Ali	To highlight best practices and innovative approaches to teaching and learning.	Potential publication of conference proceedings, and journal articles

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
29	(New Case Study) Analysis of Water Quality in nearby villages and their impact on human health	Complete Semester	SDG 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and SDG 6.1: Achieve universal and equitable access to safe and affordable drinking water	Dr. Divyanshi, Ms Nisha, Dr. Monika, Dr. Pooja Bansal	To educate rural communities about the importance of safe drinking water and hygienic practices.	Improved awareness regarding the importance of clean water and hygiene.
30	Research Paper/ Project/ Field Project under New MoU (Activity -1)	Complete Semester	SDG 4/9 4.3.1: Participation rate of youth and adults in formal and non-formal education and training 9.5.1: Research and development expenditure as a proportion of GDP	Physics - Dr. Ruby	To enhance the research capabilities, analytical skills, and professional development of the students	Development of research skills, methodologies, and interdisciplinary collaboration capabilities among students
31	Research Paper/ Project/ Field Work under New MoU (Activity -2)	Complete Semester	SDG 4/9 4.3.1: Participation rate of youth and adults in formal and non-formal education and training 9.5.1: Research and development expenditure as a proportion of GDP	Physics - Dr. Ruby	To enhance the research capabilities, analytical skills, and professional development of the students	Development of research skills, methodologies, and interdisciplinary collaboration capabilities among students
32	Capacity Building Program on Communication Skills to Enhance Professional Confidence	Jan-May	SDG 4 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.	Dr. Nainy, Dr. Ritika Khatri, Dr. Pradeep, and Ms. Kritika	To develop essential soft skills such as communication, teamwork, leadership, emotional intelligence, and problem-solving among participants.	Exhibit higher levels of professional confidence in academic and workplace scenarios.
33	Life Skills Enhancement Program: Meditation, Yoga and Holistic Health	Jan-May	SDG 3 SDG 3.4: Promote mental health and well-being	Dr Manju and Dr. Saba Rashid	Promote physical fitness through yoga postures that improve flexibility, posture, strength, and overall vitality.	Experience improved concentration, clarity, and emotional balance.
34	Forensi Quest: Inter-University Forensic Science Challenge	Mar-26	SDG 9.5: Enhance scientific research, upgrade the technological capabilities in particular developing countries,	Dr. Baljeet, Dr. Sourabh, and Dr. Vaibhav	To promote scientific temper, critical thinking, problem solving approach and creativity amongst students	Enthusiasm for science related projects and activities; Possible solution for real world problems; Create a culture for scientific enquiry

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
35	Science Fiesta - 2026 with KEIC	27-Feb-26	SDG 9.5: Enhance scientific research, upgrade the technological capabilities in particular developing countries,	Dr. Rishi Ranjan, Dr. Nitish Yadav	To promote scientific temper, critical thinking, problem solving approach and creativity amongst students	Enthusiasm for science related projects and activities; Possible solution for real world problems; Create a culture for scientific enquiry
36	Alumni Engagement Program for Strengthening Institutional Networks	23-Jan-26	SDG 4: Ensure that all learners acquire the knowledge and skills needed to promote sustainable development	Dr. Komal Yadav	To establish and strengthen networks among former students.	To create a supportive network with alumni and to provide the guidance for their career
37	Orientation Session on Building a Culture of Quality: Roles of Students and Faculty in collaboration with IQAC	19-Feb-26	SDG 4.7: Ensure that all learners acquire knowledge and skills needed to promote sustainable development through quality teaching, training, and educational reforms.	Dr. Rajni Gautam and Dr. Pooja Vats	To familiarize students and teachers with Institutional Quality Standards related to teaching– learning, governance, research, ethics, and community engagement.	Teachers align teaching plans, assessments, and documentation with institutional quality expectations.
38	Voices of Equality - A Gender Sensitization Initiative on International Women's Day	06-Mar-26	Target 5.1: End all forms of discrimination against women and girls everywhere.	Dr. Saloni Rathee, and Dr. Sapna	To promote awareness about gender equality and sensitize participants to the social, cultural, and institutional barriers faced by women and marginalized genders.	Participants will develop a deeper understanding of gender issues, stereotypes, rights, and responsibilities.
39	All SBAS faculties to participate in at least one of the offline FDP programs organised at the University	01-Jun-26	SDG 4 – Quality Education		Upgrade subject knowledge and recent trends, promote research aptitude and publication quality, Build academic leadership and institutional governance capacity	Faculty demonstrate improved teaching effectiveness and learner engagement. Teaching methods become more student-centred. Classroom interaction increases. Faculty remain updated with current disciplinary and industry practices. Teaching content becomes more relevant. Academic awareness improves.

