



K.R. MANGALAM UNIVERSITY

THE COMPLETE WORLD OF EDUCATION

SCHOOL OF ENGINEERING & TECHNOLOGY

School Handbook 2026-27

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1. About the School

Established in 2013, the School of Engineering & Technology (SOET) at K.R. Mangalam University has emerged as a future-focused center of excellence in engineering, computing, and digital innovation. The School is committed to developing next-generation technology professionals, innovators, researchers, and entrepreneurs through a dynamic ecosystem of experiential learning, industry integration, and interdisciplinary education.

At SOET, we emphasize a modern, application-driven learning approach that combines strong theoretical foundations with hands-on problem solving, real-world projects, research exposure, and industry-aligned skill development. With advanced computing infrastructure, smart classrooms, innovation labs, AI-enabled learning environments, and state-of-the-art laboratories, the School provides students with a technology-rich ecosystem designed to nurture creativity, innovation, and professional excellence.

The School offers a comprehensive portfolio of undergraduate, postgraduate, and doctoral programmes including B.Tech, BCA, B.Sc., M.Tech, MCA, and Ph.D. programmes across emerging domains of engineering and computing. Our specialized programmes are carefully designed to address the rapidly evolving global technology landscape and include high-demand domains such as:

- Artificial Intelligence & Machine Learning
- Data Science & Analytics
- Cyber Security & Digital Forensics
- Full Stack Application Development
- Cloud Computing & DevOps
- UI/UX & Human-Centered Design
- Semiconductor Design
- Robotics, IoT & Intelligent Systems

The curriculum framework at SOET is inspired by global academic best practices and modern industry expectations. It integrates concepts from leading international universities, open-source learning ecosystems, project-

based pedagogy, and outcome-driven education models. The academic structure strongly emphasizes:

- Experiential and project-based learning
- Design thinking and innovation
- Industry certifications and skill mapping
- AI-enabled application development
- Problem-solving and computational thinking
- Research, product development, and entrepreneurship
- Collaborative and interdisciplinary learning

A major strength of the School lies in its strong industry-academia integration model. SOET collaborates with leading technology organizations and industry partners including [IBM](#), [Xebia](#), [EC-Council](#), [ImaginXP](#), and other emerging technology organizations to provide students with industry exposure through live projects, internships, global certifications, workshops, hackathons, mentorship, and experiential learning opportunities.

The School actively promotes innovation, startup culture, and technology-driven entrepreneurship through its Entrepreneurship & Incubation initiatives, innovation clubs, and flagship events such as Hack-KRMU, MindBenders, coding competitions, AI innovation challenges, and participation in national-level hackathons including the Smart India Hackathon. Students are encouraged to build real-world solutions, research prototypes, digital products, and startup ventures addressing industry and societal challenges.

SOET also places strong emphasis on research, emerging technologies, and future skills. Students gain exposure to areas such as Generative AI, Large Language Models (LLMs), Edge AI, Blockchain, Quantum Computing, Computer Vision, Data Engineering, Intelligent Automation, and Human-AI Collaboration through specialized electives, laboratories, capstone projects, and innovation-driven learning frameworks.

With a strong focus on employability, innovation, research excellence, and technology leadership, the School of Engineering & Technology continues to produce highly skilled graduates who contribute significantly across global industries, startups, research organizations, and entrepreneurial ecosystems. Our alumni are successfully working in leading multinational companies,

technology startups, research labs, and innovation-driven enterprises, reflecting the School's commitment to academic excellence and future-ready education.

1. Vision and Mission

1.1 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 life-long learners contributing to nation building.

Mission

- Foster employability and entrepreneurship through futuristic curriculum and progressive pedagogy with cutting-edge technology
- Instil 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 excel in scientific and technical education through integrated teaching learning, research, and innovation.

Mission

- Creating a unique and innovative learning experience to enhance quality in the domain of Engineering & Technology.
- Promoting Curricular, co-curricular and extracurricular activities that support overall personality development and lifelong learning, emphasizing character building and ethical behaviour.
- Focusing on employability through research, innovation and entrepreneurial mindset development.
- Enhancing collaborations with National and International organizations and institutions to develop cross-cultural understanding to adapt and thrive in the 21st century.

2. Messages

2.1 Vice Chancellor:

It gives me immense pleasure to welcome you to K.R. Mangalam University (KRMU), a vibrant institution committed to academic excellence, innovation, research, and holistic development.

Your admission to KRMU marks the beginning of an exciting and transformative journey—one that will shape your future, expand your horizons, and empower you to become a skilled professional, responsible citizen, and future leader in an increasingly technology-driven world.

Since its establishment in 2013, KRMU has continuously evolved to align with global academic standards, emerging technologies, and rapidly changing industry expectations. At KRMU, we believe education must go beyond conventional classroom learning. Our focus is on creating an ecosystem where students gain not only strong academic foundations but also develop critical thinking, creativity, problem-solving abilities, entrepreneurial mindset, leadership qualities, and ethical values.

The University offers a dynamic learning environment supported by advanced infrastructure, modern laboratories, digital learning platforms, innovation centers, research-driven pedagogy, and strong industry collaborations. Our programmes are carefully designed to integrate experiential learning, interdisciplinary education, skill enhancement, industry certifications, and real-world applications that prepare students for the future of work.

At KRMU, we are deeply committed to fostering innovation, employability, and entrepreneurship. Through initiatives such as our Entrepreneurship & Incubation Center, Hack-KRMU, innovation challenges, industry-integrated projects, and startup mentoring programmes, students are encouraged to transform ideas into impactful solutions for society and industry.

Our distinguished faculty members, researchers, mentors, and industry experts work collaboratively to nurture talent across diverse and emerging domains including Artificial Intelligence, Data Science, Cyber Security, Cloud Computing, Robotics, Semiconductor Technologies, Digital Transformation, and next-generation computing technologies. We continuously strive to build a future-ready academic ecosystem that empowers students with global competencies, research aptitude, technological expertise, and lifelong learning capabilities.

As we look toward the future, KRMU envisions becoming a globally recognized center for innovation, research excellence, sustainable development, and transformative education. We remain committed to creating an inclusive and forward-thinking academic community that nurtures responsible leaders with strong ethical values, environmental consciousness, and a passion for innovation.

We are pleased to offer you provisional admission to K.R. Mangalam University. Your admission shall be confirmed upon successful verification of your eligibility and submission of the required documents as per University norms and policies.

I encourage you to make the most of the opportunities available at KRMU—learn with curiosity, innovate with confidence, collaborate with purpose, and aspire to create meaningful impact.

I wish you a successful, enriching, and memorable academic journey at K.R. Mangalam University.

With best wishes,
Vice Chancellor
K.R. Mangalam University

2.2 Dean

Message from the Dean

School of Engineering & Technology

Welcome to the School of Engineering & Technology (SOET), K.R. Mangalam University — a vibrant ecosystem of innovation, technology, research, and future-focused learning.

Since its inception in 2013, SOET has been committed to redefining engineering and technology education by integrating academic excellence with innovation-driven, industry-aligned, and application-oriented learning. Our mission is to nurture next-generation technologists, innovators, entrepreneurs, researchers, and problem-solvers who can create meaningful impact in an increasingly digital and AI-driven world.

At SOET, we believe that the future belongs to individuals who can think critically, innovate fearlessly, adapt continuously, and build technology-enabled solutions for real-world challenges. Our programmes are therefore designed beyond traditional classroom learning, with a strong emphasis on experiential learning, interdisciplinary education, project-based pedagogy, design thinking, research, and startup culture.

The School offers a diverse portfolio of undergraduate, postgraduate, and doctoral programmes across emerging domains such as Artificial Intelligence & Machine Learning, Data Science, Cyber Security, Full Stack Development, Cloud Computing, UI/UX Design, Semiconductor Technologies, Robotics, IoT, and next-generation computing systems. Our curriculum continuously evolves to align with global academic standards, disruptive technologies, and rapidly changing industry requirements.

One of the defining strengths of SOET is its strong industry integration ecosystem. Through strategic collaborations with leading organizations such as IBM, EC-Council, NSDC, Oracle, AWS, ImaginXP, Microsoft and other technology partners, students gain exposure to industry certifications, live projects, internships, hackathons, global learning resources, and real-world application development. Our focus is not only on teaching technologies, but on enabling students to build products, create innovations, and solve meaningful problems.

The School actively promotes a culture of innovation, entrepreneurship, and research through modern innovation labs, incubation support, startup mentoring, coding communities, AI innovation challenges, and flagship initiatives such as Hack-KRMU and national-level hackathon participation including the Smart India Hackathon. Students are encouraged to experiment, prototype, collaborate, and transform ideas into scalable solutions and impactful ventures.

Our distinguished faculty members bring together strong academic foundations, industry expertise, research capabilities, and innovation-oriented mentorship. They work closely with students on interdisciplinary projects, emerging technology applications, research publications, and technology-driven problem solving across domains.

As Dean, I envision SOET as a globally connected center of excellence in engineering, computing, AI, and digital innovation — a place where students are empowered to explore emerging technologies, lead transformative research, and contribute meaningfully to society and industry. We are continuously strengthening our ecosystem through advanced laboratories, AI-enabled learning environments, global collaborations, research initiatives, and future-ready academic frameworks.

At SOET, we are not just preparing students for jobs; we are preparing them for leadership in the era of intelligent systems, digital transformation, and technological disruption. We aim to develop professionals who combine technical excellence with ethical responsibility, creativity with critical thinking, and innovation with societal impact.

I invite you to become a part of this transformative journey of learning, innovation, discovery, and growth. Together, let us shape the future of technology and create solutions that make a difference in the world.

With best wishes,

Dr. Pankaj Agarwal, Dean

School of Engineering & Technology

K.R. Mangalam University

4. School Boards and Committees

4.1 School Advisory Board

The Advisory Board is integral to our strategic academic and developmental objectives, offering guidance on a variety of crucial areas, including:

- Helping identify and establish clear career pathways for our students.
- Advising on policies and practices to maintain alignment with industry standards and educational goals.
- Ensuring our curriculum remains aligned with industry needs and workforce standards.
- Promotion of the programs and services throughout the community and the state.
- Articulation of agreements with other education and training institutions.
- Policies and practices as they relate to industry standards and educational aims.
- Extend their domain expertise to our students/faculty through technology training, project mentoring, invited talks, workshops, seminars etc.
- Provide linkage & connect with industry for student's internships, student recruitment and scholarships.
- Advising on opportunities that lead to innovative research directions and partnerships most appropriate for KRMU.
- Identifying outreach needs in which engineering has a significant role and fostering connections with entrepreneurial entities.
- Establishing connections with relevant industries for Memorandums of Understanding, consultancy projects, and more.

Following are the members of Board of Advisors:

1. Prof (Dr.) B. Chandra, Adjunct Professor, Indian Institute of Technology, Delhi
2. Dr Sanjeev Kumar Varshney, Former-Head, International Scientific Cooperation, Ministry / Department of Science & Technology, Government of India
3. Prof. (Dr.) Brij B. Gupta, Director, International Center for AI and Cyber Security Research and Innovations (CCRI) & Distinguished Professor Department of Computer Science and Information Engineering (CSIE) Asia University, Taiwan
4. Syed Afzal Murtaza Rizvi, Professor, Department of Computer Science, Jamia Millia Islamia, New Delhi
5. Prof. (Dr) Manoj Khanna, Professor, DTU
6. Dr. Kamal Rawal, Head of Department & Professor, Center for Computational Biology and Bioinformatics, Amity University, Noida
7. Usha Jagannathan, Director for AI Products, IEEE, USA
8. Mr. Subhajit Bhattacharya, Associate Vice President, Accenture
9. Rajinder Chitoria, Data Scientist and Director at Froyo Technologies (P) Ltd
10. Mr. Siddhant Verma, Lead (AI, Data Science and BI team)

4.2 Board of Studies

The purpose of the Board of Studies (BoS) is to ensure the quality, relevance, and coherence of academic programs and curricula offered by an educational institution. It plays a key role in shaping and overseeing the development, revision, and implementation of the curriculum for various academic programs.

