



CHEBROLU HANUMAI AH INSTITUTE OF PHARMACEUTICAL SCIENCES
Chandramoulipuram, Chowdavaram, Guntur – 522019, Andhra Pradesh.
(Sponsored by Nagarjuna Education Society)
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COURSE OUTCOMES

MASTER OF PHARMACY
PHARMACEUTICS BRANCH
SEMESTER – I

MPH 101T: MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES (Theory)

- CO 1:** To get knowledge on UV-Visible, IR, flame emission and spectrofluorimetry.
- CO 2:** To understand the concepts of NMR spectroscopy.
- CO 3:** To gain knowledge on mass spectroscopy.
- CO 4:** To attain information on various chromatographic techniques.
- CO 5:** To get knowledge on types of electrophoresis techniques and X-ray crystallography.
- CO 6:** To obtain knowledge on various immunological assays.

MPH 102T: DRUG DELIVERY SYSTEM (Theory)

- CO 1:** To get knowledge on basic concepts of controlled and sustained release formulations, 3D printing of pharmaceuticals and Telepharmacy.
- CO 2:** To understand the concepts and principles of rate controlled drug delivery systems.
- CO 3:** To gain knowledge on the principles and concepts of gastro-retentive and buccal drug delivery systems.
- CO 4:** To attain information on the basics of ocular drug delivery systems.
- CO 5:** To get knowledge on the formulation and evaluation of transdermal drug delivery systems.
- CO 6:** To obtain knowledge on barriers for protein and peptide delivery systems
- CO 7:** To understand the concepts of vaccine drug delivery systems.

MPH 103T: MODERN PHARMACEUTICS (Theory)

- CO 1:** To understand the elements of pre-formulation studies along with active pharmaceutical ingredients and generic drug development.
- CO 2:** To attain information on basic principles and guidelines of validation.
- CO 3:** To get knowledge on the Industrial Management and cGMP considerations along with different validation techniques employed in the field of pharmacy.
- CO 4:** To understand the compression and compaction processes.
- CO 5:** To gain information on various parameters used in the dissolution and pharmacokinetic methods.

MPH 104T: REGULATORY AFFAIRS (Theory)

- CO 1:** To get knowledge on documentation in pharmaceutical industry and various regulatory requirements for approval of pharmaceutical products.
- CO 2:** To attain information on post approval regulatory requirements as per ICH, EU and MHRA guidelines for drug products and medical devices.
- CO 3:** To understand the regulatory aspects involved in non-clinical drug development.
- CO 4:** To get knowledge on regulatory requirements for conduction and safety monitoring of the clinical trials.

SEMESTER – II**MPH 201T: MOLECULAR PHARMACEUTICS (Theory)**

- CO 1:** To get knowledge on basic concepts and formulation approaches in design of targeted drug delivery systems.
- CO 2:** To attain information on concepts on targeting methods, preparation and evaluation of nanoparticles and liposomes.
- CO 3:** To obtain knowledge on preparation and applications of microcapsules and microspheres.
- CO 4:** To understand the importance of pulmonary drug delivery systems and preparation and evaluation of aerosols.
- CO 5:** To understand the concepts of nucleic acid based therapeutic drug delivery systems.

MPH 202T: ADVANCED BIOPHARMACEUTICS AND PHARMACOKINETICS (Theory)

- CO 1:** To understand the principles involved in drug absorption from gastro-intestinal tract.
- CO 2:** To gain information on biopharmaceutical factors and considerations in design and performance of drug product.
- CO 3:** To attain knowledge on pharmacokinetic compartmental modeling.
- CO 4:** To understand the concepts of Bioavailability and Bioequivalence studies.
- CO 5:** To apply the pharmacokinetics to modified release, targeted drug delivery and biotechnological products.

MPH 203T: COMPUTER AIDED DRUG DELIVERY SYSTEM (Theory)

- CO 1:** To attain knowledge on applications of computers in pharmaceutical research and development.
- CO 2:** To understand various computational models in drug disposition.
- CO 3:** To know about the technology involving computers in the development of pharmaceutical formulations.
- CO 4:** To attain information on computer based simulation experimentation.
- CO 5:** To get the picture on artificial intelligence and its application in pharmacy field.

MPH 204T: COSMETICS AND COSMECUTICALS (Theory)

- CO 1:** To get knowledge on regulatory provisions relating to import of misbranded, spurious and manufacturing of cosmetics.
- CO 2:** To understand the structure of skin, hair and their related problems.
- CO 3:** To gain knowledge on surfactants and their applications along with concepts on formulation of creams, shampoos, tooth paste, soaps and syndet bars.
- CO 4:** To get information on classification of sunscreens and their regulatory aspects.
- CO 5:** To understand the concepts of herbal ingredients used in hair, skin and oral care.

SEMESTER – III

MRM 301T: RESEARCH METHODOLOGY AND BIOSTATISTICS (Theory)

CO 1: To gain knowledge on research study designs.

CO 2: To know about various biostatistical parameters and their application in pharmaceutical research.

CO 3: To attain knowledge on medical research and ethics.

CO 4: To get information on guidelines for conducting animal experiments.

CO 5: To get the picture on declaration of Helsinki regarding medical research.