

Regd. No. MH/4775/Satara

DTE Code : 6394, MSBTE Code : 2144



Shree Santkrupa Shikshan Sanstha's

SHREE SANTKRUPA COLLEGE OF PHARMACY

Ghogaon (Shivajinagar), Tal: Karad, Dist: Satara, (Maharashtra State) Pin-415111

Ph : (02164) 257374 | Email : principalsntk@rediffmail.com | Web : www.sscop.org

**Course Outcomes****PROGRAM: M. Pharm Pharmacology**

Name of Subject with Code	CO Code	Course Outcomes
M.Pharm -I (Semester-I) in (Pharmacology)		
MPL101T Modern Pharmaceutical Analytical Technique	MPL101T_CO1	Develop the ability to gain the knowledge about ICH guidelines and degradation and determination in drugs.
	MPL101T_CO2	Evaluate the accuracy and reliability of analytical results obtained from the analysis of various drugs in single and combination dosage forms
	MPL101T_CO3	Interpret the spectrums and chromatogram of different methods of analysis.
	MPL101T_CO4	Discuss Theoretical and Practical Skills with Analytical Instruments.
	MPL101T_CO5	Explain the basic principles of biological test and immunoassays.
MPL102T Advanced Pharmacology-I	MPL102T_CO1	Predict Pharmacokinetic and Pharmacodynamics process of lipophilic and hydrophilic drugs.
	MPL102T_CO2	Differentiate pharmacological actions of drug acting on autonomic nervous system
	MPL102T_CO3	Relate concept of drug action on central nervous system with its receptors
	MPL102T_CO4	Describe mechanism and pharmacology of prototype drugs acting on CVS disorders and explain their clinical use.
	MPL102T_CO5	Illustrate feedback mechanism using mechanism and pharmacological action of hormones, autacoids and their antagonists
MPL103T Pharmacological and Toxicological Screening Methods-I	MPL103T_CO1	Summarize the various animals used in the drug discovery process
	MPL103T_CO2	Elaborate good laboratory practices in maintenance and handling of experimental animals
	MPL103T_CO3	Appraise the regulations and ethical requirement for the usage of experimental animals
	MPL103T_CO4	Describe the various preclinical in-vitro, in-vivo and other possible animal alternative models for the screening various pharmacological activities.
	MPL103T_CO5	Explain general principles and evaluation of Immunoassay methods

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MPL104T Cellular and Molecular Pharmacology	MPL104T_CO1	Analyze the receptor signal transduction processes
	MPL104T_CO2	Construct the molecular pathways affected by drugs
	MPL104T_CO3	Discuss mechanisms and applicability of molecular pharmacology, genomic and proteomic tools.
	MPL104T_CO4	Distinguish the process of Pharmacogenomics
	MPL104T_CO5	Summarize the concept of Immunotherapeutic.
	MPL104T_CO6	Interpret various Cell culture techniques.
MPL105P Pharmacology – I (Practical)	MPL105P_CO1	Demonstrate route of drug administration, blood withdrawal techniques.
	MPL105P_CO2	Evaluate the effect of drug on CNS activity, analgesic activity, Anti-diabetic activity, Anti-inflammatory activity, diuretic activity, antiulcer activity etc.
	MPL105P_CO3	Estimate DNA/RNA isolated from biological sample using various techniques
	MPL105P_CO4	Demonstrate MTT assay, gel electrophoresis, gene amplification and Protein quantification
	MPL105P_CO5	Discuss the principle, procedure and applications of enzyme inhibition activity, pharmacokinetics studies, apoptosis determination etc.
	MPL105P_CO6	Exhibit the extraction techniques of drug from biological samples and their estimation using various analytical techniques.
M. Pharm I (Semester-II) in Pharmacology		
MPL201T Advanced Pharmacology II	MPL201T_CO1	Illustrate feedback mechanism using mechanism and pharmacological action of drug acting on endocrine systems.
	MPL201T_CO2	Relate concept of mechanism and resistance of drugs acting microbes, fungus, virus and tuberculosis.
	MPL201T_CO3	Explain the pharmacotherapy of COPD, Asthma, constipation, diarrhea, Ulcer, inflammation, Rheumatoid Arthritis, immune disorders et
	MPL201T_CO4	Relate significance of rhythm, cycles and biological clock for application of chronotherapy in various disease conditions.
	MPL201T_CO5	Describe antioxidant scavenging effects on free radicals to cure diabetes, neurodegenerative diseases and cancer etc.
	MPL201T_CO6	Conclude the recent advances in the treatment of Alzhemier's disease, Parkinson's disease, cancer and diabetes mellitus

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MPL202T Pharmacological & Toxicological Screening Methods II - Theory	MPL202T_CO1	Summarize the various types of toxicity studies.
	MPL202T_CO2	Discuss the importance, ethical and regulatory requirements for various types of toxicity studies.
	MPL202T_CO3	Outline the significance of reproductive toxicity, teratogenicity, Genotoxicity, carcinogenicity studies
	MPL202T_CO4	Describe the significance of IND enabling studies and safety pharmacology studies
	MPL202T_CO5	Recognize the importance and applications of toxicokinetics studies and alternative methods to animal toxicity testing
	MPL202T_CO6	Demonstrate the practical skills require for conducting the preclinical toxicity studies
MPL203T Principles of Drug Discovery-Theory	MPL203T_CO1	Illustrate various stages in modern drug discovery process
	MPL203T_CO2	Appraise role of genomics, proteomics and bioinformatics in drug discovery.
	MPL203T_CO3	Discuss the different methods for lead identification
	MPL203T_CO4	Summarize different approaches for rational drug design
	MPL203T_CO5	Discuss the concept of QSAR and QSAR statistical methods
	MPL203T_CO6	Elaborate role of in-vitro screening technique in drug discovery
MPL 204T Clinical Research and Pharmacovigilance Theory	MPL204T_CO1	Discuss the basic concept of clinical research
	MPL204T_CO2	Explain regulatory requirements and plans for conceptualizing, designing, conducting, managing, and conducting clinical trial.
	MPL204T_CO3	Summarize the types of clinical trial designs
	MPL204T_CO4	Elaborate the responsibilities of key players involved in clinical trials
	MPL204T_CO5	Describe in detail about safety monitoring, reporting and close-out activities
	MPL204T_CO6	Discuss the principles of Pharmacovigilance.

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MPL205P Pharmacology – II (Practical)	MPL205P_CO1	Demonstrate the determination of unknown concentration of sample by Bioassay method using chicken ilium preparation
	MPL205P_CO2	Elaborate the drug effect on rat BP, heart rate and ECG using computer simulation techniques
	MPL205P_CO3	Discuss the acute oral toxicity, dermal toxicity, repeated dose toxicity studies and drug mutagenicity study as per OECD guidelines
	MPL205P_CO4	Evaluate the ADR reporting and monitoring protocol.
	MPL205P_CO5	Design the protocol for Clinical trial studies
	MPL205P_CO6	Explain the efficacy of drugs using In-silico studies like docking studies, Pharmacophore based screening and QSAR studies