Following are the members of the Board of Studies:

Member	Member designated as
Prof. (Dr.) Pankaj Agarwal Dean, School of Engineering & Technology, K.R Mangalam University	Chairperson
Prof. (Dr.) Manoj Khanna (Professor, University of Delhi)	External Expert Member
Mr. Kshitiz Verma, CDTI, Jaipur	External Expert Member
Mr. Anil Kumar Rai, Director Engineering at MediaTek [Ex- Intel, Ex- Samsung, Noida, Uttar Pradesh, India	External Expert Member
Mr. Vivekanand Vivek, Co-founder, Zenith School of AI	Industry Expert
Mr. Subhajt Bhattacharya, Associate Vice President, Accenture	Industry Expert
Mr. Ankit Luthra (KRMU Alumni), 2023 Passout, B.Tech. GenAI Software Engineer Consultant Gurugram, Haryana	Industry Expert
Mr. Rahul Batra, Data Scientist, IBM Gurgaon	Industry Expert
Mr. Rajinder Chittoria, Froyo Technologies	Industry Expert
Dr. Sudhir Gaur, Chief Education Officer, Vserv Academy	External Expert Member
Mr. Keshav Gupta, Sr. Full Stack Expert, ImaginXP	Industry Expert
Dr. Shweta Bansal, Associate Professor, School Coordinator, School of Engineering & Technology, K.R Mangalam University	Internal member

Dr. Meenu, Associate Professor, School of Engineering & Technology, K.R Mangalam University	Internal member
Dr. Swati Gupta, Associate Professor, School of Engineering & Technology, K.R Mangalam University	Internal member
Dr. Vandna Batra, Assistant Professor, School of Engineering & Technology, K.R Mangalam University	Internal member
Dr. Preeti Rathi, Assistant Professor, School of Engineering & Technology, K.R Mangalam University.	Internal Member
Dr.Yogita Yashveer Raghav, Assistant Professor, School of Engineering & Technology, K.R Mangalam University.	Internal Member
Dr. Surabhi Shankar, Assistant Professor, School of Engineering & Technology, K.R Mangalam University.	Internal Member
Dr. Saneh Lata, Assistant Professor, School of Engineering & Technology, K.R Mangalam University.	Internal Member
Dr. Manish Kumar, Assistant Professor, School of Engineering & Technology, K.R Mangalam University.	Internal Member
Dr. Monika Khatkar, Assistant Professor, School of Engineering & Technology, K.R Mangalam University.	Internal Member

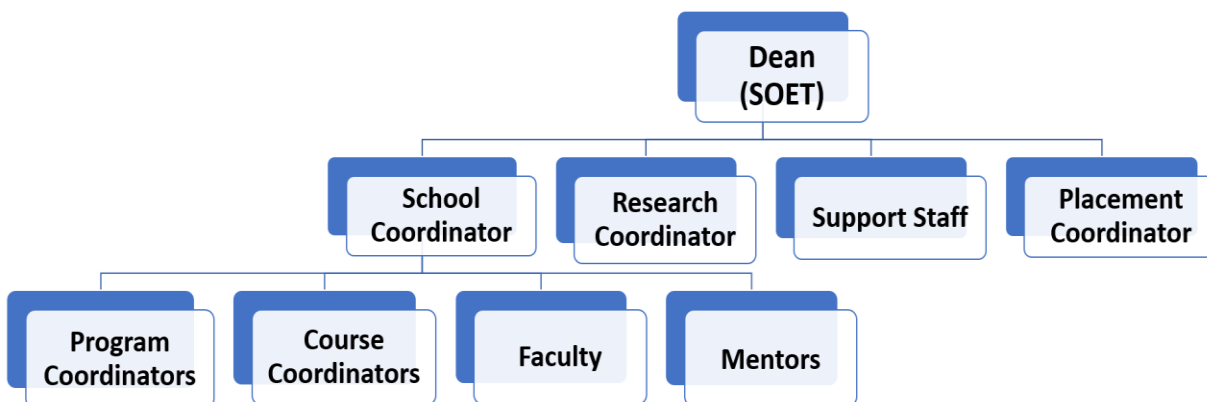
4.3 School Research Committee

The main purpose of the School Research Committee is to facilitate the progress of PhD scholars by overseeing the allocation of supervisors and ensuring that scholars receive the necessary guidance throughout their research journey. The committee reviews the progress of PhD candidates, providing feedback and support to help them meet their academic goals.

1. Prof. (Dr.) Pankaj Agarwal – Chairman, SRC (SOET)
2. Prof. (Dr.) Shweta Bansal – Member, SRC (SOET)
3. Prof. Someshwar Mukherjee, Professor of Practice (SOET)
4. Dr. Swati Gupta – Member, SRC (SOET)
5. Dr. Meenu – Member, SRC (SOET)
6. Dr. Anshu – Member, SRC (SOET)
7. Dr. Vandna Batra – Member, SRC (SOET)
8. Dr. Prabhakar Bhandari – Member, SRC (SOET)
9. Dr. Surabhi Shankar – Member, SRC (SOET)
10. Dr. Yogita Yashveer Raghav – Member, SRC (SOET)

11. Dr. Preeti Rathi – Member, SRC (SOET)
12. Dr. Manish Kumar – Member, SRC (SOET)
13. Prof. (Dr.) Hema Chaudhary – External Member, SRC (SOET)
14. Dr. Kaushal Kumar – Coordinator, SRC (SOET)
15. Dr. Saneh Lata Yadav – Co-Coordinator, SRC (SOET)

4.4 Academic Coordination: Roles and Responsibilities



Dean: Dr. Pankaj Agarwal, Professor

- Provides overall leadership and strategic direction for the School of Engineering and Technology.
- Ensures the implementation of the school’s vision and mission, focusing on quality education, innovation, and entrepreneurship.
- Oversees academic programs, faculty development, and resource allocation.
- Enhances collaborations with national and international organizations and institutions.
- Promotes a culture of ethical behavior, lifelong learning, and student success.

Associate Dean/School Coordinator:

- Assists the Dean in coordinating administrative and academic activities within the school.
- Acts as a liaison between faculty, students, and the administration.
- Organizes school events, meetings, and faculty development programs.
- Ensures effective communication and implementation of school policies and procedures.

Program Coordinator:

- Manages specific academic programs (e.g., B.Tech, M.Tech) within the school.
- Oversees curriculum development and ensures alignment with industry standards.
- Monitors program quality and student performance.
- Coordinates with faculty to enhance teaching and learning methodologies.

List of Program Coordinators:

B.Tech CSE	Dr. Manish Kumar, Assistant Professor
B.Tech CSE (AI & ML)	Dr. Meenu, Associate Professor
B.Tech CSE (Data Science)	Dr. Swati Gupta, Associate Professor
B.Tech CSE (FSD)	Dr. Yogita Raghav, Assistant Professor
B.Tech CSE (UI & UX)	Dr. Vandna Batra, Assistant Professor
B.Tech CSE (Robotics)	Dr. Rakhi Dua
B.Tech CSE (Cyber Security)	Dr. Deepak Kaushik, Professor
BCA (AI & Data Science)	Dr. Surabhi Shankar, Assistant Professor
B.Sc (DS/CS/Cyber)	Dr. Saneh Lata, Assistant Professor
MCA	Dr. Preeti Rathi, Assistant Professor

Course Coordinators:

- Responsible for the planning, delivery, and evaluation of specific courses within a program.
- Ensures course content is up-to-date and relevant to current industry trends.
- Provides support to faculty and students in course-related matters.
- Facilitates assessment and feedback processes to improve course effectiveness.

Research Coordinator: Dr. Kaushal Kumar & Dr. Saneh Lata

- Promotes and oversees research activities within the school.
- Assists faculty and students in identifying research opportunities and securing funding.
- Coordinates research seminars, workshops, and conferences.
- Ensures compliance with ethical guidelines and research standards.

School Timetable Coordinator: Dr. Preeti Rathi

- Develops and manages the school timetable for classes, labs, and exams.
- Ensures efficient use of resources and facilities.
- Coordinates with faculty to accommodate their availability and teaching preferences.
- Addresses scheduling conflicts and adjusts the timetable as needed.

School Placement Coordinator: Dr. Monika Khatkar

- Leads the school's efforts to enhance student employability and career development.
- Establishes and maintains relationships with industry partners for internships and placements.
- Organizes campus recruitment drives, career fairs, and skill development workshops.

- Provides career counseling and support to students preparing for job interviews and further studies.

5.Faculty and Staff

S. N.	Faculty Name	Gender	Designation	Domain	Specialisation
1	Dr. Pankaj Agarwal	Male	Professor & Dean	CSE	Data Science, Algorithms
2	Mr. Someshwar Mukherjee	Male	Professor of Practice	CSE	Electrical Engineering
3	Dr. Shweta Bansal	Female	Professor	CSE	Natural language Processing (NLP)
4	Dr. Surendra Kumar Yadav	Male	Associate Professor	ME	Thermal Engg.
5	Dr. Kaushal Kumar	Male	Associate Professor	ME	Tribology & Materials
6	Dr. Meenu	Female	Associate Professor	CSE	Computer Network, Adobe Network, Big Data
7	Dr. Swati Gupta	Female	Associate Professor	CSE	Big Data, Database
8	Dr. Anshu	Female	Associate Professor	CSE	Discrete Maths, Data Structures, C Programming, Image Processing
9	Dr. Amar Saraswat	Male	Assistant Professor	CSE	AI

10	Dr. Prabhakar Bhandari	Male	Assistant Professor	ME	Thermal Engg.
11	Ms. Jyoti Kataria	Female	Assistant Professor	CSE	Machine Learning, Deep Learning
12	Ms. Suman	Female	Assistant Professor	CSE	Machine Learning, IOT
13	Dr. Rupesh Kumar Tipu	Male	Assistant Professor	CE	Structural Engg.
14	Dr. Vandna Batra	Female	Assistant Professor	CSE	Machine Learning
15	Ms. Ruchika Bhakhar	Female	Assistant Professor	CSE	Python, Machine learning , data science
16	Dr. Saneh Lata Yadav	Female	Assistant Professor	CSE	WSN, IoT, Machine Learning
17	Dr. Surabhi Shanker	Female	Assistant Professor	CSE	Semantic Web, DBMS, E-Commerce
18	Dr. Preeti Rathi	Female	Assistant Professor	CSE	DBMS, WUM, OS, TOC
19	Dr. Rakhi Dua	Female	Assistant Professor	ECE	Antenna Designing, Optical Communication
20	Ms. Neetu Chauhan	Female	Assistant Professor	CSE	DBMS, AI & ML, Algorithms, Python
21	Dr. Imran Siraj	Male	Assistant Professor	ME	Manufacturing Technology, Robotics, Automation, Automobile Engineering

22	Ms. Lucky Verma	Female	Assistant Professor	CSE	Theory of Computation, Operating Systems, OOPS with Java, C++
23	Dr. Yogita Yashveer Raghav	Female	Assistant Professor	CSE	Cloud Computing, Programming Languages, Database Management, Data Structures
24	Ms. Rishika Mehta	Female	Assistant Professor	CSE	Java, Discrete Mathematics, Database Management Systems, Data Structures, Cloud Computing, Operating Systems, Web Technologies
25	Ms. Mansi kajal	Female	Assistant Professor	CSE	ML, DL, CSE, Python
26	Dr. Reenu	Female	Assistant Professor	CSE	Java, Data Structure, Operating Systems, Artificial Intelligence, machine Learning, OOPS, DBMS
27	Ms. Megha Sharma	Female	Assistant Professor	CSE	DBMS, Operating Systems, Discrete Maths, Software Engineering
28	Dr. Aarti	Female	Assistant Professor	CSE	Data Structures, C Programming, C++, Cyber Security, Operating System, Wireless Sensor Networks, HTML, CSS
29	Dr. Ayyala kishore ajay kumar	Male	Assistant Professor	ECE	electronic Devices Circuits, Digital System, Antennas and wave propagation, Signals and system, Digital Signal Processing
30	Ms. Kriti Sharma	Female	Assistant Professor	CSE	Blockchain, Computer Networks, Cryptography, Data Structures and Algorithms
31	Dr. Manish Kumar	Male	Assistant Professor	CSE	Python, R, Java, Machine learning, data science

32	Dr. Ravinder Beniwal	Male	Assistant Professor	CSE	C,C++,Data Structure,Operating System,Computer Network,Cloud Computing,DBMS
33	Dr.Digvijay Singh	Male	Assistant Professor	EEE	BIPV, Solar PV & Thermal, Renewable Energy technologies
34	Dr. Monika Khatkar	Female	Assistant Professor	CSE	Deep Neural network, Data Science, IOT Security
35	Dr. Shahjad	Male	Assistant Professor	CSE	Data structure & algorithms , OS, TOC , Python , Compiler
36	Mr. Vishwanil Suman	Male	Assistant Professor	CSE	Programming Languages , DBMS , CN
37	Mr. Mohammad Aijaz	Male	Assistant Professor	CSE	Data Structure & Algorithm , DBMS , Python and NLP
38	Mr. Deepak Kaushik	Male	Assistant Professor	CSE	Data Structure & Algorithm , DBMS , Python and NLP
39	Ms. Jyoti Kaurav	Female	Assistant Professor	CSE	AI&ML, IOT, Computer Networks
40	Ms. Ritu Devi	Female	Assistant Professor	CSE	Computer Vision, Machine Deep Learning
41	Ms. Jyoti Yadav	Female	Assistant Professor	CSE	Cybersecurity
42	Mr. Gaurav	Male	Assistant Professor	ME	Industry 4.0
43	Dr. Rajesh Kumar	Male	Assistant Professor	CSE	Computer network,Cyber security,Blockchain,IOT,Machine Learning

44	Ms. Iflah Aijaz	Female	Assistant Professor	CSE	Cyber security,Blockchain,IOT
45	Dr. Feroz Ahmed	Male	Assistant Professor	CSE	CSE
46	Mr. Saurabh Sachan	Male	Assistant Professor	ME	Robotics and AI
47	Dr. Rupendra Pratap Singh	Male	Assistant Professor	CSE	Wireless Sensor Networks (WSN), Machine Learning, IoT, and Edge Computing
48	Ms. Swati Jain Kansal	Female	Assistant Professor	CSE	NLP(Natural Language processing)
49	Dr. Neha kaushik	Female	Assistant Professor	CSE	Software Architecture,Microservice
50	MS. Alina Banerjee	Female	Assistant Professor	CSE	Machine Learning
51	Dr. Satinder Pal Singh	Male	Assistant Professor	CSE	AI/ML,Python, C, C++,Data Structure,Neural Networks, Cloud computing
52	Dr. Shahid Ahmad Wani	Male	Assistant Professor	CSE	theory of computation, DBMS,Software engineering, Machine Learning,Deep Learning
53	Mr. Anurag Singh	Male	Assistant Professor	CSE	Cyber security

