



PROGRAM OUTCOMES (PO): M. PHARM.

PO	KEY CONCEPT	EXPLANATION
PO1	Research Ability	An ability to independently carry out research and development work utilising modern tools and employing planning and problem analysis skills to solve practical problems
PO2	Technical Communication	An ability to write and present substantial technical documents / reports and communicate effectively
PO3	Expertise Demonstration	An ability to demonstrate a degree of mastery over the area of specialization in terms of pharmaceutical knowledge, learning aptitude, managerial and administrative skills, computational and informatics skills in academia, manufacturing, clinical and allied sectors
PO4	Professional Leadership	An ability to lead in terms of team building, planning, motivating and ethically executing professional responsibilities and establish professional identity in the society
PO5	Environment & Sustainability	An ability to comprehend the impact of the pharmaceutical solutions in societal and environmental contexts, and explore the knowledge of and need for sustainable development and apply the knowledge to solve such problems.



PROGRAM SPECIFIC OUTCOMES (PSO): PHARMACEUTICS

PSO	KEY CONCEPT	EXPLANATION
PSO1	F&D	Apply the principles of drug delivery system in designing of safe and efficacious pharmaceutical dosage forms including novel drug delivery systems and cosmetics.
PSO2	Unit Operations	Able to plan, manage and carry out unit operations for environmentally sustainable manufacturing of pharmaceuticals and cosmetics.
PSO3	Regulatory Compliance	Able to develop and evaluate new drug formulations and cosmetics meeting the regulatory specification.
PSO4	Modern tools	Able to use modern scientific instrumental and computational tools in formulation development and pharmacokinetic investigation.
PSO5	Research Methodology	Understand, plan and apply the concepts of research methodology in pharmaceutical product development and able to interact with scientific audience through writing in form of reports/thesis or presentations



COURSE OUTCOME M. PHARM. PHARMACEUTICS (New Syllabus)

NAME OF THE COURSE WITH CODE	COURSE OUTCOME
MPT 1061 MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES	MPT 1061. CO1: Determine the role of various drug excipients interaction.
	MPT 1061. CO2: Apply the knowledge to undertake various analytical instrumental studies such as spectroscopic, separation science, thermal, biotechnological and crystallography-based studies
	MPT 1061. CO3: Evaluate various results and interpretations of such instrumental techniques, solve any existing problems.
	MPT 1061. CO4: Develop newer analytical methods by instrumental techniques.
MPT 1062 DRUG DELIVERY SYSTEMS	MPT 1062. CO1: Students can able to build their concept and knowledge of novel drug delivery systems.
	MPT 1062. CO2: Students can implement their knowledge for selection of drugs and polymers for the development of novel drug delivery systems.
	MPT 1062. CO3: Students can be able to develop and evaluate various novel drug delivery systems.
MPT 1063 MODERN PHARMACEUTICS	MPT 1063. CO1: Apply the preformulation parameters through an optimized approach for designing a viable pharmaceutical product.
	MPT 1063. CO2: Review the policies of good manufacturing practice and implement the concept of total quality management.
	MPT 1063. CO3: Apply statistical tools for determining the stability of pharmaceutical tablets.
MPT1064 REGULATORY AFFAIR	MPT 1064. CO1: Apply the significance of regulatory guidelines in documentation and fulfilling of regulatory criteria for drug product approval and registration.
	MPT 1064. CO2: Understand the regulatory framework of different countries and concept of harmonization of regulatory guidelines.
	MPT 1064. CO3: Evaluate strategies for non-clinical drug development in the regulatory framework.
	MPT 1064. CO4: Student can able to conduct clinical trials after getting the proper approval from the regulatory method.