S. No.	Name of the event	Date of the Event (DD-MM-YYYY)	SDG Goals	Organizers (Faculty In charge)	Objective	Outcome
40	Pending ODD 2025-26 Students Immersion Program at MNIT, Jaipur/ IISER Mohali	Jun-26	SDG 4.4: Increase the number of youth and adults with relevant skills, including technical and vocational skills, for employment and entrepreneurship.	Mr Nitin Tyagi	To facilitate hands-on activities that promote problem-solving, teamwork, and innovation.	Students relate academic concepts to real-world scenarios, leading to deeper learning.
41	Pending ODD 2025-26 Seminar -Intellectual Property Rights in collaboration with National Intellectual Property Awareness Mission NIPAM	11-Apr-26	SDG 9 Industry, Innovation, and Infrastructure: IPR encourages innovation and R&D. SDG 4: Quality Education: Enhances knowledge and skills in legal and innovation fields.	Dr Mahipal and Dr Baljeet Yadav	To equip students and researchers with a comprehensive understanding of Intellectual Property Rights (IPR), its significance in innovation and entrepreneurship, and how it contributes to economic growth and sustainability	Increased awareness of how to protect innovative ideas and research outputs.
42	Pending ODD 2025-26 Research Paper/ Project/ Field Work under New MoU (Activity -2)	Mar-26	SDG 4/9 4.3.1: Participation rate of youth and adults in formal and non-formal education and training 9.5.1: Research and development expenditure as a proportion of GDP	Mathematic / Forensic Science/ Chemistry (Dr Baljeet and Dr Mahipal, Dr Mina Kumari, Dr Neeraj Kumari)	To enhance the research capabilities, analytical skills, and professional development of the students	Development of research skills, methodologies, and interdisciplinary collaboration capabilities among students
43	Industrial Visit to RCB, Faridabad	29-Jan-26	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Ms Kritika and Dr. Nisha	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
44	Industrial Visit CFSL, Delhi	27-Mar-25	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Mr. Nitin Tyagi, Dr. Sourabh and Dr. Vaibhav	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.
45	Industrial Visit	30-Jan-26	SDG 4 4.3.1: Participation rate of youth and adults in formal and non-formal education and training.	Dr. Ritika, Dr. Rishi Ranjan and Dr. Kriti	To enhance students' knowledge by observing the implementation of concepts learned in classrooms.	Students get firsthand experience with modern technologies, equipment, and machinery used in industries.

16. Testimonials (Outstanding students/Alumni/ Distinguished guest)



I am a proud graduate of the B.Sc. Mathematics (2022–2025) programme, I extend my sincere gratitude to K.R. Mangalam University for playing a pivotal role in shaping my academic journey. The programme strengthened my analytical thinking, problem-solving abilities, and conceptual understanding of mathematics. Through supportive faculty, well-structured coursework, and continuous guidance, I gained the confidence to approach complex challenges with clarity and precision. My experience at KRMU has been transformative, helping me grow both academically and personally. I am truly thankful to the university for providing an encouraging learning environment and for equipping me with the skills essential for my future professional endeavors.