54	Ms Ruchi Sharma	Female	Assistant Professor	CSE	Data Structure, Algorithm, Cyber Security
55	Mr. Akash Tiwari	Male	Teaching Assistant	CSE	Java,C++,SQL
56	Dr. Shweta Agarwal	Female	Associate Professor(joined as Assistant Professor)	CSE	design analysis of algorithms,Data structure,ML, structure
57	Ms. Atisha Dahiya	Female	Assistant Professor	CSE	Software Project Management,Operating Systems,Programming for Problem Solving,Artificial Intelligence: Knowledge Representation and Reasoning
58	Dr. Shaheen Usmani	Female	Assistant Professor	CSE	AIML, Machine Learning,Deep Learning,Python
59	Mr. Amit singh	Male	Assistant Professor	CSE	computer network, Operating SyStem
60	Mr. Ankit Srivastava	Male	Assistant Professor	CSE	Machine Learning, Software Engineering
61	Ms. Neha Jhakra	Female	Teaching Assistant	CSE	Data Science, AI
62	Ms. Nainsi Soni	Female	Assistant Professor	CSE	
63	Ms. Anjali Pal	Female	Assistant Professor	CSE	Image Processing ,Deep Learning, Machine Learning,Image Analysis

64	Ms. Aayushi Bansal	Female	Assistant Professor	CSE	Machine Learning, Deep Learning, Soft Computing, Image Processing, DBMS
65	Dr. Sameer Farooq	Male	Assistant Professor	CSE	ML, Cyber Security, Cloud Computing
66	Mr. Arsalan Ahmed Alyas	Male	Assistant Professor	CSE	Cyber Security
S. N	Trainer Name	Contact no.	Designation	Domain	Highest qualification
1	Mr. Abhishek Kumar Singh	9060493608	Technical Trainer (TL)	CSE	B.Tech CSE (Bharat Institute of Higher Education and Research) Chennai
2	Mr. Rajesh Kumar Gupta	9315326240	Technical Trainer	CSE	B.Tech in Maths and Computing(Delhi Technological University)2023
3	Mr. Bhavesh Badani	6392264629	Technical Trainer (DSA)	CSE	B.Tech (IT)(Dr. Ambedkar Institute of Technology, Kanpur 2024)
4	Mr. Nandan	9534694015	Technical Trainer	CSE	BCA(Magadh University ,Bodh Gaya2019), MCA(National Institute of Technology, Jamshedpur2024)
5	Mohd. Shadab	9696844453	Technical Trainer	CSE	B.Tech CSE(Shri Rawatpura Sarkar Institute of Technology and Science, RGPV University 2025)
6	Mr. Devender	9369238419	Technical Trainer	CSE	B.Tech CSE(Lovely Professional University)2023
7	Mr. SP Acharya	7008020112	Technical Trainer	CSE	B.Sc.(Nayagarh Autonomous College 2019), M.Sc (Ravenshaw University 2021)
8	Mr. Pratik Raj Verma	7765905199	MERN Stack Trainer	CSE	B.Tech (IT)(Arya College of Engineering and IT, Asam 2024)

9	Mr. Himanshu Kaushik	9560264237	Technical Trainer	CSE	B.Tech (IT) Delhi Institute of Technology & Management 2011),M.Tech(AI) Sri Mata Vaishno Devi University 2014),
10	Mr. Akash Tiwari	8957153240	Technical Trainer	CSE	B.Tech CSE(Chaudhary Charan Singh University, Meerut Up 2024)
11	Mr. Suman Kumar Das	8797736779	Technical Trainer	CSE	BCA (Sikkim Manipal University 2018), MCA (Jharkhand University of Technology)2024
12	Mr. Shaquib Hasan	9319410904	Technical Trainer	CSE	B.Tech ECE (GEC, Aurangabad 2025)
13	Ms. Vibha	9718751929	Technical Trainer	CSE	B.Sc. Computer Sci.(Kurukshetra University 1998), M.Sc Applied maths (Guru Jambheshwar University,Hisar 2000), PGDCA(Kurukshetra University 2001)
14	Mr. Love Porwal	8769350815	Technical Trainer	CSE	B.Tech (Arya College of Engineering and IT 2017) Jaipur, M.Tech (Truba College of Scienceand Technology 2022)Bhopal
15	Mr. Vishal	8407073104	Technical Trainer	CSE	MCA (MNNIT, Allahabad 2023)
16	Gyan Chandra Vishwakarma	9310285060	Technical Trainer	CSE	B.Sc(H) Computer Sci.(University of Delhi)2013,M.sc Computer Sci.(Kalina University)2018
17	Mr. Devansh Garg	9810891924	Technical Trainer	CSE	B.A (H)Political Sci.(Delhi University)2016, LLB Corporate Law(Sushant University2023), MCA (AI)(Amity University 2024)
18	Mr. Suryansh Yadav	8081867169	Technical Trainer (Zoshima)	CSE	B.Tech(Lovely Professional University)2021

6. School Infrastructure (Physical and learning):

The School of Engineering and Technology (SOET) at K.R. Mangalam University provides a vibrant, technology-driven academic ecosystem designed to foster innovation, interdisciplinary learning, research excellence, and industry readiness. The school offers a comprehensive range of modern teaching, learning, research, and innovation resources that empower students to develop future-ready technical and professional competencies.

SOET features state-of-the-art infrastructure comprising 20 plus advanced computer laboratories equipped with more than 900 high-performance computing systems, all supported by smart screen panels/projectors and powered by the latest Windows 10/11 environments. With a student-to-computer ratio of 1:3.3 and high-speed internet connectivity through Airtel, students benefit from a seamless and technology-enabled learning experience conducive to hands-on experimentation, software development, simulation, and research activities.

The school has established multiple specialized laboratories and Centers of Excellence (CoEs) that provide immersive experiential learning aligned with emerging technologies and industry demands. These include advanced AI & Machine Learning Labs, Robotics & Automation Labs, Cloud Computing & Virtualization Labs, iOS & Apple Application Development Labs, Electrical & Electronics Labs, Embedded Systems & IoT Labs, and the Phoenix Drone Flying Centre—an industry-sponsored facility focused on drone technologies and autonomous systems.

To further strengthen innovation-led learning, SOET houses dedicated Centers of Excellence in Artificial Intelligence, Robotics & Automation, Cloud Computing, and Cyber Security, enabling students to work on real-world projects, industry problem statements, and interdisciplinary research initiatives. The university's Apple iOS Development Lab provides students with exposure to the Apple development ecosystem, mobile application design, and UI/UX technologies. In addition, the Makers Lab and Innovation & Prototyping Facilities encourage students to transform ideas into functional prototypes using modern tools, embedded platforms, sensors, fabrication equipment, and rapid prototyping technologies. These facilities collectively nurture creativity, design thinking, entrepreneurship, and product innovation among students.

SOET also emphasizes strong academic and research support through its comprehensive library resources, including 6,229 books in the central library

and an additional 324 specialized books within the school library. Students and faculty have access to print journals, IEEE (EBSCO) digital resources, research databases, and advanced plagiarism detection platforms such as Turnitin and Drill Bit, promoting academic integrity and quality research practices. The school additionally maintains a repository of recorded video lectures and digital learning content developed by faculty members to support blended and self-paced learning.

The teaching infrastructure includes 49 modern classrooms equipped with advanced audio-visual teaching aids, enabling interactive, collaborative, and outcome-based learning. SOET also integrates virtual laboratories, simulation environments, and Massive Open Online Courses (MOOCs) into its pedagogy to provide students with flexible access to global learning resources and emerging technology domains.

To enhance professional competency and global employability, SOET functions as a Certiport Authorized Testing Center, facilitating internationally recognized certifications from leading technology organizations such as Microsoft, Cisco, Pearson, Meta, and other industry partners. The university's Learning Management System (LMS), powered by Moodle, supports digital learning, assessment management, collaborative learning, and continuous academic engagement.

The curriculum at SOET is carefully designed in alignment with Bloom's Taxonomy and Outcome-Based Education (OBE) principles, ensuring balanced cognitive, technical, professional, ethical, and social development. Regular feedback and consultation from industry experts, alumni, recruiters, faculty members, and students help ensure that the curriculum remains contemporary, industry-aligned, innovation-focused, and responsive to evolving technological trends.

With its strong focus on advanced infrastructure, Centers of Excellence, experiential learning, research-driven education, and industry integration, the School of Engineering and Technology at K.R. Mangalam University creates a transformative learning environment that equips students with the knowledge, technical expertise, innovation mindset, and leadership capabilities required to excel in the rapidly evolving global technology ecosystem.

7. Best Practices

Best Practice 1: Holistic Sustainable Learning through Social Connect

The School of Engineering and Technology (SOET) at K.R. Mangalam University is dedicated to fostering holistic and sustainable learning by aligning its initiatives with the United Nations' Sustainable Development Goals (SDGs). Through innovative approaches and a strong emphasis on social connect, SOET exemplifies best practices in engineering education. Key achievements include 30 impactful school activities, 21 published journals, 10 scholarly books, 40 patents, 34 published book chapters, and 21 conference presentations, all contributing to sustainable development. The curriculum integrates SDG principles, offering 8 courses on Quality Education (SDG 4), 16 courses on Industry, Innovation, and Infrastructure (SDG 9), 3 courses on Decent Work and Economic Growth (SDG 8), 9 courses on Peace, Justice, and Strong Institutions (SDG 16), 1 course each on Climate Action (SDG 13), Sustainable Cities and Communities (SDG 11), No Poverty (SDG 1), and Reduced Inequalities (SDG 10). These initiatives showcase the school's commitment to addressing global challenges and preparing students to contribute effectively to a sustainable future. By integrating experiential learning, research, and community engagement, SOET fosters innovation and equips students to be socially responsible global citizens, ready to shape a sustainable and equitable world.

Best Practice 2: Nurturing Eco-Conscious Behavior: Taking steps towards Environment Sustainability

The School of Engineering and Technology (SOET) at K.R. Mangalam University is committed to fostering eco-conscious behavior and taking decisive steps toward environmental sustainability. As part of its academic initiatives, the school offers a two-credit course on Environmental Studies and Disaster Management, ensuring students are equipped with the knowledge and skills to address critical environmental challenges. The school's dedication to sustainability is further reflected in its scholarly output, with 17 journal publications, 9 conference papers, and 7 patents focused on environmental sustainability.

To enhance practical learning, SOET offers two-credit Value-Added Courses (VACs) on topics such as Renewable Energy Systems, Automation and Industry 4.0, Sustainable Development, Practical Robotics and UAV Applications, and Applied Automotive Engineering with hands-on practices.

Notable projects include an E-Waste Management initiative led by Dr. Rishabh Arora, which underscores the school's commitment to addressing global environmental concerns.

Environmental sustainability is also an integral part of the school's activity calendar, with various initiatives and events designed to engage students and faculty in sustainable practices. By embedding environmental consciousness into its curriculum, research, and extracurricular activities, SOET prepares students to be proactive and responsible contributors to a sustainable future.

8. School Education Philosophy

The School of Engineering and Technology (SOET) at K.R. Mangalam University follows a progressive, learner-centric, and innovation-driven educational philosophy aimed at nurturing technically competent, ethically responsible, and socially conscious professionals. The school believes that education must empower students not only to excel in their careers but also to contribute meaningfully to society through creativity, leadership, and lifelong learning.

Rooted in the broader purpose of education, SOET emphasizes both "learning to earn" and "learning to live." The institution is committed to equipping students with advanced technical knowledge, professional competencies, entrepreneurial capabilities, and future-ready skills required to thrive in the rapidly evolving global technological ecosystem. Simultaneously, the school fosters emotional intelligence, ethical values, adaptability, collaboration, and responsible citizenship to support students' holistic personal and professional development.

The educational philosophy of SOET is built upon the integrated development of the cognitive, affective, and psychomotor domains of learning:

- **Cognitive Development:**

The school emphasizes conceptual clarity, analytical thinking, computational reasoning, innovation, research aptitude, and problem-solving abilities. Students are encouraged to apply theoretical concepts to real-world engineering challenges through interdisciplinary learning, design thinking, and emerging technologies such as Artificial

Intelligence, Robotics, Cloud Computing, Data Science, Cyber Security, and IoT.

- **Affective Development:**

SOET nurtures professional ethics, integrity, leadership, teamwork, communication skills, emotional intelligence, social responsibility, and lifelong learning attitudes. The institution believes that future engineers and technology leaders must possess not only technical expertise but also empathy, adaptability, and a commitment to sustainable and inclusive development.

- **Psychomotor Development:**

The school strongly promotes experiential and hands-on learning through laboratories, innovation centers, makerspaces, prototyping activities, industry-sponsored labs, internships, hackathons, live projects, and research-driven activities. Students gain practical exposure in developing hardware-software integrated solutions, mobile and cloud applications, intelligent systems, robotics solutions, and real-world engineering prototypes.

SOET adopts an Outcome-Based Education (OBE) framework aligned with Bloom's Taxonomy to ensure measurable learning outcomes and continuous academic improvement. The teaching-learning ecosystem integrates project-based learning, experiential learning, research-oriented pedagogy, industry collaboration, and technology-enabled education to bridge the gap between academic learning and industry expectations.

The school further emphasizes innovation, entrepreneurship, interdisciplinary collaboration, and professional readiness through Centers of Excellence, certification-oriented learning, startup incubation support, and industry engagement initiatives. Learning extends beyond traditional classrooms through participation in technical clubs, innovation challenges, competitions, community engagement, internships, and global certification programs.

