

Department wise Specialization

1	Applied Chemistry: Bio-Organic, Bio-Inorganic Chemistry, Bio-Medical, Bio-informatics, Physical Chemistry, Theoretical Chemistry, Computational Chemistry, Medicinal Chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry, Corrosion and Coatings, Polymer Chemistry, Material Chemistry
2	Applied Geology: Sedimentology and Sequence Stratigraphy, Petroleum Geology, Coal Geology, Structural Geology, Mathematical Geology, Geostatistics, Geomorphology, Quaternary Geology, Paleontology, Organic Geochemistry, Igneous, Metamorphic Petrology, Marine Geology, Economic Geology, Mineral Exploration
3	Applied Geophysics : Earth and Planetary Science, Gravity & Magnetic Methods, Geophysical Signal Processing, Seismic Methods, Well Logging, Electromagnetic Methods, Electrical Methods, Remote Sensing, Seismology, Magneto-telluric Methods
4	Applied Mathematics: All relevant areas of Pure Mathematics, Applied Mathematics, Statistics, Operation Research, Theoretical Computer Science
5	Applied Physics: Nuclear Physics, High Energy Physics, Biophysics, Biomedical Physics, Biophotonics, Optics, Applied Optics, Optical Instrumentation, Astrophysics, Cosmology, Astrophysics and Cosmology
6	Chemical Engineering: Process Systems Engineering and Control, Transport and Separation Processes, Modeling and Simulation, Chemical Engineering Thermodynamics, Petroleum Refining and Petrochemicals, Polymer Engineering, Energy Systems Engineering, Coal to Chemicals, Process Integration, Process and Equipment Design, Molecular Simulation, Electrochemical Engineering, Membrane Science & Engineering, Industrial, Occupational & Process Safety, All Chemical Engineering and allied areas
7	Civil Engineering: Transportation Engineering, Water Resource Engineering having specialization in Remote sensing & GIS, Geotechnical Engineering, Structural Engineering
8	Computer Science and Engineering: Data Mining, Machine Learning, Embedded Systems, Natural Language Processing, Soft Computing, Artificial Intelligence, Data Base Management Systems, Language Processor, Parallel & Distributed Computing, Big Data Analytics, Cryptography or any relevant areas of Computer Science & Engineering
9	Electrical Engineering: Measurement Instrumentation, Control System, Electrical Machines, Power Systems, Electrical Drives, Power Electronics, High Voltage, Energy System.
10	Electronics Engineering: Microelectronics & VLSI, Signal Processing & Communication, Instrumentation and Control, Mechatronics, Embedded Systems, RF and Microwave Engineering, Photonics, Microwave Photonics, Biomedical Engineering, Artificial Intelligence
11	Environmental Science & Engineering: Air Pollution, Noise Pollution, Atmospheric Science & Climate Change, Environmental Economics, Environmental Biotechnology, Remote Sensing & GIS, Groundwater and Hydrology, Environmental Nanotechnology, Solid and Hazardous Waste Management
12	Fuel and Mineral Engineering: Mineral processing: ore processing and coal preparation, Metal extraction processes, Modeling, simulation and design, Waste processing and utilization, Engineering metallurgy, Solid fuel processing and utilization
13	Humanities and Social Sciences: English, Philosophy, Sociology, Economics, Linguistics and Psychology
14	Managements Studies: Accounting & Finance, Business Analytics, Economics, Operations Management, Human Resource Management , Marketing Management
15	Mechanical Engineering: Machine Design, Manufacturing Engineering, Production Engineering, Thermal Engineering, Maintenance Engineering and Tribology.
16	Mining Machinery Engineering: Mining machinery Engineering, Machine Design, CAD,CAM, Maintenance Engineering, Tribology, Automobile Engineering, Material Science, Fluid Mechanics, Safety Engineering , Power Hydraulics, Automation, Manufacturing, Mine Electrical Engineering , Electrical Machinery, Power Electronics and Drives, Power System Engineering , Instrumentation
17	Mining Engineering: Mining Engineering, Opencast Mining, Surface Mining, Mine Planning &

	Design, Rock Excavation Engineering, Tunneling & Underground Space Technology, Geomatics & Mine Surveying, Mine Survey, Remote Sensing & GIS, Rock Mechanics/Geo-mechanics, Mine System Engineering, Operations Research, Underground Coal Mining, Mine Ventilation, Environmental Engineering, Environmental Science & Engineering, Mineral Economics/Geostatistics, Mine Safety Engineering / Ergonomics, Mine Automation, Mine Planning, Computer Applications in Mining, GIS & Remote Sensing
18	Petroleum Engineering: Specialization in upstream operation in Petroleum Engineering