Rahul S
B.Sc. Mathematics (2022–2025)



My academic journey at K.R. Mangalam University has been one of the most transformative and memorable phases of my life. As a B.Sc. (Hons.) Forensic Science student (2022–2025), I had the privilege of learning in an environment that encouraged curiosity, analytical thinking, and hands-on exploration. The well-designed curriculum, advanced forensic laboratories, and the guidance of highly knowledgeable faculty members played a crucial role in strengthening my foundation in forensic science. Their mentorship motivated me to go beyond textbooks, think critically, and develop a deeper understanding of the real-world applications of forensic principles.

Beyond academics, the dynamic and supportive campus culture helped me evolve into a confident, disciplined, and goal-oriented individual. The university not only shaped my professional skills but also instilled values, leadership qualities, and a vision for my future career. K.R. Mangalam University has given me knowledge, opportunities, and invaluable experiences that have contributed immensely to my personal and professional growth. I feel proud to be an alumnus of this esteemed institution, and I will always remain grateful for the guidance and support I received throughout my journey.

Prayankar Rudra Paul
B.Sc. (H) Forensic



My journey as a B.Sc. (Hons.) Forensic Science student at K.R. Mangalam University has been a truly transformative and inspiring experience. The university provided me with a strong academic foundation, state-of-the-art laboratories, and an environment that constantly encouraged scientific curiosity and critical thinking. Throughout my academic years, I had the privilege of learning from highly experienced and supportive faculty members who guided me at every step. Their mentorship not only strengthened my theoretical understanding but also enhanced my practical skills, preparing me for real-world forensic challenges. The dynamic campus environment, co-curricular opportunities, and hands-on exposure to various forensic domains helped shape me into a confident and skilled individual. I am grateful for the discipline, values, and professional outlook that the university instilled in me.

K.R. Mangalam University has played a pivotal role in shaping my academic and personal growth. I feel proud to be an alumnus of this esteemed institution and will always remain thankful for the knowledge, opportunities, and unforgettable experiences it has given me.

Sanjeev Kumar
**B.Sc. (H) Forensic
Science (2022–2025)**



As a B.Sc. Physics student at K.R. Mangalam University, my journey has been truly enriching and inspiring. The faculty members are highly qualified, passionate about teaching, and always approachable. Their constant support has helped me strengthen my conceptual understanding and guided me effectively in research and project work.

During my time at the university, I got the opportunity to work on an internship project that provided valuable hands-on experience and helped me develop a problem-solving approach. The guidance and encouragement from the faculty, along with the support of the university's Innovation and Incubation Centre, KEIC, played an important role in nurturing my entrepreneurial aspirations. I was fortunate to have my startup idea, along with my team, incubated at KEIC, where we received mentorship, resources, and expert guidance to develop our concept further.

Beyond academics, K.R. Mangalam University offers a vibrant campus life supported by excellent infrastructure, modern laboratories, and a strong emphasis on holistic student development. The university has truly provided me with a strong foundation for achieving my academic and professional goals.

Kashish
B.Sc. (H) Physics
2022-25



As a B.Sc. Physics student at K.R. Mangalam University, my journey has been truly enriching and inspiring. The faculty members are highly qualified, passionate about teaching, and always approachable. Their constant support has helped me strengthen my conceptual understanding and guided me effectively in research and project work.

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Kashish
B.Sc. (H) Physics
2022-25

17. Contact Details

Dean: Prof. (Dr.) Meena Bhandari

Email Id: deansbas@krmangalam.edu.in, meena.bhandari@krmangalam.edu.in

M. No.: 9999621544

Standard Operating Procedure (SOP) for Internship

All undergraduate students at the School of Basic and Applied Sciences must complete a summer internship as part of their curriculum to earn 2 credits for each internship. The internship should provide students with practical experience and exposure to real-world applications of their academic knowledge. The following guidelines outline the procedure, expectations, and requirements for the internship:

1. Eligibility

- All undergraduate students enrolled in the School of Basic and Applied Sciences in 4-year bachelor's degree program are required to undertake an internship at the end of second semester and fourth semester after the end-term examination.
- Students enrolled in 3-year bachelor's degree program will undertake one internship at the end of second semester after the end-term examination.
- The internship should be related to the student's field of study, including disciplines such as Physics, Chemistry, Mathematics, or Forensic Sciences.