Through this holistic and future-focused educational philosophy, the School of Engineering and Technology strives to develop competent engineers, innovators, researchers, entrepreneurs, and responsible global citizens who are prepared to lead, innovate, and create impactful solutions for the challenges of the 21st century.

9. Educational Pedagogy (Inside and outside classroom)

The School of Engineering and Technology (SOET) at K.R. Mangalam University follows a highly practical, experiential, and industry-oriented pedagogy designed to bridge the gap between academic learning and real-world technological applications. The teaching-learning process is structured to ensure that students not only understand concepts theoretically but also develop the ability to design, build, innovate, deploy, and solve real engineering and industry problems through hands-on engagement.

SOET adopts a learner-centric and Outcome-Based Education (OBE) approach that integrates classroom instruction, laboratory experimentation, project-enabled learning, industry exposure, research activities, innovation practices, and technology-driven self-learning. The pedagogy is carefully designed to promote problem-solving ability, technical competency, creativity, collaboration, leadership, and lifelong learning skills essential for the rapidly evolving engineering and technology landscape.

Inside Classroom Learning

The classroom ecosystem at SOET is highly interactive, application-oriented, and technology-enabled. Teaching methodologies go beyond conventional lectures and focus on experiential and active learning approaches that encourage students to apply concepts to practical scenarios.

Key pedagogical practices include:

- **Project-Based and Problem-Based Learning (PBL):** Students regularly work on real-world engineering problems, case studies, mini-projects, and interdisciplinary challenges that simulate industry environments and encourage innovation-driven thinking.
- **Hands-on Learning and Lab Integration:** Theoretical concepts are closely integrated with laboratory practice through coding sessions, hardware implementation, simulations, prototyping, debugging exercises, cloud deployments, AI model development, robotics experimentation, and IoT-based applications.
- **Industry-Oriented Technical Training:** Students receive practical exposure to modern tools, frameworks, platforms, and technologies used in industry, including Python, Cloud

Platforms, AI/ML frameworks, DevOps tools, Mobile App Development platforms, Cyber Security tools, CAD software, embedded systems, and automation technologies.

- **Collaborative and Team-Based Learning:** Group activities, design challenges, coding contests, peer discussions, collaborative projects, and technical brainstorming sessions help students develop teamwork, communication, and leadership capabilities.
- **Case Studies and Application-Centric Teaching:** Real-world industrial case studies, startup success stories, product engineering examples, and technology implementation scenarios are integrated into classroom discussions to strengthen practical understanding.
- **Skill Enhancement and Certification-Oriented Learning:** Regular value-added sessions, certification preparation workshops, coding practice sessions, aptitude training, and industry skill modules are conducted to enhance employability and professional readiness.
- **Technology-Enabled Teaching:** Smart classrooms, Learning Management Systems (LMS), virtual labs, recorded lectures, simulation tools, coding platforms, MOOCs, and digital learning resources are actively used to support blended and self-paced learning.
- **Research and Innovation Exposure:** Students are encouraged to participate in research discussions, technical paper writing, patent-oriented projects, innovation challenges, and prototype development activities from early semesters onward.

Outside Classroom Learning

SOET strongly believes that meaningful engineering education extends beyond classroom walls. Therefore, the school provides a rich ecosystem of experiential, industry-linked, innovation-driven, and socially relevant learning opportunities outside the classroom.

Key outside-classroom learning initiatives include:

- **Internships and Industrial Training:** Students undergo internships, live industry projects, industrial visits,

and corporate training programs to gain practical exposure to professional workflows, workplace culture, and emerging technologies.

- **Hackathons, Coding Competitions, and Technical Challenges:** Students actively participate in national and international hackathons, coding contests, robotics competitions, innovation challenges, and product development events that strengthen problem-solving and rapid prototyping abilities.
- **Centers of Excellence and Innovation Labs:** Dedicated Centers of Excellence in AI, Robotics & Automation, Cloud Computing, Cyber Security, Apple iOS Development, and Makerspaces provide students with opportunities to work on real-time applications, research projects, startup ideas, and interdisciplinary innovations.
- **Startup and Entrepreneurship Ecosystem:** Entrepreneurship development programs, startup incubation support, innovation mentoring, design thinking workshops, and product pitching sessions encourage students to transform ideas into viable technology solutions and ventures.
- **Technical Clubs and Student Communities:** Student-led technical clubs, coding communities, robotics teams, AI forums, and innovation groups foster peer learning, collaboration, leadership, and continuous technical engagement.
- **MOOCs and Self-Driven Learning:** Students are encouraged to pursue global certifications, online courses, self-paced learning modules, and open-source contributions through platforms such as Coursera, NPTEL, edX, AWS Academy, Microsoft Learn, Cisco Networking Academy, and other industry learning ecosystems.
- **Community Engagement and Social Innovation:** Students participate in outreach activities, social innovation projects, sustainability initiatives, digital literacy campaigns, and technology-for-society programs to develop empathy, ethics, and social responsibility.
- **Career Development and Mentorship:** Career mentoring sessions, alumni interactions, expert talks, placement training, resume-building workshops, mock interviews, and professional

development activities help students prepare for higher education, entrepreneurship, research, and global career opportunities.

Through this comprehensive and practice-oriented educational pedagogy, the School of Engineering and Technology creates a dynamic ecosystem where students learn by designing, building, experimenting, collaborating, innovating, and solving real-world problems. The institution ultimately aims to develop industry-ready engineers, technology innovators, entrepreneurs, and socially responsible professionals capable of thriving in the rapidly evolving global technology landscape.

10. Assessment and Evaluation

The grading and evaluation policies for theory courses, practical courses, projects, internships, and dissertations are detailed for each course individually.

- **Feedback and Continuous Improvement Mechanisms:** Continuous feedback is an integral part of the learning process. Faculty members actively monitor student learning during every class session to identify areas for improvement and provide timely support.
- **Academic Integrity and Ethics:** Upholding academic integrity is a fundamental principle of the learning process. All student submissions are rigorously checked for plagiarism using Turnitin and Drill Bit software. Submissions are required to have a similarity index below 10% to ensure originality and adherence to ethical standards.

Evaluation Scheme (Theory):

Evaluation Components	Weightage
Internal Marks (Theory & Lab) Continuous Assessment (40 Marks) Project/ Quizzes/ Assignments and Essays/ Presentations/ Participation/ Case Studies/ Reflective Journals (minimum of five components to be evaluated)	40 Marks
Internal Marks (Theory) – Mid Term Exam	20 Marks

External Marks (Theory): -	40 Marks
Total	100 Marks

*Note: (It is compulsory for a student to secure 40% marks in Internal and End Term Examination separately to secure minimum passing grade).

Evaluation Scheme (Laboratory):

Evaluation Components	Weightage
Internal Marks (Practical) –	
1. Conduct of Experiment	10 Marks
2. Lab Records	10 Marks
3. Lab Participation	10 Marks
4. Lab Project	20 Marks
External Marks (Practical): -	50 Marks
End term Practical Exam and Viva Voce	
Total	100 Marks

*Note: (It is compulsory for a student to secure 40% marks in Internal and End Term Practical Exam and Viva Voce separately to secure minimum passing grade).

11. Collaborations

The School of Engineering & Technology places a strong emphasis on forging robust partnerships with leading industry organizations to bridge the gap between academia and real-world applications. These collaborations are pivotal in aligning academic curricula with the dynamic needs of the industry, ensuring that students gain practical knowledge, hands-on experience, and exposure to cutting-edge technologies.

Through partnerships with renowned organizations such as IBM, Imagin XP, EC Council, Bitxyl Pvt Limited, NASSCOM, Certiport, CDAC, and Froyo Technologies, the school integrates industry expertise into its programs. These collaborations bring industry professionals to classrooms, offering students insights into real-world challenges, mentorship, and opportunities to earn globally recognized certifications. Additionally, students benefit from skill development programs, internships, and specialized training, making them industry-ready.

By fostering these alliances, the School of Engineering & Technology not only enhances the learning experience but also equips students with the competencies and credentials necessary to excel in competitive job markets. This synergy between academia and industry drives innovation, cultivates talent, and prepares future-ready professionals who can contribute meaningfully to the evolving technological landscape.

12. Program Educational Objectives, Program Outcomes

Undergraduate programs

PEOs

PEO1: Successful professionals in industry, government, academia, research, entrepreneurial pursuits and consulting firms.

PEO2: Able to apply their knowledge of computer science & engineering principles to solve societal problems by exhibiting a strong foundation in both theoretical and practical aspects of the field.

PEO3: Dedicated to upholding professional ethics and social responsibilities, with a strong commitment to advancing sustainability goals.

PEO4: Demonstrating strong leadership skills and a proven ability to collaborate effectively in diverse, multidisciplinary teams to successfully achieve project objectives.

Program outcomes (POs) for B.Tech (All Specializations)

Engineering Graduates will be able to:

PO1. Core Competencies in Engineering:

Graduates will possess a strong foundation in engineering knowledge, critical problem analysis, and solution design, equipped with skills for conducting thorough investigations to solve complex challenges.

PO2. Modern tool usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO3. Societal and Environmental Responsibility

Apply contextual knowledge to evaluate societal, health, safety, legal, and cultural issues, while understanding the impact of engineering solutions on the environment and advocating for sustainable development.

PO4. Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO5. Effective Communication and Team Collaboration

Excel in both individual and team roles within diverse and multidisciplinary settings, while communicating complex engineering concepts clearly through effective reports, presentations, and interactions.

PO6. Project management

Apply engineering and management principles to lead and manage projects effectively in computer science and engineering contexts.

PO7. Life-long learning:

Embrace and actively pursue continuous learning to stay current with technological advancements and evolving practices in computer science and engineering.

Program Outcomes (POs) for BCA/B.SC Programs

Graduates will be able to:

PO1. Core Competencies: Graduates will possess a strong foundation in computer science principles, critical problem analysis, and solution design, equipped with skills for conducting thorough investigations to solve complex challenges.

PO2. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern IT tools including prediction and modeling to complex computer science activities with an understanding of the limitations.

PO3. Societal and Environmental Responsibility

Apply contextual knowledge to evaluate societal, health, safety, legal, and cultural issues, while understanding the impact of engineering solutions on the environment and advocating for sustainable development.

PO4. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the computer science practice.

PO5. Effective Communication and Team Collaboration

Excel in both individual and team roles within diverse and multidisciplinary settings, while communicating complex computer science concepts clearly through effective reports, presentations, and interactions.

PO6. Project management

Apply engineering and management principles to lead and manage projects effectively in computer science contexts.

PO7. Life-long learning: Embrace and actively pursue continuous learning to stay current with technological advancements and evolving practices in computer science.

Program Educational Objectives for Master's in Computer Application (MCA)

PEO1: Achieve success in industry, government, academia, research, entrepreneurship, or consulting roles related to computer applications.

PEO2: Apply advanced computer application principles and methodologies to solve real-world problems, integrating theoretical knowledge with practical skills.

PEO3: Uphold professional ethics and social responsibilities, contributing to societal well-being and sustainability through the effective use of technology.

PEO4: Exhibit leadership and teamwork skills to effectively manage and collaborate in diverse, multidisciplinary projects within the field of computer applications.

POs (Program Outcomes) for MCA

1. PO1. Core Competencies in Computer Applications: Demonstrate a solid foundation in computer application principles, critical problem analysis, and solution design, with the ability to conduct thorough investigations and address complex technical challenges.
2. PO2. Modern Tool Usage: Create, select, and apply advanced techniques, resources, and IT tools for complex computer application tasks, with an understanding of their limitations and applications.
3. PO3. Societal and Environmental Responsibility: Evaluate and address societal, health, safety, legal, and cultural issues related to computing, considering the environmental impact of solutions and advocating for sustainable practices.
4. PO4. Ethics: Apply ethical principles and adhere to professional ethics and norms in the practice of computer applications.
5. PO5. Effective Communication and Team Collaboration: Excel in both individual and team roles in diverse and multidisciplinary environments, effectively communicating complex computer application concepts through reports, presentations, and interactions.

6. PO6. Project Management: Utilize management principles to lead and manage projects effectively within computer applications contexts.
7. PO7. Life-Long Learning: Engage in continuous learning to stay updated with technological advancements and evolving practices in computer applications.

12. Programmes Offered by the School

Category	Program Name
Under Graduate	Bachelor of Technology - Computer Science & Engineering
Under Graduate	Bachelor of Technology - Computer Science & Engineering (Artificial Intelligence & Machine Learning)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (Cyber Security)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (Data Science)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (UX OR UI)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (Full Stack Development)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (AI & Robotics)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (Semiconductor Design)
Under Graduate	Bachelor of Technology - Computer Science & Engineering (Cloud Computing)
Under Graduate	Bachelor of Computer Applications - (Artificial Intelligence & Data Science)
Under Graduate	Bachelor of Computer Applications - (Cyber Security)
Under Graduate	Bachelor of Science (Hons) - Computer Science/Cyber Security/Data Science
Post Graduate	Master of Computer Applications(Core)
Post Graduate	Master of Computer Applications (AI & ML)
Doctoral	Ph.D in Engineering

12.1 Bachelor of Technology - Computer Science & Engineering

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering (CSE) is a comprehensive four-year undergraduate program that provides students with a strong foundation in computer science, engineering principles, and emerging technologies. The curriculum balances core subjects such as programming, algorithms, data structures, and software engineering with hands-on labs, industry-oriented projects, and internships to ensure practical exposure and real-world readiness. With a focus on cutting-edge technologies like artificial intelligence, machine learning, blockchain, and cybersecurity, the program equips students to meet the evolving demands of the tech industry while fostering research, innovation, and problem-solving skills for diverse career opportunities.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in Computer Science and Engineering (CSE) program opens doors to diverse and rewarding career paths in the ever-evolving tech industry. Graduates are equipped to excel in core technology roles like software development, web development, and system analysis, as well as in emerging fields such as artificial intelligence, data science, blockchain, and cloud computing. Opportunities also extend to specialized areas like cybersecurity, network engineering, and robotics, alongside managerial and consultancy positions. With the skills and knowledge acquired, graduates are well-prepared to pursue advanced studies, launch entrepreneurial ventures, or contribute to cutting-edge research and innovation.

