

COURSE OBJECTIVES OF M.PHARM

PHARMACEUTICS (MPH)

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES (MPT 101T)

- Chemicals and excipients
- The analysis of various drugs in single and combination dosage forms
- Theoretical and practical skills for handling of the instruments

DRUG DELIVERY SYSTEMS (MPH102T)

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

MODERN PHARMACEUTICS (MPH103T)

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

REGULATORY AFFAIRS (MPH104T)

- The Concepts of innovator and generic drugs, drug development process
- The Regulatory guidance's and guidelines for filing and approval process
- Preparation of Dossiers and their submission to regulatory agencies in different countries.
- Post approval regulatory requirements for actives and drug products

- Submission of global documents in CTD/eCTD formats
- Clinical trials requirements for approvals for conducting clinical trials
- Pharmacovigilance and process of monitoring in clinical trials.

MOLECULAR PHARMACEUTICS (NANOTECHNOLOGY & TARGETED DRUG DELIVERY SYSTEMS) (MPH 201T)

- The various approaches for development of novel drug delivery systems.
- The criteria for selection of drugs and polymers for the development of NTDS
- The formulation and evaluation of novel drug delivery systems.

ADVANCED BIOPHARMACEUTICS & PHARMACOKINETICS (MPH 202T)

- The basic concepts in biopharmaceutics and pharmacokinetics.
- The use of raw data to derive the pharmacokinetic models and parameters that best describe the process of drug absorption, distribution, metabolism, and elimination.
- The critical evaluation of biopharmaceutical studies involving drug product equivalency.
- The design and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutical parameters.
- The potential clinical pharmacokinetic problems and application of the basics of pharmacokinetics.

COMPUTER AIDED DRUG DEVELOPMENT (MPH203T)

- History of Computers in Pharmaceutical Research and Development
- Computational Modeling of Drug Disposition
- Computers in Preclinical Development
- Optimization Techniques in Pharmaceutical Formulation
- Computers in Market Analysis
- Computers in Clinical Development
- Artificial Intelligence (AI) and Robotics

- Computational Fluid Dynamics (CFD)

COSMETICS AND COSMECEUTICALS (MPH204T)

- Key ingredients used in cosmetics and cosmeceuticals.
- Key building blocks for various formulations.
- Current technologies in the market.
- Various key ingredients and basic science to develop cosmetics and cosmeceuticals.
- Scientific knowledge to develop cosmetics and cosmeceuticals with desired safety, stability, and efficacy.