

Department-wise Desired Areas of Specialization

Applied Geology

Structural Geology, Economic Geology, Petrology,

Architecture

M. Arch:

Architecture, Urban Design, Landscape Architecture, Interior Design, Conservation, Inclusive/Age-friendly Designs, Traditional Designs and Knowledge, Sustainable Architecture, Sustainable Habitats, Design Theory, Parametric Design, Energy Auditing, Net Zero buildings, Systems Architecture, Building Information System, Building Energy systems, Building Science and Technology, or any other relevant field.

M. Planning/M.Tech. (Planning):

Physical Planning, Urban Planning, City Planning, Town Planning, Housing, Environmental Planning, Transportation Planning, Water Infrastructure, Regional Planning, GIS & Remote Sensing, Econometrics, Planning Statistics, Socio-Economic Planning, or any other relevant field.

Masters in:

Urban Transport Management, Sustainable Habitat Design; Building Engineering Management, Construction/ Project Management, Environmental Management, Disaster Management, Building Economy/ Real-Estate Management, or any other relevant field.

Biomedical Engineering

Biomedical Device Design, Bioelectronics, Biomedical Instrumentation, Biosensors, experimental Brain computer interface, telemedicine, rehabilitation engineering.

****Any one of the UG and PG degrees as mentioned in point no. 5 (Common Essential educational requirements) MUST be in Bio-Medical Engineering.***

Biotechnology

Metabolic Engineering, Industrial Biotechnology, Protein Engineering, Plant Biotechnology, Genome Editing, Bioprocess Engineering

Chemical Engineering

Process Modelling & Simulations, Process Control, AI & ML and Data Analytics in Chemical Engineering, Advanced Separation Process, Computational Fluid Dynamics, Biochemical processes, Molecular thermodynamics.

Computer Applications

Data Mining, Network & Cyber Security, Wireless Sensor Networks, Mobile & Pervasive Computing, Parallel & Distributed Computing, IoT & Cloud Computing, Computer Vision and Image Processing, Natural Language Processing, Theoretical Computer Science, Artificial Intelligence (Machine Learning, Deep Learning, Soft Computing etc.), Big Data Processing, Decision Support Systems, Computer networks, Optimization, Information Security, Algorithms.

Computer Science & Engineering

Web technology, Mobile Computing, Networking, Distributed Systems, Cloud Computing,

Soft Computing, Machine Learning, Reinforcement learning, Artificial Intelligence, NLP, Information/Network Security, Image Processing, Computer Vision, Theoretical Computer Science and Software Engineering

Electrical Engineering

Control system, Power Electronics, Power System, Power System Protection, Electric Machine and Drives, Signal Processing, Measurement and Instrumentation, Electronics, Renewable Energy, and allied areas of Electrical Engg.

Electronics and Communication Engineering

VLSI and embedded system, Communication Systems and Engineering, WSN, IoT Communication and Computer Networks, Computer Vision, Signal Processing, Biomedical signal/image processing, Electronic Instrumentation, Cryptography and Network Security.

Humanities & Social Sciences

English Literature: American literature, Indian English Literature, Common wealth literature.

Information Technology

Theoretical Computer Science, Data Science, Cyber Security, Computer Vision, Artificial Intelligence and Machine Learning, Natural Language Processing, Embedded System and IoT, Next Generation Networks, Natural Computing, Data Modelling.

Mathematics

Measure Theory, Functional Analysis, Algebra, Number Theory, Topology

Metallurgical and Materials Engineering

Non-Ferrous extractive metallurgy, Ferrous extractive metallurgy and steel technology, Computational materials engineering, Mechanical metallurgy, Electronic materials, Additive manufacturing, Nanomaterials and nanotechnology, Physical Metallurgy,

Mining Engineering

Rock Mechanics, Explosives & Blasting, Mine Environment, Underground Mining Methods, Surface Mining, Mine Planning and Design