
Course Outcomes (COs)

Program: pharm D

Batch: 3rd year



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha		
Course	Pharm D		
Batch	2020-2026		
Semester	3		
Subject	Pharmacology-II		

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	CO1	Explain the pharmacology drugs acting on blood and blood forming, agents and Pharmacology of drugs acting on Renal System	Unit 1, 2	Remember	Emily James
2	CO2	Have an indepth knowledge of principles of Chemotherapy and pharmacology of chemotherapeutic agents .	Unit 3	Understand	Emily James
3	CO3	Explain pharmacology drugs acting on immune system	Unit 4	Understand	Emily James
4	CO4	Discuss principles of toxicology and bioassay	Unit 5	Understand	Emily James
5	CO5	Discuss Structure and functions of the components of the cell. Discuss different aspects of genes and their regulatory functions.	Unit 6	Apply	Emily James

Generated at : 06/06/2023 15:15:52



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha		
Course	Pharm D		
Batch	2020-2026		
Semester	3		
Subject	Pharmaceutical Analysis		

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	C302.1	Critically evaluate various analytical techniques in the context of qualitative and quantitative analysis of drugs in single and combination dosage forms	qualitative and quantitative analysis of drugs in single and combination dosage forms	Apply	Elseena Jose
2	C302.2	Demonstrate an understanding of theory and application of most common methods of pharmaceutical analysis in research, academic and industry.	Practical experiments based on theoretical Knowledge	Apply	Elseena Jose
3	C302.3	Apply the principles of chromatography in qualitative and quantitative analysis of pharmaceuticals in research and industrial perspective	Various chromatographic methods	Apply	Elseena Jose
4	C302.4	Utilize the knowledge of spectroscopy in the elucidation of molecular structure and the interpretation of the result.	IR, MASS AND NMR INTERPRETATION	Analyze	Elseena Jose
5	C302.5	Demonstrate the scope of various quality-assuring parameters for reliable analytical testing and documentation	Demonstrate the scope of various quality-assuring parameters for reliable analytical testing and documentation	Understand	Elseena Jose



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha		
Course	Pharm D		
Batch	2020-2026		
Semester	3		
Subject	Pharmacotherapeutics-II		

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	PD3.1	know the pathophysiology of selected disease states and the rationale for drug therapy		Apply	Dona Maria Jetto
2	PD3.2	know the therapeutic approach to management of these diseases		Analyze	Dona Maria Jetto
3	PD3.3	know the controversies in drug therapy		Evaluate	Dona Maria Jetto
4	PD3.4	know the importance of preparation of individualised therapeutic plans based on diagnosis		Analyze	Dona Maria Jetto
5	PD3.5	identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects)		Apply	Dona Maria Jetto

Generated at : 06/06/2023 15:22:14



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha		
Course	Pharm D		
Batch	2020-2026		
Semester	3		
Subject	Pharmaceutical Jurisprudence		

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	PD304.1	1	To understand the constitution of central and state pharmacy councils	Understand	Prasanth B
2	PD 304.2	2	Understand the Pharmaceutical legislations and their implications in the development and marketing.	Apply	Prasanth B
3	PD 304.3	3	Grasp knowledge on administration of various act in India	Evaluate	Prasanth B
4	PD304.4	4	Grasp knowledge on the regulatory authorities and agencies governing the import, manufacture and sale of pharmaceuticals.	Apply	Prasanth B
5	PD 304.5	5	Understand the code of ethics during the pharmaceutical practice and the pharmacists oath.	Analyze	Prasanth B

Generated at : 06/06/2023 15:27:06



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661
 Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha		
Course	Pharm D		
Batch	2020-2026		
Semester	3		
Subject	Medicinal Chemistry		

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	CO.1	Demonstrate extensive and coherent knowledge of the principles and concepts associated with the design and discovery of medicinal agents.		Understand	SINI BABY
2	CO 2	Get knowledge about drug design softwares and advanced techniques		Apply	SINI BABY
3	CO 3	Study the concept of prodrug design & its applications in the field of medicines.		Analyze	SINI BABY
4	CO 4	Explain the effect of chemical structure of a drug on its pharmacokinetic properties.		Understand	SINI BABY
5	CO 5	Study the important classes of medicinal compounds and drugs including their SAR, MOA, therapeutic uses, synthesis and their applications in medical field.		Apply	SINI BABY

Generated at : 06/06/2023 15:31:38



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha		
Course	Pharm D		
Batch	2020-2026		
Semester	3		
Subject	Pharmaceutical Formulations		