NAME OF THE COURSE WITH CODE	COURSE OUTCOME
MPT 1965 PHARMACEUTICS PRACTICAL I	MPT 1965. CO1: Students will able to develop the analytical method of the supplied sample by various analytical instrumentation methods.
	MPT 1965. CO2: Students will able to perform preformulation studies and implement their knowledge to develop various novel drug delivery systems.
	MPT 1965. CO3: Students can utilize their knowledge to formulate and evaluate various novel drug delivery systems.
MPT 1986 SEMINAR	MPT 1986. CO1: Students can able to show competence in identifying relevant information, defining and explaining topics under discussion.
	MPT 1986. CO2: Students can able to improve their communication and presentation skill.
	MPT 1986. CO3: Students can engage with works that are widely held to be significant in the field of pharmaceutical research.
MPT 2061 MOLECULAR PHARMACEUTICS (NANO TECHNOLOGY & TARGETED DDS)	MPT 2061. CO1: Students can able to implement their knowledge on various approaches of novel drug delivery system.
	MPT 2061. CO2: Students can able to gather a clear concept on drug and formulation components required for designing novel drug delivery systems.
	MPT 2061. CO3: Students can utilize their knowledge to fabricate targeted drug delivery systems.
MPT 2062 ADVANCED BIO PHARMACEUTICS & PHARMACOKINETICS	MPT 2062. CO1: Understand the mechanism of drug absorption and the various factors affecting the movement of the drug in the body.
	MPT 2062. CO2: Students can able to analyse concept and significance of dissolution testing and their mathematical validation for optimization of drug bioavailability.
	MPT 2062. CO3: Students can able design and derive pharmacokinetic models for quantitative study of drug ADME (drug absorption, distribution, metabolism and elimination).
	MPT 2062. CO4: Students can able evaluate the role of bioavailability and bioequivalence studies using biopharmaceutic and pharmacokinetic parameters.
MPT 2063 COMPUTER AIDED DRUG DELIVERY SYSTEM	MPT 2063. CO1: Optimize the biopharmaceutical characteristics of a drug or pharmaceutical product through virtual simulations.
	MPT 2063. CO2: Review the various protocols for management of clinical data and adherence to regulatory guidelines.



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	MPT 2063. CO3: Nurture the idea of artificial intelligence and its applications in the automation in pharmaceutical industry.
MPT2064 COSMETIC AND COSMECEUTICALS	MPT 2064. CO1: Utilize the knowledge of regulatory requirement for the manufacturing of cosmetics.
	MPT 2064. CO2: Prepare different cosmetics and cosmeceuticals.
	MPT 2064. CO3: Evaluate the different formulation as per different official book.
MPT 2965 PHARMACEUTICS PRACTICAL II	MPT 2965. CO1: To prepare and characterize various polymer-based formulations for drug encapsulation.
	MPT 2965. CO2: To interpret the effect of formulation processing parameters on pharmacokinetic profile of the drugs.
	MPT 2965. CO3: To develop and evaluate different kinds of cosmeceutical products.
MPT 2986 SEMINAR	MPT 2986. CO1: Students can able to show competence in identifying relevant information, defining and explaining topics under discussion.
	MPT 2986. CO2: Students can able to improve their communication and presentation skill.
	MPT 2986. CO3: Students can engage with works that are widely held to be significant in the field of pharmaceutical research.
MPT 381 JOURNAL CLUB	MPT 381. CO1: To search articles from various scientific databases.
	MPT 381. CO2: To prepare a technical presentation for a small audience.
	MPT 381. CO3: To deliver a presentation and address related queries.
MPT 384 RESEARCH METHODOLOGY & BIOSTATISTICS	MPT 384.CO1: Discuss and explain different methods and technologies used to carry out research work.
	MPT 384.CO2: Assess the basic principles and working of analytical instrument in carrying out research work.
	MPT 384.CO3: Implement the regulatory requirements and follow ethics while conducting clinical trials.



NAME OF THE COURSE WITH CODE	COURSE OUTCOME
	MPT 384. CO4: Demonstrate expertise in carrying out statistical analysis of the research findings.
MPT 391 DISCUSSION/ PRESENTATION (PROPOSAL)	MPT 391. CO1: Students will be able to categorize relevant information for defining and explaining the topic for presentation.
	MPT 391. CO2: In terms of summarizing and organizing the whole methodology, students will be able structure their oral work and composing information.
	MPT 391. CO3: Students will be able to build appropriate vocabularies with voice modulation, voice projection and pacing.
MPT392 RESEARCH WORK	MPT 392. CO1: Students can develop a structured presentation methodology to prepare presentation material and effective visual aids
	MPT 392. CO2: Students can able to percolate his knowledge to the audiences.
	MPT 392. CO3: The students can be able to Determine and develop personal style.
MPT 481 JOURNAL CLUB	MPT 481. CO1: To search articles from various scientific databases.
	MPT 481. CO2: To prepare a technical presentation for a small audience.
	MPT 481. CO3: To deliver a presentation and address related queries.
MPT 491 FINAL PRESENTATION	MPT 491. CO1: Students will be able to categorize relevant information for defining and explaining the topic for presentation.
	MPT 491. CO2: In terms of summarizing and organizing the whole methodology, students will be able structure their oral work and composing information.
	MPT 491. CO3: Students will be able to build appropriate vocabularies with voice modulation, voice projection and pacing.
MPT 492 RESEARCH WORK	MPT 492. CO1: The students would be able to build problem solving skills and execute them to research in the related fields
	MPT 492. CO2: The students would be able to design plan of work, execute them and interpret the data to evaluate the work



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	MPT 492. CO3: The students would be able to write their research reports constituting Introduction, Experimental Methods, Results & Discussion, Conclusion and References