



M.Sc. Chemistry

Aims and Objectives

- To prepare the student to pursue a successful research career either in academic or in industries.
- To hands on experience on highly sophisticated instrumentation facility of IIT Mandi like (HR-TEM, HRMS, NMR, Confocal Microscopy, Single molecule spectroscopy, XRD, FTIR, Uv-vis, fluorolog, TGA, AAS)
- Research component is the major part of the curriculum.
- Broad based curriculum with the free electives and specialization electives.
- Research component start in first semester and extends throughout the program with motto “learn by doing”.

Academic Curriculum & Courses

Inorganic Chemistry

- Transition Elements & Coordination Compounds
- Organometallic Chemistry
- Bio-Inorganic Chemistry
- Metallurgy
- S and P Block Elements
- Inorganic Spectroscopy

Organic Chemistry

- Reaction Mechanisms and Stereo-chemistry
- Pericyclic and Photo-chemistry
- Hetero-cyclic Compounds
- Natural Products
- Organic Spectroscopy

Physical & Computational Chemistry

- Advanced Quantum Mechanics
- Group Theory and Molecule Spectroscopy
- Computational Chemistry
- Statistical Thermodynamics & Electrochemistry
- Reaction Dynamics, Catalysis & Kinetics

Elective Courses

- Nano Manufacturing
- Energy Materials
- Nano Biotechnology
- Biological Modelling
- Analytical Bio-techniques
- Proteomics

Achievements

- Students have publications in reputed journals like Nanoscale, Chemical Science, ACS etc.
- Alumni in well-known universities like University of Gottingen, University of Valencia, Indian Institute of Sciences, IISERs, IITs etc.
- Alumni serving in PSUs and other multinational firms, while some pursuing teaching in leading institutes in the country and abroad.

Facilities

IIT Mandi bestows best Advance Materials Research Facility among the leading institutes in India & provides hands on experience to it's students.

Associated Faculty

Course Coordinator & Faculty Advisor:

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