2. Internship Duration

- The internship should last for a minimum of 4 to 6 weeks (approximately 120 to 150 hours) during the summer break.
- The total time commitment must meet the requirements to qualify for the allocation of 2 credits for each internship.

3. Internship Scope

- Internships can be carried out in various sectors, including:
 - Research institutions and laboratories.
 - Industries related to semiconductors, materials science, environmental science, data analysis, Forensic Sciences, etc.
 - Universities or academic institutions offer summer research/internship programs.
 - Startups or established companies in relevant fields.
- The chosen internship must offer hands-on experience and align with the student's academic and career goals.

4. Selection Process

- Students may arrange internships through:
 - University-organized programs or collaborations (MOUs with industries and institutions).
 - Direct applications to organizations.
 - Internship portals or professional networks.
- Before finalizing the internship, students must receive approval from their academic advisor/mentor to ensure the internship meets academic standards and aligns with the student's study area.

5. Learning Outcomes

- Students are expected to achieve the following outcomes:
 - Apply theoretical knowledge to practical scenarios.
 - Develop professional skills, such as communication, teamwork, and time management.
 - Gain an understanding of industry practices, research methodologies, or advanced laboratory techniques.
 - Enhance problem-solving and critical thinking skills in real-world applications.

6. Documentation and Evaluation

- **Internship Proposal:** Before starting the internship, students must submit a proposal including details of the organization, internship objectives, and duration for approval by the academic advisor/mentor.
- **Daily/Weekly Log:** Students must maintain a record of activities carried out during the internship, summarizing tasks and reflecting on learning.
- **Internship Report:** Upon completion, students must submit a detailed internship report that includes:
 - Description of the organization and work environment.
 - Summary of tasks and projects undertaken.
 - Learning experiences and skills acquired.
 - Challenges faced and how they were addressed.
 - Reflections on how the internship relates to their academic program.
- **Supervisor Evaluation:** The internship supervisor at the host organization must provide a certificate to students on successful completion of the internship program.

7. Credit Allocation

- Evaluation scheme for internship

Particular	Weightage
Internal Marks: - Internship completion certificate obtained from supervisor from host institute.	30 Marks
External Marks (Practical): -	70 Marks
Presentation	25
Report Writing	25
Viva Voce	20

- Students must pass all evaluation components to receive the 2 credits.

8. Deadlines

- **Internship Proposal Submission:** At least two weeks before the commencement of the internship.
- **Final Report Submission:** Within two weeks after completing the internship.

9. Code of Conduct

- Students must adhere to the professional code of conduct during their internship, maintaining ethical behavior, punctuality, and a commitment to learning.

Any issues or disputes during the internship should be immediately reported to the academic advisor/mentor.

Standard Operating Procedure (SOP) for Research Project / Dissertation

All undergraduate students at the School of Basic and Applied Sciences are required to complete a research project under the supervision of a faculty member in their final year. The project is a crucial component of the curriculum and provides students with the opportunity to apply their academic knowledge to real-world research problems. Successful completion of the research project will lead to the awarding of the required credits as per the course structure.

1. Eligibility

- All final-year undergraduate students are required to complete a research project in their chosen field of study.
- The project must be undertaken under the supervision of a faculty member from the School of Basic and Applied Sciences.

2. Project Duration

- The project is generally conducted over one semester of the final year, based on the course structure.
- Students are expected to dedicate a significant amount of time to the project to meet the required credits.

3. Project Scope

- The research project must be directly related to the student's field of study, which may include topics from Physics, Chemistry, Mathematics, Forensic Science, Materials Science, Environmental Science, or other applied sciences.
- Students are encouraged to work on current and relevant topics, including experimental, theoretical, computational, or applied research.
- Projects can involve individual or group work, as defined by the supervisor.