Specific Job Roles:

- Core Technology Roles: Software Developer, System Analyst, Web Developer, Database Administrator.

- Emerging Technology Roles: Data Scientist, AI/ML Engineer, Blockchain Developer, Cloud Computing Specialist.
- Network and Security Roles: Cybersecurity Analyst, Network Engineer.
- Research and Development: Research Scientist, Robotics Engineer.
- Managerial and Consultancy: IT Consultant, Project Manager.
- Entrepreneurship: Startup Founder, Tech Entrepreneur.
- Higher Education: Academic/Teaching Roles, Specialized Certifications in areas like Ethical Hacking or IoT.

Program Specific Outcomes (PSO)

On completion of the program, students will be:

PSO1: Understanding the concepts, theories, tools, techniques, and methodologies of Computer Science & Engineering.

PSO2: Applying the concepts, theories, tools, techniques, and methodologies to solve real-world Computer Science & Engineering challenges.

PSO3: Analyzing the methodologies context, problems, situations and issues related to Computer Science & Engineering.

PSO4: Evaluating the possible alternative solutions and making choices/decisions to solve problems in Computer Science & Engineering.

PSO5: Designing and developing innovative solutions to address complex problems in Computer Science & Engineering.

12.2 Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Artificial Intelligence and Machine Learning (AI & ML)

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Artificial Intelligence and Machine Learning (AI & ML) is a cutting-edge four-year undergraduate program designed to meet the growing demand for AI-driven technologies. This program offers a deep focus on AI and ML concepts, tools, and applications while providing a solid foundation in computer science and engineering principles. The curriculum

includes key topics such as deep learning, natural language processing, computer vision, reinforcement learning, and data analytics, alongside core subjects like programming, algorithms, and software engineering.

Students gain hands-on experience through labs, industry projects, and internships that emphasize real-world applications of AI and ML. The program fosters innovation, problem-solving skills, and research acumen, preparing graduates to address complex challenges in industries ranging from healthcare and finance to robotics and autonomous systems.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in AI & ML opens a plethora of career opportunities in AI-powered industries. Graduates are equipped with skills to excel in advanced AI/ML roles, core technology positions, and research-driven domains. They are also well-positioned to contribute to innovation, entrepreneurship, or further academic pursuits in AI-related fields.

Specific Job Roles:

- **AI & ML Specialization Roles:** AI/ML Engineer, Data Scientist, NLP Specialist, Computer Vision Engineer, Reinforcement Learning Expert.
- **Core Technology Roles:** Software Developer, System Analyst, Database Administrator.
- **Emerging Technology Roles:** Cloud AI Specialist, Edge Computing Developer.
- **Research and Development:** AI Research Scientist, Robotics Engineer (AI-Driven), Autonomous Systems Developer.
- **Managerial and Consultancy:** AI Consultant, AI Product Manager.
- **Entrepreneurship:** AI Startup Founder, Machine Learning Solutions Architect.
- **Higher Education:** Academic/Teaching Roles, Advanced Certifications in AI & ML, Data Science, or related fields.

Program Specific Outcomes (PSO)

On completion of the program, students will be:

PSO1: Understanding the foundational concepts, theories, tools, techniques, and methodologies specific to Artificial Intelligence and Machine Learning within the broader field of Computer Science & Engineering.

PSO2: Applying AI and ML principles, tools, and techniques to design, develop, and implement intelligent systems that address real-world challenges.

PSO3: Analysing complex datasets, models, and algorithms to identify patterns, trends, and insights pertinent to AI and ML applications in various domains.

PSO4: Evaluating the performance, accuracy, and efficiency of AI and ML models, and making informed decisions to optimize and improve these models for practical applications.

PSO5: Designing and developing innovative AI and ML-based solutions that leverage cutting-edge technologies to solve complex problems.

12.3 Bachelor of Technology - Computer Science & Engineering (Cyber Security)

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Cyber Security is a four-year undergraduate program designed to address the growing need for skilled professionals in safeguarding digital assets. This program provides a robust foundation in computer science and engineering principles, with a specialized focus on cybersecurity concepts, tools, and practices.

The curriculum encompasses key topics such as ethical hacking, cryptography, network security, malware analysis, digital forensics, and secure software development. Core computer science subjects like programming, algorithms, and data structures complement the specialized courses. Students gain practical experience through state-of-the-art labs, real-world projects, and industry-aligned internships, equipping them to identify, prevent, and mitigate cyber threats effectively.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in Cyber Security prepares graduates for a range of in-demand roles in cybersecurity and related domains. With expertise in securing digital environments, graduates are well-equipped to excel in government, private, and multinational organizations, as well as pursue research or entrepreneurial ventures in the cybersecurity domain.

Specific Job Roles:

- **Cyber Security Roles:** Cybersecurity Analyst, Ethical Hacker, Penetration Tester, Incident Responder, Cyber Forensic Expert, Security Operations Center (SOC) Analyst.
- **Core Technology Roles:** Software Developer, System Analyst, Network Administrator.
- **Advanced Security Roles:** Cryptographer, Malware Analyst, Threat Intelligence Specialist, Cloud Security Engineer.
- **Research and Development:** Cybersecurity Researcher, Secure Systems Architect, AI in Cybersecurity Specialist.
- **Managerial and Consultancy:** Security Consultant, Information Security Manager, Compliance Analyst.
- **Entrepreneurship:** Cybersecurity Startup Founder, Security Solutions Architect.
- **Higher Education:** Academic/Teaching Roles, Advanced Certifications in Cybersecurity (e.g., CISSP, CEH, CISM).

Program-Specific Outcomes (PSOs) for B.Tech CSE with Specialization in Cyber Security

On completion of the program, students will be:

- **PSO1:** Understanding the fundamental concepts, principles, tools, and techniques in Cyber Security, including cryptography, ethical hacking, and secure software development.
- **PSO2:** Applying Cyber Security methodologies to identify, assess, and mitigate security vulnerabilities and threats in real-world systems.
- **PSO3:** Analyzing cybersecurity challenges, such as malware threats, network intrusions, and data breaches, to propose effective countermeasures.
- **PSO4:** Evaluating alternative security frameworks, tools, and practices to optimize system security and compliance with global standards.
- **PSO5:** Designing and implementing robust and innovative cybersecurity solutions to address complex security problems in diverse environments.

12.4 Bachelor of Technology - Computer Science & Engineering (Data Science Specialization)

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Data Science is a four-year undergraduate program designed to cater to the growing need for skilled professionals in data-driven decision-making and analytics. This program focuses on key areas such as data mining, statistical modeling, big data technologies, machine learning, and data visualization while providing a strong foundation in computer science and engineering principles.

The curriculum integrates essential topics like algorithms, programming, and database management with advanced data science subjects, including predictive analytics, natural language processing, and deep learning. Students gain practical exposure through hands-on labs, industry projects, and internships, enabling them to solve real-world problems in various domains such as finance, healthcare, e-commerce, and marketing. The program

emphasizes research, problem-solving, and innovation, preparing graduates for dynamic and evolving careers in data science.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in Data Science offers a wide range of career opportunities in data-driven industries. Graduates are equipped with the skills and knowledge to excel in advanced data science roles, core technology positions, and research-oriented careers.

Specific Job Roles:

- **Data Science Specialization Roles:** Data Scientist, Data Analyst, Big Data Engineer, Machine Learning Engineer, Business Intelligence Analyst.
- **Core Technology Roles:** Software Developer, System Analyst, Database Administrator.
- **Emerging Technology Roles:** Cloud Data Engineer, IoT Data Analyst.
- **Research and Development:** Data Research Scientist, AI in Data Analytics Specialist.
- **Managerial and Consultancy:** Data Consultant, Data Product Manager.
- **Entrepreneurship:** Data Solutions Startup Founder, Analytics Solutions Architect.
- **Higher Education:** Academic/Teaching Roles, Advanced Certifications in Data Science, Machine Learning, or Big Data Technologies.

PSO's for B. Tech. CSE with Specialization in Data Science

PSO1: Understanding the concepts, theories, tools, techniques, and methodologies of Data Science.

PSO2: Applying Data Science principles to analyse and solve real-world data-driven challenges.

PSO3: Analysing data sets, methodologies, and algorithms to extract meaningful insights.

PSO4: Evaluating data models and analytical methods to optimize performance.

PSO5: Designing and developing innovative data-driven solutions to address complex problems.

12.5 Bachelor of Technology - Computer Science & Engineering with specialization in UX / UI

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in User Experience (UX) and User Interface (UI) Design is a four-year undergraduate program designed to address the increasing demand for professionals skilled in creating intuitive and user-centric digital experiences. This program combines the principles of computer science, design thinking, and human-computer interaction to equip students with the expertise needed to design, develop, and optimize user interfaces and experiences across platforms.

The curriculum includes core computer science topics such as programming, algorithms, and software engineering, alongside specialized subjects like interaction design, usability testing, design psychology, prototyping, and front-end development. Students gain hands-on experience through design studios, labs, industry-oriented projects, and internships, fostering innovation and problem-solving skills. Graduates of this program are well-prepared to design impactful and accessible digital products that enhance user satisfaction and engagement.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in UX/UI offers diverse career opportunities in tech-driven industries. Graduates are equipped to excel in roles that focus on crafting user-friendly digital products and interfaces, contributing to innovation and business success.

Specific Job Roles:

- UX/UI Design Roles: UX Designer, UI Designer, Interaction Designer, Visual Designer, Information Architect.
- Development Roles: Front-End Developer, UX Engineer, Web Designer.
- Research and Analysis Roles: UX Researcher, Usability Analyst, Design Strategist.
- Emerging Technology Roles: AR/VR Experience Designer, Product Designer (UI/UX for IoT).
- Managerial and Consultancy: UX/UI Consultant, Design Product Manager.
- Entrepreneurship: Digital Product Startup Founder, Design Solutions Architect.
- Higher Education: Academic/Teaching Roles, Advanced Certifications in UX/UI Design, Interaction Design, or Human-Computer Interaction.

12.6 Bachelor of Technology - Computer Science & Engineering (Full Stack Development Specialization)

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Full Stack Development is a four-year undergraduate program tailored to meet the demand for skilled professionals proficient in end-to-end application development. This program emphasizes the integration of front-end and back-end development skills, equipping students to design, develop, and deploy scalable and efficient web and mobile applications.

The curriculum combines foundational computer science topics such as programming, algorithms, and database management with specialized courses in front-end technologies (HTML, CSS, JavaScript frameworks), back-end frameworks (Node.js, Django, Spring), APIs, cloud integration, and

DevOps. Students gain practical experience through coding labs, industry projects, and internships, fostering a strong understanding of the entire development lifecycle. The program prepares graduates to address real-world challenges and deliver robust, user-friendly solutions in diverse industries.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in Full Stack Development offers a wide range of career opportunities in the software development industry. Graduates are well-equipped to take on roles requiring comprehensive knowledge of full-stack technologies and modern development practices.

Specific Job Roles:

- **Full Stack Development Roles:** Full Stack Developer, Front-End Developer, Back-End Developer, Web Application Developer.
- **Core Technology Roles:** Software Engineer, System Analyst, Database Administrator.
- **Emerging Technology Roles:** Cloud Application Developer, DevOps Engineer.
- **Research and Development:** Software Solutions Architect, Automation Engineer.
- **Managerial and Consultancy:** Technical Project Manager, IT Consultant.
- **Entrepreneurship:** Application Development Startup Founder, SaaS Solutions Architect.
- **Higher Education:** Academic/Teaching Roles, Advanced Certifications in Full Stack Development, Cloud Computing, or DevOps.

12.7 Bachelor of Technology - Computer Science & Engineering (AI & Robotics Specialization)

Program Overview

The **B.Tech CSE (Artificial Intelligence & Robotics)** program is designed to equip students with cutting-edge skills in intelligent systems, autonomous machines, and next-generation computing. This specialization blends the core foundations of **computer science, machine learning, deep learning, and embedded systems** with practical expertise in **robotics, computer vision, and natural language processing**.

Students gain hands-on experience through **industry-driven projects, robotics labs, and AI simulation platforms**, preparing them to design, program, and deploy autonomous systems for real-world applications such as **smart manufacturing, healthcare robotics, drones, and autonomous vehicles**. The curriculum is closely aligned with industry needs and global certifications, ensuring students are **future-ready for careers in AI engineering, robotics development, research, and automation industries**.

Duration

4 Years Full Time (8 Semesters)

Career Options and Avenues in AI & Robotics

Graduates of B.Tech in Computer Science & Engineering (AI & Robotics Specialization) have a wide spectrum of career opportunities across industries that are rapidly adopting automation and intelligent technologies. The demand for professionals skilled in AI algorithms, robotics engineering, machine learning, and intelligent automation is growing across the globe.

