

LABS DETAILS

Pharmaceutical Medicinal Chemistry/ Pharmaceutical Analysis

Pharmaceutical chemistry is focused on quality aspects of medicines including the new drug development.

- These well-furnished laboratories provide the facilities for practical training in pharmaceutical medicinal chemistry including synthesis and structural elucidation of medicinally important compounds, analytical chemistry, organic chemistry and biochemistry with well-designed experiments.
- The department of pharmaceutical chemistry is one of the important branches in the pharmacy. It is equipped with state of the art facilities to undertake academics in Bachelor of Pharmacy course. Pharmaceutical Chemistry Labs are well equipped with latest instruments to impart practical training to the students.
- Students familiarized with various organic compounds by their nature, physical and chemical properties and usage in chemical reactions as well as in pharmaceutical industries in this laboratory.

Pharmaceutics

Pharmaceutics is the discipline of pharmacy that deals with the practical aspects of manufacturing, formulation and evaluation of various pharmaceutical dosage forms.

- This subject also helps the students to acquire knowledge and skill to apply quality assurance principles, including legal and ethical aspects involving drugs, delivering a quality assured product as per the pharmacopoeia, WHO and ISO standards.
- This well-furnished laboratory caters to the practical requirements of the various subjects like dosage form design, physical pharmacy, dispensing pharmacy, pharmaceutical engineering and unit operations.
- The facilities available in this lab ensure the complete knowledge of manufacturing of different formulation. This lab also aid in training the students to teach about the dispensing of the drugs in a hospital by a pharmacist and about community pharmacy practice.
- It also deals with the study of oral, parenteral, dermal, transdermal and mucosal dosage forms; it also focuses on the preparation and evaluation of cosmetics. It also covers basic topics like development of new drugs, preformulation, along with principles of formulation design.
- It will help students familiarize with current Good Manufacturing Practices (cGMP), design, development and maintenance of aseptic areas, procedure for sterility testing, experiments in biotechnology, growth, cultivation, isolation and identification of microorganisms and microbiological assays.

Pharmacology / Human Anatomy and Physiology Lab

The Pharmacology Lab provides quality drug analysis services, analytical support and Therapeutic drug monitoring.

- Pharmacology is the science concerned with all aspects of the action of drugs and other chemicals on living systems. Its primary aim is the discovery of chemical mechanisms by which cellular and molecular functions are regulated for the purpose of understanding how existing drugs act and to develop new drugs for treatment and diagnosis of human diseases. The discipline of pharmacology explores biology through the actions of drugs and chemical substances. Drugs and chemicals produce their effects only through modifications of underlying biological systems; their actions are useful in regulating not only normal functions of cells and organisms but also the abnormal processes which occur in disease.
- The broad scope of interests of pharmacology ranges from the study of intermolecular reactions of chemical constituents of cells with drugs to the effects of drugs and established therapeutic agents on mammalian physiological organ systems. Professional pharmacologists tend toward careers in basic research and teaching in academia, in conducting innovative research in the pharmaceutical/biotech industry or for government laboratories and in ensuring the safety of drugs and chemicals through work at government agencies.

Pharmacognosy

The Department of Pharmacognosy is responsible for providing knowledge and information on topics such as production of pharmaceutical raw materials from natural sources, traditional medicines and chemical analysis and phytochemical screening of medicinal plants, medicinal plant biotechnology and phytotherapy etc.

- Laboratory of Pharmacognosy are well positioned for the proper entry of light which is the essential requirement for the microscopical slides to be observed. The labs are well equipped and suitable for various Pharmacognostical studies which the students are undertaking.
- They provide facilities for the students to acquire skills in learning morphological and microscopical characters of natural drugs using, Compound Microscope, Dissection Microscope & Projection Microscope.
- Students are trained in the various stages of natural drug research like different types of extraction, separation of groups of compounds, purification and identification of individual compounds and characterization. Sophisticated instrument are used for the Chromatographic and standard Spectroscopic techniques.
- The major research interest of the department has been in the area of traditional Health care system, with a view of utilization of traditional and folklore remedies into the provision of primary health care.
- Standardization of herbal drugs which is the major task in the present scenario is also carried out by the students in this department as their project work for the qualitative & quantitative evaluation of Phyto-medicine.

Central Instrumentation Room

An objective of providing a central facility of latest and advanced analytical techniques for research in various areas of science and technology. It houses several highly sophisticated and modern analytical equipment's offering its users, a wide range of analytical methods/techniques for chemical/material analysis/testing/characterization enabling them to keep pace with developments taking place globally, publish their research findings in peer reviewed high impact factor journals and through their concerted efforts contribute to the upliftment of the society at large.

- The Facility helps in knowledge sharing by constant interaction with all the Departments. Central instrumentation Laboratory equipped with modern instruments like HPLC, Spectro-fluorimeter, Ultrasonic homogenizer, UV spectrophotometer, Refrigerated Centrifuge, Electrophoresis unit, High sensitivity digital balance etc.
- The Central Instrumentation Lab provides analytical support and intellectual input to students.
- As a result of excellent laboratory facilities and their proper utilization under the supervision of faculty members, the pass outs will have an edge for immediate employment.

Machin Room

The Machine room is well furnished with instruments as per PCI norms like Tablet Punching Machine, Capsule Filling Machine, Ampoule Washing, Ampoule Filling & Sealing Machine, bottle washing machine and more.

- These instruments impart practical training for preparation of various pharmaceutical dosage forms like NDDS, Tablets, Capsule, Ointments, Parenterals, Liquid orals and Packaging Science.
- This lab will be equipped with rapid mixer granulator, fluidized bed processor, Tray Dryer, homogenizer water bath, stability chamber.
- The equipment/machinery available in the laboratory are appropriate for conducting novel drug delivery based work including solid dispersions, spherical agglomeration, hydrotropes, micronization, microencapsulation's for solubility enhancement and oral bioavailability enhancement using polymer and lipid based approaches, transdermal drug delivery systems for topical and systemic delivery, targeted nanoparticles, targeted microsphere, transmucosal drug delivery.