4. Project Selection

- **Supervisor Assignment:** Each student will be assigned or can select a faculty supervisor based on their area of interest and available projects.
- **Topic Approval:** Students must submit a research proposal outlining their project objectives, methodology, and timeline. The proposal must be approved by the faculty supervisor.
- The research project topic should align with the academic interests of both the student and the faculty supervisor and should be feasible within the given time frame and resources.

5. Learning Objectives

- The research project aims to achieve the following:
 - Develop research skills, including data collection, analysis, and interpretation.
 - Enhance problem-solving and critical thinking abilities.
 - Improve technical writing and presentation skills.
 - Foster innovation and creativity in scientific inquiry.
 - Promote collaboration and teamwork, where applicable.

6. Project Phases

- **Initial Proposal:** Students must develop a research proposal that defines the project's objectives, scope, and expected outcomes. This should be approved by the faculty supervisor.
- **Literature Review:** Students must conduct a comprehensive review of existing research related to their project topic and present the findings as part of their progress.
- **Data Collection and Analysis:** Depending on the nature of the project, students will gather data through experiments, simulations, or theoretical work and analyze the findings.
- **Drafting the Final Report:** The final report will include a detailed description of the research, methodology, results, and conclusions.

7. Documentation and Submission

- **Research Proposal:** Students are required to submit a research proposal that clearly defines the problem statement, research methodology, and expected outcomes. The proposal must be approved by the supervisor.
- **Progress Reports:** Students must submit periodic progress reports to their supervisor, summarizing the research activities, challenges encountered, and the next steps.
- **Final Project Report:** Upon completion of the project, students must submit a final report that includes:
 - Introduction and background of research.
 - Detailed methodology.
 - Data analysis, results, and discussion.
 - Conclusion and future scope of research.
 - References and bibliography.
- **Project Presentation:** Students will be required to present their research findings through a presentation to a panel of faculty members.

8. Evaluation Criteria

- The evaluation of the research project will be based on the following:

Particular	Weightage
Internal Marks (to be provided by supervisor): - (Punctuality, Performance, Work Ethics, Efforts and Research Output)	50 Marks
External Marks: - Presentation	50 Marks
Report Writing	20
Viva Voce	10
	20

- Students must meet all evaluation criteria to successfully earn the credits assigned to the research project in their course structure.

9. Code of Conduct

- Students must adhere to the highest standards of academic integrity and ethics while conducting research.

- Any form of plagiarism, data manipulation, or misconduct will lead to disqualification from the project and disciplinary action.
- Regular communication with the supervisor is mandatory to ensure timely completion of the project.
- Students must respect deadlines and follow the guidelines provided by the school and supervisor.

10. Deadlines

- **Research Proposal Submission:** Within the first month of the final year or as directed by the department.
- **Progress Reports:** As specified by the supervisor, typically at key milestones of the project.
- **Final Report Submission:** At the end of the final semester or by the deadline set by the supervisor.
- **Presentation:** At the end of the semester, after end term examination.

APPENDIX-III

General Standard Operating Procedure (SOP) for All Labs

These Standard Operating Procedures (SOPs) provide guidelines for safe and efficient conduct in the Physics, Chemistry, and Forensic Science laboratories. All university students must adhere to these protocols to ensure safety, accuracy in experiments, and the responsible use of lab resources.

1. Lab Attendance and Conduct

- Students must arrive on time and sign the attendance register before entering the lab.
- Follow the instructions of the lab supervisor and respect the lab environment.
- Avoid unnecessary movements or distractions; focus on your assigned tasks.

2. Personal Protective Equipment (PPE)

- Lab coats, safety goggles, and gloves must be always worn, depending on the nature of the experiments.
- Long hair should be tied back, and loose clothing or accessories should be secured.
- Closed-toe shoes are mandatory in all lab environments.

3. Preparation for Lab Sessions

- Read and understand the lab manual or experimental procedure prior to entering the lab.
- Be aware of the potential hazards of materials and equipment you will use.
- Students are required to maintain a lab notebook to record their procedures, observations, and results.

4. Handling Equipment and Materials

- All equipment and materials should be handled with care, as instructed by the lab supervisor.
- Do not use equipment without prior authorization from the instructor.
- Report any malfunctioning equipment or hazards immediately.