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	CO 1	Demonstrate knowledge of various dosage forms used in pharmaceuticals, including tablets, liquid orals, parenteral preparations, novel drug delivery systems, ophthalmic preparations, ointments, and capsules, and their formulation principles.		Understand	Fels Saju
2	CO2	To provide a comprehensive understanding of the principles of drug formulation, development, and manufacturing, including the selection of appropriate dosage forms, excipients, and manufacturing processes.		Apply	Fels Saju
3	CO3	Analyze the physicochemical properties of drug substances and their impact on the selection of appropriate dosage forms for administration, including the use of novel drug delivery systems.		Understand	Fels Saju
4	CO4	To enable students to apply fundamental concepts of physical pharmacy, pharmacokinetics, and drug delivery to the design and optimization of pharmaceutical products for different therapeutic indications.		Create	Fels Saju
5	CO5	Evaluate the stability of pharmaceutical products under different storage conditions, including temperature, humidity, and light exposure, and assess the impact of formulation factors on product stability for different types of dosage forms.		Apply	Fels Saju



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	Pharm D
Batch	2020-2026
Semester	3
Subject	Pharmacology-II Practical

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	CO1	They gained skills to apply pharmacology drug knowledge to carry out simulated pharmacological experiments using experimental software.		Apply	Emily James
2	CO2	They would have learnt the principles of bioassay and gained skills to carry out bioassays to identify concentrations of unknown .		Apply	Emily James
3	CO3	Students would have gained knowledge to study the potentiating and antagonising effects of agonists/antagonists on DRC.		Apply	Emily James
4	CO4	They would have learnt the basic pre requisites in carrying out experimental pharmacology experiments.		Understand	Emily James

Generated at : 28/06/2023 15:05:33



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	Pharm D
Batch	2020-2026
Semester	3
Subject	Pharmaceutical Analysis Practical

SI.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	C302.6	Illustrate the practical applications of instruments used in pharmaceutical research activities.		Apply	Elseena Jose
2	C302.7	Design the analytical methods and evaluate the drug substance and formulations as per pharmacopoeia guidelines.	Method development	Analyze	Elseena Jose
3	C302.8	Utilize the theoretical skill in interpreting the qualitative and quantitative data in an effective way.	interpreting the qualitative and quantitative data	Analyze	Elseena Jose

Generated at : 28/06/2023 15:06:43



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	Pharm D
Batch	2020-2026
Semester	3
Subject	Pharmacotherapeutics-II Practical

SI.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	pd303.1	Understand the therapeutic approach to the management of diseases and to learn the importance of preparation of individualized therapeutic plans based on the diagnosis		Apply	Dona Maria Jetto
2	PD303.2	Knowledge in analysing patient specific cases based on SOAP format		Apply	Dona Maria Jetto
3	PD303.3	Gain knowledge in analysing patients therapy based on clinical parameters		Evaluate	Dona Maria Jetto

Generated at : 28/06/2023 15:07:39



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	Pharm D
Batch	2020-2026
Semester	3
Subject	Medicinal Chemistry Practical

SI.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	C 3.5	Synthesis of selected drugs involving two or more steps and study spectral analysis of drugs synthesized		Remember	SINI BABY
2	C3.5	Establishing the Pharmacopeial Standards of drugs synthesized		Apply	SINI BABY
3	C3.5	Identification and estimation of drug metabolites from biological fluids		Apply	SINI BABY
4	C3.5	Determination of Partition coefficient, Dissociation constant and Molar refractivity of compounds for QSAR analysis		Apply	SINI BABY
5	C3.5	Workshop on drug design softwares.		Apply	SINI BABY

Generated at : 17/07/2023 10:32:04



Nirmala College of Pharmacy, Muvattupuzha

Muvattupuzha P.O Ernakulam District Kerala, India, Pin:686661

Email : info@nirmalacp.org, Phone : 04852836888

Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	Pharm D
Batch	2020-2026
Semester	3
Subject	Pharmaceutical Formulations Practical

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1		Attain basic understanding in the area of pre-formulation study, manufacturing, packaging and labeling of tablets.		Apply	Fels Saju
2		Understand the requirements of parenteral product preparation, packaging and labeling		Apply	Fels Saju
3		Understand processes involved in the preparation and evaluation of syrups		Apply	Fels Saju
4		Develop skill in the manufacturing and packaging of creams		Apply	Fels Saju
5		Learn the evaluation studies of different formulations and packaging materials.		Apply	Fels Saju

Generated at : 28/06/2023 15:08:33