PROGRAM- M.Pharm

DURATION-02 Years

M.PHARM - PHARMACEUTICS

Programme Outcomes and Objectives;

To educate the students about the concepts of pre-formulation studies, development of different types of dosage forms and perfor stability studies for the developed formulations.

- To train the students in Molecular Pharmaceutics (Nano Tech and targeted Drug Delivery Systems). To teach various approaches for development of novel drug delivery systems understanding the criteria for select of drugs and polymers for the development of Nano and targeted Drug Delivery Systems.
- To develop formulations and evaluation of novel drug delivery systems in terms of rational and critical analysis and troubleshooting.
- To mould the students for drug evaluation from raw data and derive the pharmacokinetic models and parameters that best describe the process of drug absorption, distribution, metabolism and elimination.
- To create research interest in sudents in utilizing Computational Modeling for Drug Disposition.
- To provide general perspective of use of Computers in Preclinical Development, Clinical studies, Optimization Techniques in Pharmaceutical Formulation, in Market Analysis , Artificial Intelligence (AI)and Robotics.
- To train the students in the development of cosmetics and cosmeceuticals with desired Safety, stability, and efficacy.

M.PHARM- PHARMACOLOGY

Programme Outcomes and Objectives ;

- To uphold all laws, regulations, safety and ethical standards that apply to the experimental procedures in animals and the environment
- To know the advances in the drug treatment of various diseases, concepts of drug action and mechanisms involved
- To appreciate the basic knowledge in the field of pharmacology pertaining to the drugs and therapeutic applications
- To impart adequate hands-on training in various animal models and determine the effects of drugs using animal models
- To provide practical inputs in pharmacokinetic studies of various drugs and formulations in animals to establish *in-vitro* and *in-vivo* correlations
- To acquire practical knowledge in various analytical techniques used in molecular biology
- To train students in using suitable statistical methods for interpretation of results
- To prepare the students in team work, lifelong learning and continuous improvement on preclinical evaluation of drugs and recent experimental techniques in the drug discovery and development

M. PHARM- PHARMACOGNOSY

Programme Outcomes and Objectives;

- To educate the students about the use of medicinal plants, current cultivation technologies and extraction procedures for natural compounds.
- To train the students for the isolation, identification, characterization, biosynthesis and activity profile of biologically active natural products
- To create interest in Herbal drug discovery and development, optimization of lead compounds and Phytochemical documentation.
- To train the students with the necessary skills for starting up of new herbal drug industry, Regulatory requirements, ISO documentation, GMP/ GLP in herbal drugs, WHO guidelines in safety assessment of herbal drugs, Monograph preparation and documentation and patenting.
- To provide students with the necessary skills in Plant tissue culture techniques, Plant genetic engineering, molecular biology for the production of primary and secondary metabolites and application of Polymerase chain reaction in plant genome analysis.
- To mould the students in learning and acquiring knowledge about the primary concepts of traditional system of medicine, Formulation development and standardization of various traditional formulations, Quality control and quality assurance concepts involved in traditional system of medicine.

M.PHARM- PHARMACEUTICAL ANALYSIS

Programme Outcomes and Objectives;

- To make the student understand the basic knowledge on the assay of single and multi component pharmaceuticals dosage forms by using various analytical instruments.
- To train the student to develop i) basic practical skills using instrumentation techniques ii) Skills in selecting the suitable analytical techniques for analysis of drugs and pharmaceutical dosage forms.
- To expand the theoretical knowledge on various techniques for analysis of organic compounds.
- To apply the gained knowledge in developing novel and cost effective analytical procedures for new drugs and new drug combinations in the market.
- To make the student learn the concepts and importance of impurity profiling.
- To train the student to gain appropriate knowledge regarding appropriate analytical skills required for the analysis of impurities in the bulk drugs and various formulations.
- To mould the student to enrich with sufficient idea on categorizing the impurities and methods for analysis of related substances in the drug.
- To make the student learn and appreciate the concept and significance of validation.
- To make the student learn the importance of patent and Intellectual property rights.
- To train the student on the qualification aspects of instruments and importance of calibration of analytical instruments.
- To train student on different types of validation and various validation aspects to be carried out in the industry.
- To make students learn the various analytical techniques in the determination of food constituents, food additives and finished food products.
- To train the student to determine the pesticide content in food.
- To create awareness in students regarding food regulations and legislations.
- To make the student aware of detailed interpretation pattern for various organic substances.
- To equip the student with relevant theoretical and practical aspects of HPLC and GC techniques.

- To enable the student to resolve trouble shootings in various analytical instruments like HPLC, GC etc.,
- To provide sufficient knowledge to student to conduct bioequivalence studies.
- To upgrade the student with latest regulatory guidelines of bioequivalence studies on formulations.
- To enrich students with information on cGCP and cGLP.
- To train students with appropriate theoretical and practical skills on quantification of analytes in biological fluids.
- To train students to possess sufficient knowledge and understanding of cGMP and cGLP aspects.
- To make students understand the importance and scope of documentation, quality certification in Pharmaceutical Industries.
- To make students realize the responsibilities and importance of Quality control, Quality Assurance and regulatory affairs.