5. Chemical and Sample Handling

- All chemicals and samples must be properly labelled before use.
- Never taste or directly smell chemicals; use wafting techniques when necessary.
- Dispose of chemicals and samples according to the designated waste disposal procedures for each lab.

6. Emergency Procedures

- In case of an accident, fire, or chemical spill, immediately notify the lab supervisor.
- Know the locations of safety equipment, such as fire extinguishers, safety showers, and first-aid kits.
- Emergency exits should be always kept clear.

7. Cleaning and Storage

- All workstations should be cleaned after experiments, and all materials and equipment should be returned to their designated storage places.
- Wash hands thoroughly after completing the lab work, even if gloves were worn.
- Ensure proper disposal of waste and return all equipment to its original state.

APPENDIX-IV

SOP for Physics Laboratories

Physics labs involve the use of various instruments, sensitive equipment, and experiments related to mechanics, optics, electromagnetism, and modern physics. The following guidelines apply specifically to the physics lab environment:

1. Equipment Calibration

- Before starting an experiment, ensure all instruments are calibrated and set to zero, if required.
- Handle sensitive equipment like oscilloscopes, lasers, and spectrometers with care.
- Always use the equipment as per the instructions provided by the supervisor or lab manual.

2. Electrical Safety

- Ensure all electrical connections are properly insulated before switching on any equipment.
- Never work with live circuits without supervision.
- Turn off equipment immediately after use to avoid overheating or electrical hazards.

3. Optical and Laser Safety

- When working with lasers, ensure that you are familiar with the laser safety guidelines.
- Never look directly into a laser beam or its reflection.
- Use appropriate filters and safety glasses when working with high-intensity light sources.

4. Magnetic Fields

- Be cautious when working with strong magnetic fields; ensure that any metallic objects, including watches and electronic devices, are kept away.
- Properly secure magnets to prevent sudden movements or accidental injuries.

APPENDIX-V

SOP for Chemistry Laboratories

Chemistry labs involve handling chemicals, reagents, and performing reactions that may present various risks. Special care is required to prevent accidents and ensure proper disposal of hazardous materials.

1. Chemical Safety

- Always read the labels on chemical bottles before using them to confirm the correct substance is being used.
- When diluting acids, always add acid to water, not water to acid, to avoid dangerous reactions.
- Store volatile and flammable substances away from open flames and heat sources.

2. Handling Glassware

- Inspect glassware for cracks or defects before use.
- When heating substances in glass containers, ensure they are placed on heat-resistant surfaces and handled with tongs or protective equipment.
- Never apply excessive force when inserting glass tubing into stoppers.

3. Fume Hoods and Ventilation

- Conduct all reactions that produce fumes or volatile substances under a fume hood.
- Ensure the ventilation system is working properly before starting experiments.
- Never place your head inside the fume hood while working.

4. Waste Disposal

- Separate chemical waste based on type (e.g., organic, inorganic, acids, bases).
- Follow the lab-specific protocols for disposing of hazardous materials, ensuring they do not contaminate water or air sources.
- Use designated waste containers for different types of chemicals.

APPENDIX-VI

SOP for Forensic Science Laboratories

Forensic science labs involve analysis of evidence, samples, and various materials in controlled environments. The following guidelines ensure accuracy, integrity, and safety in forensic investigations:

1. Sample Handling

- Use sterile equipment and gloves when handling biological evidence to avoid contamination.
- Keep samples isolated to prevent cross-contamination.
- Use separate workstations for different types of evidence, such as blood samples, fingerprints, or fibers.

2. Biological and Chemical Safety

- Handle biological samples with care, using appropriate PPE (e.g., gloves, masks) to avoid exposure to pathogens.

- Dispose of biological waste in designated biohazard containers.
- Follow chemical safety guidelines when working with reagents used in forensic analysis, such as DNA extraction chemicals.