Key Career Roles:

- AI Engineer / Machine Learning Engineer – Designing and deploying AI solutions for predictive analytics, decision-making, and automation.
- Robotics Engineer – Developing autonomous robots for manufacturing, healthcare, defense, and service industries.
- Computer Vision Engineer – Building intelligent vision systems for drones, autonomous vehicles, and surveillance.
- Data Scientist / AI Researcher – Applying deep learning and data-driven methods to solve complex problems.

- Automation Specialist / IoT Engineer – Integrating robotics with IoT and smart devices for industrial applications.
- Human-Robot Interaction Designer – Enhancing usability and communication between humans and intelligent machines.

Industry Avenues:

- Manufacturing & Industry 4.0 – Robotics for assembly lines, predictive maintenance, and smart factories.
- Healthcare & Medical Robotics – AI-powered diagnostics, robotic surgery, and assistive devices.
- Autonomous Systems – Drones, self-driving cars, and intelligent transport systems.
- Defense & Aerospace – Robotics for surveillance, unmanned vehicles, and mission-critical operations.
- Service & Consumer Robotics – Domestic robots, AI assistants, and customer service automation.
- Research & Innovation – Opportunities in global research labs, R&D centers, and higher studies in AI, Robotics, and Automation.

12.8 Bachelor of Technology (B.Tech) in Computer Science and Engineering with a Specialization in Cloud Computing

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Cloud Computing is a future-focused four-year undergraduate program designed to prepare students for the rapidly evolving world of cloud technologies, distributed computing, virtualization, and scalable digital infrastructure. The program equips students with strong foundations in computer science and engineering while providing specialized expertise in cloud platforms, cloud-native application development, DevOps, virtualization, containerization, cloud security, distributed systems, and modern enterprise computing environments.

The curriculum is carefully designed to align with current industry requirements and global technology trends, integrating core computer science subjects such as programming, data structures, algorithms, operating systems, databases, networking, and software engineering with advanced cloud computing technologies including AWS, Microsoft Azure, Google Cloud Platform (GCP), Kubernetes, Docker, serverless computing, edge computing, and cloud automation.

The program follows a highly practical and industry-oriented learning approach, where students gain hands-on experience through cloud labs, live deployments, virtualization environments, industry projects, hackathons, certification-oriented training, internships, and real-world application development. Students learn to design, deploy, manage, secure, and optimize scalable cloud-based solutions for modern enterprises and digital ecosystems.

Special emphasis is placed on emerging areas such as multi-cloud architecture, cloud AI integration, cloud security, cloud-native DevOps, Infrastructure as Code (IaC), Site Reliability Engineering (SRE), microservices architecture, and cloud-enabled AI/ML applications. Through project-enabled learning and exposure to real-world case studies, students develop strong problem-solving, analytical, technical, and innovation skills required to build next-generation cloud-enabled systems and services.

The program also fosters research aptitude, entrepreneurial thinking, and innovation through Centers of Excellence in Cloud Computing, AI, Cyber Security, and emerging technologies, enabling students to work on interdisciplinary projects and industry-driven problem statements.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in Cloud Computing offers diverse and high-demand career opportunities across cloud service providers, IT companies, software industries, startups, multinational corporations, financial organizations, healthcare systems, e-commerce platforms, and research organizations. Graduates are equipped with the technical expertise and practical exposure required to design, deploy, secure, and manage modern cloud-based digital infrastructures and applications.

Specific Job Roles:

- **Cloud Computing Specialization Roles:**

Cloud Engineer, Cloud Solutions Architect, Cloud Administrator, Cloud Security Engineer, Cloud Consultant, Cloud Support Engineer.

- **DevOps and Automation Roles:**

DevOps Engineer, Site Reliability Engineer (SRE), Infrastructure Automation Engineer, Platform Engineer, Kubernetes Administrator.

- **Cloud Development Roles:**

Cloud Application Developer, Cloud-Native Software Engineer, Full Stack Cloud Developer, Serverless Application Developer.

- **Data and AI-Enabled Cloud Roles:**

Cloud AI Specialist, Cloud Data Engineer, Big Data Engineer, Edge Computing Developer, AI Infrastructure Engineer.

- **Infrastructure and Networking Roles:**

System Engineer, Network Cloud Engineer, Virtualization Specialist, Infrastructure Engineer.

- **Cyber Security and Governance Roles:**

Cloud Security Analyst, Identity and Access Management (IAM) Specialist, Security Operations Engineer.

- **Research and Innovation Roles:**

Distributed Systems Researcher, Cloud Research Engineer, High-Performance Computing Specialist.

- **Managerial and Consultancy Roles:**

Technology Consultant, Cloud Transformation Consultant, IT Infrastructure Manager, Technical Program Manager.

- **Entrepreneurship:**

Cloud Startup Founder, SaaS Product Developer, Cloud Solutions Entrepreneur.

- **Higher Education and Certifications:**

Advanced Certifications in AWS, Microsoft Azure, Google Cloud, DevOps, Kubernetes, Cyber Security, and opportunities for postgraduate studies and research.

Program Specific Outcomes (PSO)

On completion of the program, students will be able to:

PSO1:

Understand the foundational concepts, architectures, technologies, tools, and methodologies related to Cloud Computing, distributed systems, virtualization, and modern computing infrastructures within the broader domain of Computer Science & Engineering.

PSO2:

Apply cloud computing principles, platforms, and technologies to design, develop, deploy, and manage scalable, reliable, and secure cloud-based applications and services for real-world scenarios.

PSO3:

Analyze complex computing requirements, cloud infrastructures, distributed environments, and system performance metrics to optimize cloud-enabled solutions across diverse application domains.

PSO4:

Evaluate the performance, scalability, security, reliability, and cost-efficiency of cloud architectures, cloud services, and deployment models to make informed engineering and business decisions.

PSO5:

Design and develop innovative cloud-native solutions using emerging technologies such as containerization, microservices, DevOps, serverless computing, edge computing, and AI-enabled cloud platforms to solve modern technological and industrial challenges.

12.9 Bachelor of Technology (B.Tech) in Computer Science and Engineering with a Specialization in Semiconductor Design

Program Overview

The Bachelor of Technology (B.Tech) in Computer Science and Engineering with a specialization in Semiconductor Design is a contemporary four-year undergraduate program designed to prepare students for the rapidly expanding semiconductor and electronics industry. The program combines strong foundations in Computer Science and Engineering with specialized knowledge in semiconductor technologies, chip design, embedded systems, VLSI design, hardware-software co-design, electronic design automation (EDA), and next-generation computing systems.

The curriculum is carefully structured to address the growing global demand for skilled semiconductor professionals driven by advancements in Artificial Intelligence, IoT, consumer electronics, automotive systems, telecommunications, robotics, high-performance computing, and smart devices. Students gain comprehensive exposure to semiconductor manufacturing fundamentals, digital and analog circuit design, CMOS technology, FPGA programming, system-on-chip (SoC) architecture, processor design, hardware verification, embedded programming, and semiconductor testing methodologies.

The program integrates core computer science subjects such as programming, algorithms, computer organization, operating systems, databases, networking, and software engineering with advanced semiconductor-focused domains including VLSI design, HDL programming (Verilog/VHDL), chip architecture, microcontrollers, embedded systems, PCB design, IC fabrication concepts, and hardware acceleration technologies.

SOET adopts a highly practical and industry-oriented pedagogy for this program. Students gain hands-on experience through semiconductor laboratories, FPGA-based development environments, embedded systems projects, hardware prototyping, EDA tools, simulation platforms, chip design workflows, and industry-driven mini and major projects. The learning ecosystem emphasizes real-world problem-solving, hardware-software integration, system optimization, and innovation-driven design thinking.

The program also provides exposure to emerging areas such as AI hardware accelerators, edge computing devices, semiconductor applications in autonomous systems, low-power chip design, RISC-V architecture, IoT hardware platforms, neuromorphic computing, and hardware security. Through project-enabled learning, internships, industry collaborations, and

Centers of Excellence, students develop strong technical, analytical, research, and innovation capabilities required for modern semiconductor industries and advanced technology domains.

The program further promotes interdisciplinary learning, research orientation, entrepreneurship, and product innovation, enabling students to contribute effectively to India's growing semiconductor ecosystem and global electronics manufacturing initiatives.

Duration

4 Years Full Time (8 Semesters)

Career Options

The B.Tech in CSE with a specialization in Semiconductor Design opens a wide range of career opportunities in semiconductor industries, chip manufacturing companies, embedded systems organizations, electronics industries, automotive technology companies, telecommunications firms, consumer electronics, AI hardware startups, and research organizations.

Graduates are equipped with the technical expertise required to work across semiconductor design, embedded computing, hardware development, chip verification, electronic automation, and intelligent hardware systems.

Specific Job Roles:

- **Semiconductor Design Roles:**
VLSI Design Engineer, Semiconductor Design Engineer, Physical Design Engineer, RTL Design Engineer, ASIC Design Engineer, FPGA Engineer.
- **Embedded and Hardware Roles:**
Embedded Systems Engineer, Microcontroller Programmer, Hardware Design Engineer, PCB Design Engineer, Firmware Engineer.
- **Verification and Testing Roles:**
Verification Engineer, Validation Engineer, Semiconductor Test Engineer, DFT (Design for Testability) Engineer.

- **Processor and Architecture Roles:**
SoC Design Engineer, Processor Design Engineer, RISC-V Developer, Hardware Acceleration Engineer.
- **AI and Emerging Hardware Roles:**
AI Hardware Engineer, Edge Computing Engineer, IoT Hardware Specialist, Robotics Hardware Developer.
- **Automation and EDA Roles:**
EDA Tool Engineer, Hardware Simulation Engineer, Electronic Systems Engineer.
- **Research and Development Roles:**
Semiconductor Research Engineer, Embedded AI Researcher, Advanced Computing Systems Developer.
- **Managerial and Consultancy Roles:**
Semiconductor Technology Consultant, Hardware Product Manager, Technical Solutions Architect.
- **Entrepreneurship:**
Embedded Systems Startup Founder, Electronics Product Innovator, Semiconductor Technology Entrepreneur.
- **Higher Education and Research:**
Opportunities for advanced studies, research, and global certifications in VLSI, Embedded Systems, Semiconductor Manufacturing, FPGA Design, and Hardware Security.

Program Specific Outcomes (PSO)

On completion of the program, students will be able to:

PSO1:

Understand the foundational concepts, principles, architectures, tools, technologies, and methodologies related to semiconductor design, VLSI systems, embedded computing, and hardware-software integration within the broader field of Computer Science & Engineering.

PSO2:

Apply semiconductor design principles, embedded system concepts, programming techniques, and hardware development methodologies to design, simulate, implement, and optimize intelligent electronic and computing systems.

PSO3:

Analyze complex hardware architectures, digital systems, embedded platforms, and semiconductor workflows to identify performance, reliability, power efficiency, and optimization requirements for real-world applications.

PSO4:

Evaluate semiconductor systems, chip architectures, embedded solutions, and hardware-software integrated applications with respect to functionality, scalability, security, efficiency, and industrial feasibility.

PSO5:

Design and develop innovative semiconductor and embedded technology solutions using modern tools and emerging technologies such as FPGA platforms, AI accelerators, IoT devices, RISC-V architectures, edge computing systems, and intelligent hardware platforms to solve contemporary technological challenges.

12.10 Bachelor of Computer Applications (BCA) - Artificial Intelligence & Data Science Specialization

Program Overview

The Bachelor of Computer Applications (BCA) with a specialization in Artificial Intelligence (AI) and Data Science is a three-year undergraduate program designed to equip students with the knowledge and skills required to thrive in AI and data-driven industries. The program focuses on foundational computer applications concepts while integrating specialized topics in AI and Data Science, such as machine learning, data analytics, natural language processing, predictive modeling, and big data technologies.

The curriculum emphasizes practical learning through coding, AI model development, data visualization, and hands-on labs. Industry-oriented projects and internships provide students with exposure to real-world applications, fostering innovation, problem-solving skills, and critical thinking.

Graduates are well-prepared to tackle challenges in diverse domains, from healthcare and finance to e-commerce and technology startups.

Duration

3 Years Full Time (6 Semesters)

Career Options

The BCA in AI & Data Science offers exciting career opportunities in cutting-edge industries where data and AI play a transformative role. Graduates are equipped to take on roles that require expertise in AI technologies and data-driven decision-making.

Specific Job Roles:

- **AI & Data Science Roles:** Data Scientist, AI/ML Developer, Data Analyst, Business Intelligence Analyst, NLP Specialist.
- **Core Technology Roles:** Software Developer, System Analyst, Database Administrator.
- **Emerging Technology Roles:** Big Data Engineer, Cloud Data Analyst.
- **Research and Development:** AI Research Assistant, Data-Driven Application Developer.
- **Managerial and Consultancy:** Data Consultant, AI Solutions Analyst.
- **Entrepreneurship:** AI Startup Founder, Analytics Solutions Architect.
- **Higher Education:** Academic/Teaching Roles, Advanced Certifications in AI, Data Science, or Big Data Technologies.

12.11 Bachelor of Science (Hons) - Computer Science / Cyber Security / Data Science

Program Overview

The Bachelor of Science (Hons) program in Computer Science, Cyber Security, and Data Science is a three-year undergraduate degree designed to equip students with a comprehensive understanding of foundational and advanced concepts across these dynamic domains. The program offers an

interdisciplinary curriculum that integrates core computer science principles with specialized knowledge in cybersecurity and data science, preparing students for diverse and in-demand career paths.

