



INSTITUTE OF INFRASTRUCTURE, TECHNOLOGY, RESEARCH AND MANAGEMENT

An Autonomous University established by Government of Gujarat



Department of Basic Sciences

*Laboratory facilities available for
External Institutions/Organizations*



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About:

The Department of Basic Sciences comprises of Physics, Chemistry and Mathematics disciplines.

Mathematics:

Mathematics discipline has a very dynamic and strong team of faculties with specialization in diverse areas of Mathematics. There are five faculty members who have research specialization in areas like Banach Algebras, Harmonic Analysis, Fuzzy Sets and its applications in Reliability, Multi-Criteria Decision Making, Optimization, and Statistics, Intuitionistic fuzzy Set Theory, Partial Differential Equations, Finite Element Methods, Isogeometric Analysis (IGA), Mesh-free methods. Number theory, Modular Representation Theory, Mod-p-Local Langlands Program. Number Theory and Dynamical Systems, Lie Groups and Topological Groups.

Chemistry:

Chemistry discipline at IITRAM supports the engineering curriculum and engages the cutting-edge research in various fields. Faculty members in Chemistry have expertise in the field of Physical, Inorganic, Applied and Material Chemistry. Chemistry laboratory is designed to support and illustrate chemical concepts studied in the lecture portion. This laboratory is equipped with high end equipment like Gas-Chromatography, UV-visible Spectrophotometer, Heating Oven, Muffle Furnace, High Vacuum Pump, Rota Evaporator, Heat Controlled Magnetic Stirrer, Heating Mantle, pH Meter, Conductivity Meter, Potentiometer, UV Chamber etc.

Physics:

The discipline of Physics was established with an aim to carry out experimental and theoretical physics. Currently, the physics discipline has two faculty members working in the area of theoretical and experimental fields. The theoretical research is focused on the investigation of material properties through Density Functional Theory. We currently use packages like Quantum Espresso and Wien2k to carry out the simulations at the Institute's High-Performance Computing Facility.

Laboratories:

- Chemistry Laboratory
- Physics Laboratory
- Mathematics Laboratory

CHEMISTRY LABORATORY

Gas Chromatography: (Thermo Fisher Scientific-trace 1310 gc)



Usage	Charges for Academic institutions & Government organizations (INR)	Charges for Industry (INR)
For separating and analyzing compounds	INR. 2000/- per measurement	INR. 4000/- per measurement

UV Visible Spectroscopy: (Agilent Cary 60)



Usage	Charges for Academic institutions & Government organizations (INR)	Charges for Industry (INR)
Analyzing chemical properties of material	INR. 2000/- per measurement	INR. 5000/- per measurement

FT-IR: (Parkin Elmer-Two Spectrum)



Usage	Charges for Academic institutions & Government organizations (INR)	Charges for Industry (INR)
Identification of unknown material	INR. 1500/- per measurement	INR. 4000/- per measurement

Photo Chemical Reactor (Lelesil Innovative Systems)



Usage	Charges for Academic institutions & Government organizations (INR)	Charges for Industry (INR)
For photochemical reactions	INR. 1000/- per measurement	INR. 2500/- per measurement

Electrochemical Workstation (Corretest – CS2350 Bipotentiostat)



Usage	Charges for Academic institutions & Government organizations (INR)	Charges for Industry (INR)
Advanced electrochemical studies	INR. 2200/- per measurement	INR. 5000/- per measurement

All charges mentioned above are excluding GST | Charges may be revised from time to time as per Institute norms