3. Instrumentation Use

- Proper training is required before using advanced forensic instruments such as GC-MS (Gas Chromatography-Mass Spectrometry), FTIR (Fourier Transform Infrared Spectroscopy), or DNA sequencers.
- Maintain accurate calibration logs for all forensic instruments.
- Keep instruments clean and follow specific cleaning protocols after each use to avoid cross-sample contamination.

4. Documentation and Reporting

- Maintain accurate and detailed records of all observations, procedures, and results during forensic analysis.
- Ensure the integrity of results by adhering to standard forensic protocols for reporting and documentation.
- Prepare reports with attention to detail, ensuring the clarity and accuracy of the findings for legal purposes.

APPENDIX-VII

STANDARD OPERATING PROCEDURE (SOP) FOR ISSUING NOC TO STUDENTS

Objective: The objective of this SOP is to ensure a systematic and transparent process for issuing NOCs to students for job placements or training opportunities, thereby facilitating their professional development while maintaining academic standards and compliance.

1) Request Submission:

The following documents are to be submitted/ uploaded by the student for the requirement of NOC:

- 1.1) Cover Letter:** Detailing how the internship/placement aligns with their academic programme and career objectives.
- 1.2) Offer Letter:** An official document from the organization outlining the role, duration, and conditions.
- 1.3) Internship/Placement Plan:** A document explaining the expected learning outcomes and how the student intends to balance their academic responsibilities.

The above documents are to be addressed to the concerned school dean/head.

2) Approval Process:

Document Verification and review by Dean/Head:

- 2.1)** Dean/ Head verifies the authenticity of the request and the supporting documents provided by the student as per *point no. 1*.

2.2) Dean is required to approve the request if the following parameters are met:

- **Relevance:** The internship/placement must be relevant to the student's academic requirements.
- **Educational Value:** There must be clear learning outcomes and professional development opportunities stated by the student in the cover letter.
- **Academic Commitment Management:** Student has clearly indicated how they will manage their coursework alongside the internship/placement.

The Dean/Head will approve the request after verifying the documents provided by the student.

Note: In case the Dean/Head rejects the request, he/she needs to give a valid reason, in writing for the same.

3) Issuance of NOC:

1.1) Upon approval, the CDC will issue the NOC, stating that the University has no objection to the student pursuing the job placement or training/internship opportunity. (Annexure 1)

4) Student Acknowledgment:

1.1) The NOC is handed over to the student, who acknowledges receipt.

5) Record Keeping:

1.1) Records of NOC copies issued are to be maintained by the CDC department and respective schools.

6) Follow-Up:

1.1) Throughout the duration of the job placement or training, the University may conduct periodic checks to ensure that the student is fulfilling their academic and other obligations.

1.2) Any issues or concerns that arise during this period are addressed promptly by the CDC/Dean/Head in coordination with the student and the employer or training organization.

Appeal in case the request is rejected:

1.1) If the decision of the Dean/Head is not acceptable to the student, he/she may request Dean Academics to review all documents and render a decision.

1.2) Students must file their appeal no later than 10 working days after the school's rejection date. If the student does not file a timely appeal, the decision of the Dean/Head will be final.

1.3) A student's appeal must be submitted in writing and include all the relevant documents mentioned in point no.1 along with the Dean/Head's reason for not approving the request.

1.4) Dean Academics will review the request along with all the submitted documents and may seek clarifications from the student and Dean/head to conclude the final decision.

1.5) The decision of the Academic Dean will be final and binding; there is no further appeal.

APPENDIX- VIII

NO-OBJECTION CERTIFICATE

This is to certify that _____, Roll. No. _____ is a Bonafide student of _____ at School of Basic and Applied Sciences, K.R. Mangalam University during the academic year _____. This certificate states that the University has no objections to the consideration of the application for Summer Internship (year)_____ at __PRP_____ during the summer vacation i.e. the period from _____. However, he/she will appear for the End Term Examination held at university campus.

Dr Meena Bhandari
Dean
School of Basic and Applied Sciences
K.R. Mangalam University

CC:
Dean Academics
Career Development Cell
Programme Coordinator
Mentor



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