The curriculum includes essential topics like programming, algorithms, and software engineering alongside specialized subjects such as ethical hacking, network security, cryptography, data analytics, machine learning, and big data technologies. Hands-on labs, industry projects, and internships enable students to apply their learning in real-world scenarios, fostering critical thinking, problem-solving, and innovation. The program's holistic approach ensures students are well-prepared to address the challenges of rapidly evolving technology landscapes in a variety of industries.

Duration

3 Years Full Time (6 Semesters)

Career Options

Graduates of the B.Sc. (Hons) program in Computer Science, Cyber Security, and Data Science have a wide range of career opportunities in cutting-edge industries. They can pursue roles in core computer science, secure IT systems, data analytics, and research-driven areas.

Specific Job Roles:

- Core Computer Science Roles: Software Developer, System Analyst, IT Support Specialist, Database Administrator.
- Cyber Security Roles: Cybersecurity Analyst, Ethical Hacker, Security Operations Analyst, Network Security Specialist.
- Data Science Roles: Data Scientist, Data Analyst, Business Intelligence Analyst, Machine Learning Engineer.
- Emerging Technology Roles: Big Data Engineer, Cloud Security Analyst, AI/ML Developer.
- Research and Development: Research Assistant, Technology Innovator, Secure Systems Architect.
- Managerial and Consultancy: IT Consultant, Data Consultant, Cybersecurity Consultant.

- Entrepreneurship: Startup Founder (Technology, Security, or Data Solutions), Solutions Architect.
- Higher Education: Advanced studies in Computer Science, Cyber Security, Data Science, or specialized certifications in areas such as AI, Big Data, and Ethical Hacking.

These programs enable students to master skills that meet the demands of multiple industries, ensuring flexibility and a competitive edge in the ever-evolving technological world.

PSO's for B.Sc. (Hons.) in Data Science

PSO1: Understanding the core concepts, theories, tools, techniques, and methodologies of Data Science.

PSO2: Applying Data Science principles to solve real-world data challenges.

PSO3: Analysing data contexts, problems, and issues using appropriate methodologies.

PSO4: Evaluating alternative data solutions and making informed decisions to optimize results.

PSO5: Designing and developing innovative data-driven solutions to address complex problems.

PSO's for B.Sc. (Hons.) in Computer Science

PSO1: Understanding the core concepts, theories, tools, techniques, and methodologies of Computer Science.

PSO2: Applying Computer Science principles to solve real-world challenges.

PSO3: Analysing methodologies, problems, and issues related to Computer Science.

PSO4: Evaluating alternative solutions and making informed decisions to solve problems in Computer Science.

PSO5: Designing and developing innovative solutions to address complex problems in Computer Science.

PSO's for B.Sc. (Hons.) with Specialization in Cyber Security

PSO1: Understanding the core concepts, theories, tools, techniques, and methodologies of Cyber Security.

PSO2: Applying Cyber Security principles to solve real-world security challenges.

PSO3: Analysing security threats, vulnerabilities, and issues related to Cyber Security.

PSO4: Evaluating alternative security solutions and making informed decisions to mitigate risks.

PSO5: Designing and developing innovative solutions to address complex Cyber Security problems.

12.12 Master of Computer Applications (MCA)

Program Overview

The Master of Computer Applications (MCA) is a two-year postgraduate program designed to provide students with advanced knowledge and skills in the field of computer applications and modern technological practices. The program focuses on a comprehensive understanding of software development, system management, data analytics, cybersecurity, and emerging technologies such as artificial intelligence, cloud computing, and machine learning.

The curriculum is designed to bridge the gap between theoretical concepts and practical application through hands-on programming, live projects, and industry collaborations. Students develop expertise in areas like software engineering, database management, web technologies, network security, and data science. With an emphasis on innovation, problem-solving, and professional ethics, the program prepares graduates for leadership roles in IT and related industries.

Duration

2 Years Full Time (4 Semesters)

Career Options

The MCA program offers a wide range of career opportunities across diverse domains of technology. Graduates are well-equipped to take on specialized roles in software development, data analysis, cybersecurity, and more, or to pursue entrepreneurial ventures and advanced research.

Specific Job Roles:

- **Software Development Roles:** Software Developer, Web Developer, Mobile App Developer, Software Architect.
- **Cyber Security Roles:** Cybersecurity Analyst, Ethical Hacker, Network Security Specialist.
- **Data Science Roles:** Data Scientist, Data Analyst, Business Intelligence Developer.
- **Core IT Roles:** System Analyst, IT Consultant, Database Administrator.
- **Emerging Technology Roles:** Cloud Computing Engineer, Machine Learning Engineer, IoT Developer.
- **Research and Development:** Research Scientist, Technology Innovator, R&D Specialist.
- **Managerial and Consultancy:** IT Project Manager, Cybersecurity Consultant, Data Consultant.
- **Entrepreneurship:** Technology Startup Founder, SaaS Solutions Developer.
- **Higher Education:** Advanced certifications in Cloud Computing, Data Science, AI, and Cybersecurity or further academic research (Ph.D.).

This program is tailored to nurture industry-ready professionals with the skills and knowledge to tackle the complex challenges of modern IT environments, ensuring a successful and fulfilling career.

PSOs (Program Specific Outcomes)

1. **PSO1:** Understanding advanced concepts, theories, tools, techniques, and methodologies in computer applications.
2. **PSO2:** Applying advanced knowledge and techniques to address and solve real-world challenges in computer applications.
3. **PSO3:** Analysing and evaluating methodologies, problems, and issues within various contexts of computer applications.
4. **PSO4:** Assessing alternative solutions and making informed decisions to address complex problems in computer applications.
5. **PSO5:** Designing and developing innovative solutions to tackle sophisticated challenges in computer applications.

12.13 Master of Technology (M.Tech) - Computer Science and Engineering (CSE)

Program Overview

The Master of Technology (M.Tech) in Computer Science and Engineering (CSE) is a two-year postgraduate program that offers advanced knowledge and specialized expertise in the field of computer science and its applications. The program is designed to provide a strong theoretical foundation while emphasizing practical problem-solving skills and research-oriented learning.

The curriculum covers core areas such as advanced algorithms, software systems, database technologies, and operating systems, along with emerging fields like artificial intelligence, machine learning, big data analytics, cloud computing, and cybersecurity. With an emphasis on research and innovation, the program enables students to work on state-of-the-art projects, publish in reputed journals, and contribute to solving real-world problems through technology.

Duration

2 Years Full Time (4 Semesters)

Career Options

Graduates of the M.Tech CSE program have access to diverse and high-impact career opportunities in academia, research, and the technology industry. The program equips students with advanced skills for leadership roles and specialized positions in cutting-edge domains.

Specific Job Roles:

Core Computer Science Roles: Software Architect, System Analyst, Database Administrator, Advanced Software Developer.

Emerging Technology Roles: AI/ML Specialist, Data Scientist, Cloud Computing Engineer, Blockchain Developer.

Cyber Security Roles: Security Analyst, Cybersecurity Specialist, Cryptography Expert.

Research and Development: Research Scientist, R&D Specialist, Technology Innovator.

Academic Roles: Lecturer, Assistant Professor, Research Scholar.

Managerial and Consultancy: IT Consultant, Technical Project Manager, Technology Strategist.

Entrepreneurship: Tech Startup Founder, Advanced Solutions Architect.

Higher Education: Advanced research opportunities leading to a Ph.D. in Computer Science or related fields.

The M.Tech CSE program is designed to foster innovation, technical excellence, and research capability, preparing graduates to contribute to transformative advancements in technology and address the complexities of a rapidly evolving digital landscape.

12.14 Doctor of Philosophy (Ph.D.) in Engineering

Program Overview

The Doctor of Philosophy (Ph.D.) in Engineering is a prestigious and rigorous research-focused program aimed at advancing knowledge and fostering innovation in various disciplines of engineering. Designed for highly motivated scholars, this program provides an opportunity to undertake in-depth research

on cutting-edge topics, addressing complex challenges in academia, industry, and society.

The program emphasizes originality and creativity in research, enabling candidates to contribute significant advancements to their chosen field. It encompasses a wide range of engineering domains, including computer science, electronics, mechanical, civil, and interdisciplinary areas such as artificial intelligence, data science, robotics, renewable energy, and cybersecurity. Through a combination of advanced coursework, seminars, and independent research, scholars are guided by distinguished faculty to produce impactful contributions that meet global standards of excellence.

Duration

Typically 3 to 5 Years (Full Time or Part Time)

Key Features

- Opportunity to pursue advanced, independent research in specialized areas of engineering.
- Access to state-of-the-art laboratories and resources for cutting-edge experimentation and analysis.
- Collaboration with industry leaders, research organizations, and global academic institutions.
- Emphasis on publishing in high-impact journals and presenting at international conferences.
- Structured framework including coursework, comprehensive exams, and a dissertation to ensure academic rigor and research quality.

Career Prospects

Graduates of the Ph.D. in Engineering program are recognized as experts and innovators in their respective fields, opening doors to leadership roles in academia, research, and industry.

Potential Career Paths:

- **Academia:** Professor, Researcher, or Academic Leader in universities and educational institutions.
- **Research and Development:** Lead Scientist, Principal Investigator, or R&D Specialist in research organizations and laboratories.
- **Industry Leadership:** Technical Director, Chief Technology Officer (CTO), or Innovation Strategist in technology-driven companies.
- **Consultancy:** Independent Consultant or Advisor for engineering projects, policy development, or technological solutions.
- **Entrepreneurship:** Founder of technology startups or Research and Development enterprises.
- **Policy and Advocacy:** Roles in governmental and non-governmental organizations focusing on technological innovation and policy formulation.

The Ph.D. in Engineering program is not merely an academic milestone but a platform for visionary individuals to lead transformative changes in science, technology, and engineering, contributing to global progress and sustainability.

13. Curriculum Highlights

- **Hands-On Learning with Real-World Exposure:**

Over 15% of the total curriculum credits are dedicated to internships and project-based learning, ensuring that students graduate with at least six months of industry-relevant experience and a robust portfolio of real-world projects—tangible evidence of their technical proficiency and problem-solving capabilities.

Students actively engage with real-world challenges from industry and society, often under the mentorship of experienced industry professionals, bridging the gap between academic learning and practical implementation.

Importantly, the focus on hands-on learning is not limited to designated project courses. Laboratory assignments across subjects are designed as mini-projects, enabling students to apply classroom concepts in practical,

scenario-based tasks, fostering deeper understanding, innovation, and independent thinking from the very beginning of the program.

- **Project-Based Learning (PBL)**

The implementation of Project-Based Learning (PBL) has led to a remarkable transformation in student outcomes and engagement. This semester alone, our students have secured top positions in over eight national-level hackathons, demonstrating their ability to apply theoretical knowledge to innovative, real-world solutions.

- **Career-Focused Programming Languages:** We've moved away from legacy languages like C and C++, and now train students in Python, Java, and JavaScript—the top programming languages aligned with global job demand.
- **Web Development Training from Day One:** Students begin working with the MERN Stack (MongoDB, Express, React, Node.js) in their first year—a modern, widely-used tech stack that prepares them to build real-world applications early in their journey.
- **MakerSpace: Build from Day One:** Instead of outdated workshop classes, students now engage in a “MakerSpace” course with access to 3D printers, laser cutters, Arduino kits, and more. Their projects may also be taken forward by the KR Mangalam Entrepreneurship and Incubation Cell (KEIC) for startup development.
- **Design Thinking and Digital Prototyping:** First-year students are trained in user research, design thinking, and tools like Figma—skills essential for building products that people actually want.
- **Build a Computer from Scratch – *Nand to Tetris*:** In a unique two-semester course, students build a computer from the ground up—no exams, just deep, hands-on learning. It's one of the most foundational and immersive courses in the country.
- **Specializations with Industry Partners:** Starting in the second year, students can choose specializations such as AI & ML, Robotics, Data Science, and Cybersecurity—co-designed with industry leaders like IBM, Microsoft, EC-Council, and ImaginXP. These are supported by dedicated labs and research centers.

- **AI-Powered Learning Experience:** Our assignments and labs are fully digital, with instant feedback powered by our AI-first Learning Management System. This is a major upgrade over the outdated pen-and-paper methods still used elsewhere.
- **Placement Readiness Labs (PRL 1–4) :** We have a dedicated sequence of soft skills and professional development courses focused on communication, teamwork, presentation, and interview preparation—ensuring students are truly job-ready.
- **Competitive Programming Track :** A structured series of courses prepares students for high-stakes technical interviews at top companies like Google, Microsoft, and Amazon. This track focuses on algorithmic problem-solving and advanced programming techniques.

14. Internships and Projects

Internship Courses:

The internship courses offered across Undergraduate and Postgraduate programs, including all specializations, are designed to provide students with structured industry exposure and experiential learning opportunities. These internships serve as a critical bridge between academic learning and professional practice, enabling students to apply theoretical concepts to real-world technological, engineering, and business challenges.

The internship framework at the School of Engineering and Technology emphasizes practical learning, industry engagement, innovation, research orientation, and professional skill development. Through internships, students gain exposure to organizational workflows, emerging technologies, collaborative work environments, and industry-standard tools and practices relevant to their domains of specialization.

The internship ecosystem is carefully structured across multiple semesters to progressively enhance students' technical competencies, problem-solving capabilities, industry readiness, and professional confidence.

Objectives

III Semester Internship

The internship at this stage focuses on foundational industry exposure and early professional orientation.

