



First Year M. Pharmacy (SEM- I)

Name of the course: Modern Pharmaceutical Analysis Techniques (Theory)

[MPL 101 T]

After completion of this course student will be able to:

Code	Course Outcome
MPH 101.1	Students will understand theoretical aspects of UV- Visible Spectroscopy, IR, Spectrofluorimetry, Atomic Absorption and flame emission spectroscopy.
MPH 101.2	The students will learn the practical skills for the analysis of drugs or excipients using various instrumentation techniques.
MPH 101.3	Students will get knowledge about instrumentation, working and applications of Mass and NMR spectroscopy.
MPH 101.4	students impart wide knowledge in students on various chromatographic techniques, electrophoresis methods, Xray Crystallography and Immunoassays
MPH 101.5	The students shall understand and apply the knowledge in Thermal techniques, electrophoresis methods, X-ray Crystallography technique and Immunoassay

Mapping of course outcomes with program outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
MPH 101.1	3	1	2	3	-	-	-	-	2	-	-
MPH 101.2	3	-	2	1	-	-	-	-	2	-	-
MPH 101.3	3	1	2	3	-	-	-	-	2	-	-
MPH 101.4	3	2	2	2	-	-	-	-	2	-	-
MPH 101.5	3	2	2	2	-	-	-	-	2	-	-
Total	15	6	10	8	-	-	-	-	10	-	-
Average	3	1.2	2	1.6	-	-	-	-	2	-	-





Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



COURSE OUTCOMES OF M. PHARMACY (Pharmacology)

First Year M. Pharmacy (SEM-I)

Course Name	MPL102T(Advanced Pharmacology-I Theory)	Year of Study	2023-2024
Students will be able to:			
MPL102T.1	Discuss the pathophysiology and pharmacotherapy of different diseases		
MPL102T.2	Elaborate the updated information about mechanism of drug actions at cellular and molecular level so as to correlate with research problems		
MPL102T.3	Provide detailed mechanisms of the adverse effects, explain and correlate contraindications and clinical uses of drugs used in treatment of diseases so as to utilize them in clinical data analysis and patient counseling		



[Signature]
Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur



Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



Course Name	MPL103T(Pharmacological and Toxicological Screening Methods-I Theory)	Year of Study	2023-2024
Students will be able to:			
MPL103T.1	Describe the various animals used in the drug discovery process and good laboratory practices in maintenance and handling of experimental animals so as to observe strict adherence to ethical practices in drug research and development		
MPL103T.2	Appraise and critically discuss the regulations and ethical requirement for the usage of experimental animals.		
MPL103T.3	Describe the various newer screening methods involved in the drug discovery process and correlate such preclinical data to humans		



R. Karveer
Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur.

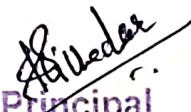


Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



Course Name	MPL104T(Cellular and Molecular Pharmacology Theory)	Year of Study	2023-2024
Students will be able to:			
MPL104T.1	Critically discuss and elaborate signal transduction mechanisms and molecular pathways affected by drugs		
MPL104T.2	Comprehend and utilize the applicability of molecular pharmacology and biomarkers in drug discovery process		
MPL104T.3	Demonstrate molecular biology techniques as applicable for Pharmacology so as to use and emphasize evidence based and ethical methods in laboratory research		



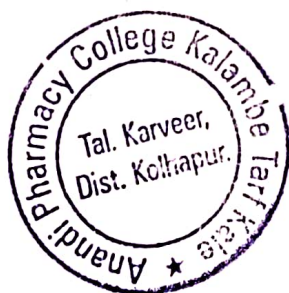

Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur.




Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACYCOLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



Course Name	MPL105P (Pharmacology- Practical I-Practical)	Year of Study	2023-2024
	Students will be able to:		
MPL105P.1	Demonstrate the ability to exercise good laboratory practices during day to day laboratory work		
MPL105P.2	Design experimental protocols, plan experimental activity with due consideration to cost and duration and adhere to the planned protocols		
MPL105P.3	Demonstrate the ability to work in a research team with total dedication and commitment to social and ethical responsibilities and regional relevant health problems associated with it		




Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur..



Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com

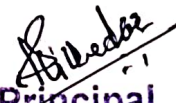


COURSE OUTCOMES OF M. PHARMACY (Pharmacology)

First Year M. Pharmacy (SEM-II)

Course Name	MPL201T(Advanced Pharmacology-II Theory)	Year of Study	2023-2024
Students will be able to:			
MPL201T.1	Explain mechanism of drugs acting on Endocrine, GIT, Alzheimer, Parkinson's, Cancer and DM		
MPL201T.2	Describe the mechanisms at cellular and molecular level of chemotherapeutic and Immuno-pharmacological agents.		
MPL201T.3	Illustrate the applications of chronotherapy in CVS, DM, Asthma and Peptic ulcer as well as protective activity of antioxidants, role of free radicals in DM, Neurodegenerative diseases and cancer		




Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur.



Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



Course Name	MPL202T(Pharmacological and Toxicological Screening Methods-II -Theory)	Year of Study	2023-2024
Students will be able to:			
MPL202T.1	Explain history of drug development and regulatory guidelines for toxicity studies as per OECD, ICH, EPA & Schedule Y, Principles of GLP		
MPL202T.2	Discuss reproductive, geno, terato, carcino, dermal, oral, inhalation toxicity as well as toxicokinetics evaluation in preclinical studies		
MPL202T.3	Describe studies of IND, Safety pharmacology as well as alternative methods for animal toxicity		



[Signature]
Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur.



Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



Course Name	MPL203T(Principles of Drug Discovery-Theory)	Year of Study	2023-2024
Students will be able to:			
MPL203T.1	Demonstrate the ability to use bioinformatic, genomic and proteomic tools in drug discovery, work out experimental study design and data analysis		
MPL203T.2	Comprehensively discuss and analyze the process of target and lead identification, optimization and validation essential to be a part of drug research team		
MPL203T.3	Demonstrate the ability to use various freewares and databases involved in computer aided drug design & discovery		



A. Uedar
Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur



Anandi Shikshan Prasarak Mandal Sanchalit

ANANDI PHARMACY COLLEGE,

Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,

Affiliated to Shivaji University, Kolhapur

Email: anandipharmacycollege02@gmail.com



Course Name	MPL204T(Clinical Research and Pharamcovigilance - Theory)	Year of Study	2023-2024
Students will be able to:			
MPL204T.1	Demonstrate the types of clinical trial designs and regulatory requirements for conducting clinical trial		Explain the
MPL204T.2	Explain the responsibilities of key players involved in clinical trials and Execute safety monitoring, reporting and close-out activities		
MPL204T.3	Explain the principles of Pharmacovigilance, detect new adverse drug reactions and their assessment and perform the adverse drug reaction reporting systems and communication in Pharmacovigilance		



Principal
Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur.



Anandi Shikshan Prasarak Mandal Sanchalit
ANANDI PHARMACY COLLEGE,
Kalambe Tarf Kale, Tal: Karveer, Dist: Kolhapur-416205 (M. S.) India
Approved by PCI New Delhi, Recognized by DTE, Mumbai, Govt. of Maharashtra,
Affiliated to Shivaji University, Kolhapur
Email: anandipharmacycollege02@gmail.com



Course Name	MPL205P (Pharmacology- Practical II-Practical)	Year of Study	2023-2024
Students will be able to:			
MPL205P.1	Demonstrate good laboratory practices during laboratorywork		
MPL205P.2	Design experimental protocols, plan experimental activity with due consideration to ethical and social requirements		
MPL205P.3	Perform laboratory experimental work in a research team,communicate, discuss and plan experimental work		



ASiladar
Principal
Anandi Pharmacy College
Kalambe Tarf Kale,
Tal. Karveer, Dist. Kolhapur.