M. Pharmacy – Department of Pharmaceutics

Quality policy

Committed to diversifying pharmaceutical technology by incorporating newer evolving techniques to the need of public health through the interface of pharmaceutical industry and academic collaboration.

Programme Outcomes

1. Apply the principles of drug delivery system in the development of eco-friendly, efficacious dosage forms.
2. Develop an ability to undertake multidisciplinary tasks in the pharmaceutical quality system.
3. Analyze, criticize, organize, improvise and manage documents, data and information related to pharmaceutical production process.
4. Imbibe ethical practices and moral values in personal and professional endeavours.
5. Execute team based research to implement innovative solutions in the area of formulation, quality assurance and technology transfer.
6. Apply problem-based learning approach and analytical thinking in academic and professional
7. Validate the knowledge and skills gained through education to gain recognition in Pharmaceutical society and related field.
8. Set-up pharmaceutical production unit to design and formulate pharmaceutical dosage form.

Course outcomes:

Name of the course: Modern Pharmaceutical Analytical Techniques (17S01101)

1. Gaining knowledge about the instruments like NMR, Mass spectrometer, IR, HPLC, GC etc.
2. Understand the basic concepts and advances in analytical techniques and theoretical skills of the analytical instruments.
3. To enrich the skills in advanced analytical instrumental techniques for identification, characterization and quantification of drugs.
4. Acquiring the knowledge in analysis of various drugs in single and combination dosage forms and selecting the suitable techniques for analysis of drugs and pharmaceuticals.

Name of the course: Drug delivery systems (17S03101)

1. The various approaches for development of novel drug delivery systems.
2. The criteria for selection of drugs and polymers for the development of delivering system.
3. The formulation and evaluation of Novel drug delivery systems.

Name of the course: Modern Pharmaceutics (17S03102)

1. The elements of preformulation studies.
2. The Active Pharmaceutical Ingredients and Generic drug Product development
3. Industrial Management and GMP Considerations.
4. Optimization Techniques & Pilot Plant Scale Up Techniques
5. Stability Testing, sterilization process & packaging of dosage forms

Name of the course: Regulatory Affairs (17S03103)

1. The Concepts of innovator and generic drugs, drug development process
2. The Regulatory guidance's and guidelines for filing and approval process
3. Preparation of Dossiers and their submission to regulatory agencies in different countries
4. Post approval regulatory requirements for actives and drug products
5. Submission of global documents in CTD/ eCTD formats
6. Clinical trials requirements for approvals for conducting clinical trials
7. Pharmacovigilence and process of monitoring in clinical trials.

Name of the course: Molecular Pharmaceutics (Nanotechnology & Targeted DDS) (NTDS) (17S03201)

1. The various approaches for development of novel drug delivery systems.
2. The criteria for selection of drug s and polymers for the development of NTDS
3. The formulation and evaluation of novel drug delivery systems.

Name of the course: Advanced Biopharmaceutics & Pharmacokinetics (17S03202)

1. The basic concepts in Biopharmaceutics and pharmacokinetics.
2. The use raw data and derive the pharmacokinetic models and parameters the best describe the process of drug absorption, distribution, metabolism and elimination.
3. The critical evaluation of biopharmaceutic studies involving drug product equivalency.
4. The design and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
5. The potential clinical pharmacokinetic problems and application of basics of pharmacokinetic

Name of the course: Computer Aided Drug Development (17S03203)

1. History of Computers in Pharmaceutical Research and Development
2. Computational Modeling of Drug Disposition
3. Computers in Preclinical Development
4. Optimization Techniques in Pharmaceutical Formulation
5. Computers in Market Analysis
6. Computers in Clinical Development
7. Artificial Intelligence (AI) and Robotics
8. Computational fluid dynamics(CFD)

Name of the course: Cosmetics and Cosmeceuticals (17S03204)

1. Key ingredients used in cosmetics and cosmeceuticals.
2. Key building blocks for various formulations.
3. Current technologies in the market
4. Various key ingredients and basic science to develop cosmetics and cosmeceuticals
5. Scientific knowledge to develop cosmetics and cosmeceuticals with desired Safety, stability, and efficacy.

Name of the course: Research Methodology and Biostatics (17S01301)

1. Learn general research methodology
2. Understand the basic concepts of biostatistics
3. Learn different parametric and non-parametric tests
4. Understand the functions of ethics committees in medical research
5. Learn the guidelines for developing animal facilities
6. Explain the guidelines and importance of medical research
7. Learn the guidelines for the experimentation on animals.
8. Understand the genesis of bioethics with special reference to Helsinki declaration