Objectives:

- Introduce students to organizational structures, workplace culture, and basic industry workflows.
- Provide practical exposure to the real-world applications of foundational computer science, engineering, and technology concepts.
- Develop essential professional skills such as communication, teamwork, discipline, adaptability, and observational learning.
- Familiarize students with emerging technologies, development environments, and industry practices related to their domain.
- Encourage curiosity, innovation, and self-learning through introductory hands-on tasks and guided industry interactions.

V Semester Internship

The internship during the middle phase of the program focuses on skill enhancement, practical implementation, and technology-driven problem-solving.

Objectives:

- Enable students to apply intermediate-level technical knowledge and programming skills in live projects, industrial environments, or research-oriented tasks.
- Provide exposure to advanced tools, frameworks, platforms, and technologies aligned with the student's specialization domain.
- Strengthen analytical thinking, debugging, system development, and implementation capabilities through real-world assignments.
- Encourage innovation, design thinking, and problem-solving through participation in industry-driven projects and technical challenges.

- Develop collaborative working abilities, professional ethics, technical documentation skills, and project reporting practices.
-

VII Semester Internship

The advanced internship is designed to prepare students for professional careers, leadership roles, research opportunities, and entrepreneurial pursuits.

Objectives:

- Provide hands-on experience in solving complex real-world problems relevant to the student's specialization and emerging technology domains.
- Enable students to work on industry-grade projects involving design, development, deployment, optimization, research, or system integration.
- Facilitate the development of leadership, decision-making, project management, and professional collaboration skills.
- Strengthen industry readiness through exposure to enterprise-level technologies, development practices, innovation ecosystems, and professional standards.
- Encourage students to integrate technical expertise with ethical practices, sustainability considerations, and professional responsibility.
- Prepare students for placements, higher education, research, startup development, and future technology-driven careers through immersive practical experience.

Project Based Courses

Purpose

The minor project courses are designed to provide hands-on experience in applying theoretical knowledge to real-world problems. These projects aim to develop critical thinking, creativity, and practical problem-solving skills while fostering teamwork and project management abilities.

Objectives

Minor Project-I

- Develop intermediate technical skills by working on moderately complex projects.
- Enhance students' ability to design, develop, and test functional prototypes.
- Strengthen analytical and troubleshooting skills for identifying and solving project-specific challenges.

Minor Project-II

- Integrate advanced concepts and tools from core and specialization courses into project development.
- Address real-world problems using innovative solutions aligned with industry practices.
- Prepare students for large-scale project execution and industry readiness.

Purpose and Objectives of Major Project in Final Semester

The Major Project in the final semester serves as a comprehensive capstone experience that enables students to engage in a full-semester, industry-aligned project addressing real-world challenges. It provides an opportunity to integrate and apply the knowledge, technical competencies, and professional skills acquired throughout the academic program in a practical and outcome-driven environment.

The project emphasizes innovation, problem-solving, research orientation, and technology-driven solution development while exposing students to professional workflows, industry practices, collaborative development environments, and emerging technologies. Through continuous mentorship from faculty and industry experts, students gain valuable experience in designing, developing, testing, and deploying impactful solutions that align with current industry and societal needs.

This experiential learning journey bridges the gap between academia and industry, strengthens students' professional competencies, and prepares them

for successful careers, higher studies, entrepreneurship, and research-driven innovation.

Objectives

The Major Project aims to achieve the following objectives:

- Provide students with an opportunity to apply theoretical concepts, technical knowledge, and domain-specific skills to solve real-world industry and societal problems.
- Enable students to design, develop, implement, and evaluate innovative, scalable, and technology-driven solutions using modern tools, platforms, and methodologies.
- Foster critical thinking, analytical reasoning, creativity, and problem-solving abilities through project-based and experiential learning.
- Expose students to professional software development practices, industry standards, agile methodologies, documentation processes, testing frameworks, deployment strategies, and project lifecycle management.
- Strengthen practical competencies in emerging technologies, interdisciplinary applications, research methodologies, and data-driven decision-making.
- Enhance collaboration, leadership, communication, teamwork, and stakeholder management skills through continuous interaction with faculty mentors, industry experts, and peer teams.
- Encourage innovation, intellectual curiosity, entrepreneurship, and research contributions through the development of impactful products, prototypes, publications, patents, or deployable solutions.
- Develop professional ethics, accountability, time management, and adaptability required for successful integration into industry and research environments.
- Prepare students for career readiness by providing hands-on exposure to real-world project execution, industry expectations, and professional problem-solving environments.

15. School Event Calendar

The purpose of the event calendar is to provide a structured framework for diverse academic, professional, and extracurricular activities that enhance the overall development of students and faculty. By incorporating industrial visits, workshops, expert talks, conferences, and interactive sessions, the calendar aims to bridge the gap between theoretical knowledge and real-world applications. It fosters innovation, leadership, and technical skills while promoting awareness of current trends, ethical values, and societal responsibilities. These events encourage active learning, professional networking, and hands-on experiences, empowering participants to excel in their academic and professional pursuits.

Event Calendar for ODD Semester 2026-27 (in preparation)

Center of Excellence in Robotics and Automation KRMU

The Center of Excellence in Robotics and Automation at K.R. Mangalam University (KRMU) is a hub for innovation, skill development, and research in cutting-edge technologies. In collaboration with IIT Bombay's eYantra program, the center empowers students and faculty with hands-on training and opportunities to excel in robotics and automation. Below is an overview of the diverse activities and accomplishments:

- eYantra Approved Lab: The lab provides state-of-the-art resources for students to experiment and innovate in the field of robotics and automation, fostering a culture of technological excellence.
- Drone Workshops and Training Sessions: Regular workshops and hands-on training sessions equip students with drone technology skills, from assembly and operation to practical applications in various industries.
- Quine Hackathon with Microsoft Azure: Collaborative hackathons such as the KRMU Open-Source Expo-Z3 encourage students to design and pitch innovative solutions, with a focus on using cutting-edge technologies like Microsoft Azure.

- **DIY Challenge Competitions:** These competitions ignite creativity and problem-solving skills, enabling students to build practical, functional prototypes.
- **DST Grant for National Technology Day 2023:** Securing a prestigious grant from the Department of Science and Technology (DST) underscores the center's commitment to impactful research and innovation.
- **Drone Pilot Certification:** Through structured training programs, students gain government-certified drone pilot licenses, enhancing their professional qualifications.
- **Innovative Project Competitions (Mindbenders 1.0 & 2.0):** These competitions provide a platform for students to showcase groundbreaking projects and foster a spirit of innovation.
- **Expert Interactions:** Visits and mentoring sessions from eminent personalities like Prof. Kavi Arya of IIT Bombay enrich the learning experience and inspire students to pursue excellence.
- **Regional Finale North India Hosted at KRMU:** The university's hosting of prestigious events like regional finales highlights its leadership in promoting robotics and automation.

Through these diverse activities, the center not only advances technical knowledge but also prepares students to tackle real-world challenges, aligning them with global industry standards and emerging technological trends.

Centre of Excellence – Artificial Intelligence (AI) @ KRMU

The Centre of Excellence in Artificial Intelligence (AI) at K.R. Mangalam University is a hub of innovation, cutting-edge research, and advanced learning in AI technologies. The center is dedicated to fostering expertise in artificial intelligence and its multidisciplinary applications, guided by a team of accomplished faculty members, including Dr. Shweta Bansal, Dr. Meenu, Dr. Swati Gupta, Dr. Monika, and Dr. Amar Saraswat.

Key Activities and Achievements

- Edited Book Series: The publication of *AI Horizons* highlights the center's commitment to advancing academic research and interdisciplinary learning.

Ongoing Projects:

- Voice-Enabled Biometric System for KRMU: Innovating campus security through AI-based biometric identification.
- WinKeat – A Cafeteria App: Successfully completed in April 2023, this app enhances the campus dining experience.
- E-Voting System Using Blockchain Technology: Addressing secure and transparent voting mechanisms.
- Spoken Language Identification for Vernacular Languages: Promoting inclusivity in AI through language recognition.
- Hand Gesture Recognition: Developing advanced human-machine interaction tools.
- Optimizing Agricultural Production Engine: Leveraging AI for enhanced agricultural efficiency.
- Big Data Analytics in Healthcare: Empowering healthcare through data-driven insights.
- Internet of Everything and Blockchain Convergence: Exploring synergies between IoT and blockchain for futuristic applications.
- Global Cost of Living Analysis Using NLP: Providing economic insights through AI-driven natural language processing.

The Centre of Excellence in Artificial Intelligence fosters a research-driven and industry-aligned ecosystem, enabling students and faculty to stay ahead in the rapidly evolving AI landscape. By working on innovative projects and participating in skill-enhancing workshops, the center empowers its members to contribute meaningfully to academia, industry, and society

Centre of Excellence – Cloud Computing

School of Engineering & Technology, K.R. Mangalam University

The Centre of Excellence (CoE) in Cloud Computing at the School of Engineering & Technology, K.R. Mangalam University is envisioned as a futuristic hub for innovation, research, skill development, industry collaboration, and entrepreneurship in the domain of cloud technologies. The CoE aims to bridge the gap between academia and industry by creating an ecosystem that empowers students, faculty, researchers, and startups to design, deploy, and manage scalable cloud-native solutions aligned with Industry 4.0 and digital transformation initiatives.

The Centre focuses on building industry-ready professionals equipped with practical expertise in modern cloud platforms, DevOps, virtualization, distributed systems, cybersecurity in cloud, AI-driven cloud services, serverless computing, cloud-native application development, and multi-cloud architectures. The CoE will serve as a catalyst for experiential learning through industry-driven projects, certifications, hackathons, internships, cloud labs, and collaborative research initiatives.

Aligned with the university's vision of innovation-led education and practical learning, the Centre of Excellence will provide students with hands-on exposure to leading cloud platforms such as Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), Oracle Cloud, Red Hat OpenShift, and Kubernetes ecosystems. The centre will emphasize real-world implementation through live projects, deployment pipelines, cloud automation frameworks, and enterprise-grade infrastructure management.

The CoE will operate on the philosophy of "Learn – Build – Deploy – Scale", enabling students to move beyond theoretical concepts and become proficient in designing cloud-enabled intelligent systems for sectors such as healthcare, fintech, smart cities, e-commerce, manufacturing, cybersecurity, education, and digital governance.

16. Testimonials

Daksh Mehta, B.Tech CSE, UNIAS (36 LPA)

"My four years at K.R. Mangalam University were a period of continuous learning and growth, equipping me with valuable skills and knowledge that I carry with me to this day. I am immensely grateful to the faculty members for their unwavering support, clear guidance, and encouragement in resolving my doubts and shaping my career. The excellent facilities provided by the university enriched my overall experience, making my journey both fulfilling and enjoyable."

Abhinav Anand, B.Tech CSE, Cargoflash (Network Engineer, 24 LPA)

"I extend my heartfelt gratitude to the Training and Placement Cell at K.R. Mangalam University for their dedicated efforts in providing countless opportunities for students to succeed. The mentorship I received helped me hone my academic and interpersonal skills, shaping me into a well-rounded professional. Choosing K.R. Mangalam University was one of the best decisions I made, as it gave me the platform to achieve my career aspirations."

Abhinav Sinha, B.Tech CSE, Nirmata Technologies India Private Ltd (20 LPA)

"My time at K.R. Mangalam University was transformative and instrumental in shaping my professional journey. The high-quality education and practical exposure I gained during my Computer Science Engineering program provided a strong foundation for my career. Currently, I am thriving at Nirmata Technologies India Private Ltd with a package of 20 LPA, a milestone made possible by the exceptional guidance and opportunities offered by the university."

Ujjwal Singh, B.Tech Mechanical Engineering, Anglo-Eastern Ltd (18 LPA)

"Joining K.R. Mangalam University was a life-changing experience. The rigorous curriculum and hands-on projects prepared me to tackle real-world challenges with confidence. I am proud to share that I have secured a position with Anglo-Eastern Ltd at an impressive package of 18 LPA. Beyond academic excellence, the university paved the way for me to achieve my dream career."

Shashank Gupta, B.Tech in Mechanical Engineering, Anglo-Eastern Ltd (18 LPA)

"My journey at K.R. Mangalam University was nothing short of extraordinary. The comprehensive B.Tech program in Mechanical Engineering equipped me with the skills and knowledge to excel in the professional world. Today, I am proud to serve as an Engineer IV with Anglo-Eastern Ltd, earning a rewarding package of 18 LPA. The university's emphasis on innovation and cutting-edge technology was instrumental in shaping my career trajectory."

Darshit Raghav, B.Tech in CSE, Debcor Engineering Pvt. Ltd. (17.4 LPA)

"Choosing K.R. Mangalam University for my B.Tech in Computer Science Engineering was one of the best decisions of my life. The university's rigorous curriculum and industry-focused training provided me with the tools to excel in my field. I am thrilled to work at Debcor Engineering Pvt. Ltd., earning a competitive package of 17.4 LPA. The strong foundation built at K.R. Mangalam has been key to my professional success."

Samarpan Upadhyaya, B.Tech in Mechanical Engineering, Upgrad (13 LPA)

"K.R. Mangalam University has been a cornerstone in shaping my career. The B.Tech program in Mechanical Engineering is meticulously designed to align with industry standards and demands. Securing a position as a Senior Business Development Analyst with a package of 13 LPA is a testament to the quality education and hands-on training I received. I am deeply thankful for the enriching journey at K.R. Mangalam University."

17. Contact Details

Dr. Pankaj Agarwal
Professor & Dean,
School of Engineering & Technology
Email: dean.soet@krmangalam.edu.in
Contact Number: 9999940157