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**Course Outcomes (COs)**

**Program: B Pharm**

**Batch: 8<sup>th</sup> semester**

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# 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	B Pharm
Batch	2018-2022
Semester	8
Subject	Biostatistics and Research Methodology

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	CO1	Gain knowledge about the basics of Research and apply this knowledge in their own research		Understand	Vidya Peter
2	CO2	Learn about different types of data and their analysis		Understand	Vidya Peter
3	CO3	Know the different computer softwares in statistics		Understand	Vidya Peter
4	CO4	To study the different epidemiologic study designs and the basic concepts of clinical trials.		Understand	Vidya Peter

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Social and Preventive Pharmacy

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP802T	Understand the concept of public health in relation to social causes of diseases and social problems of the sick		Understand	Anriya Annie Tom
2	BP802T	Understand the concept of public health in relation to nutrition and prevention of malnutrition		Understand	Anriya Annie Tom
3	BP802T	Understand general principles of public health in relation to prevention and control of diseases		Understand	Anriya Annie Tom
4	BP802T	Actively involve in national and state health programs and also be aware of WHO health initiatives		Create	Anriya Annie Tom
5	BP802T.	Actively involve in national health mission activities and community services of primary health centres in rural, urban and school health		Apply	Anriya Annie Tom

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Pharmaceutical Regulatory Science

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP804.1	Know about the process of drug discovery and development	UNIT 1	Understand	Gifty M Jojo
2	BP804.2	Know the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals and know about Regulatory Approval Process	UNIT II	Understand	Gifty M Jojo
3	BP804.3	Know about the Registration of Indian drug product in overseas market	UNIT III	Understand	Gifty M Jojo
4	BP804.4	Know about the procedure for conducting clinical trials and and documentation of	UNIT IV	Understand	Gifty M Jojo
5	BP804.5	Regulatory Concepts	UNIT V	Understand	Gifty M Jojo

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Pharmacovigilance

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP805T.1	Understand the concept Pharmacovigilance, gain deep understanding on the concept of Adverse Drug Reactions and to memorize the terms used in Pharmacovigilance.		Understand	Dona Maria Jetto
2	BP805T.2	Understand the concept Drug & Disease Classification and the basic criteria for establishing Pharmacovigilance programme in India.		Understand	Dona Maria Jetto
3	BP805T.5	Equipped to actively involve in Pharmacogenomics of adverse drug reactions		Apply	Dona Maria Jetto

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Quality Control and Standardizations of Herbals

SI.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP806ET 1	Able to explain the safety monitoring , quality control of Herbal Drugs & testing of pharmaceuticals	WHO Guidelines on Safety monitoring of herbal medicines in pharmacovigilance systems ,Quality control of herbal drugs, evaluation of crude drugs, testing of pharmaceutical substances and dosage forms , Role of biological markers ,Application of chromatographic techniques, Stability testing etc.	Evaluate	Lins Mary Joy
2	BP806ET 2	Able to explain quality assurance in herbal drug industry.	Quality assurance in herbal drug industry of cGMP, GAP, GMP and GLP in traditional system of medicine. WHO Guidelines on current good manufacturing Practices (cGMP) for Herbal Medicines. WHO Guidelines on GACP for Medicinal Plants.	Apply	Lins Mary Joy
3	BP806ET 3	Able to explain various regulatory approval process and their registration in Indian and International Markets	Preparation of documents for new drug application and export registration GMP requirements and Drugs & Cosmetics Act provisions	Apply	Lins Mary Joy
4	BP806ET 4	Able to explain EU and ICH guidelines for quality control of herbal drugs	EU and ICH guidelines for quality control of herbal drugs. Research Guidelines for evaluating the safety and efficacy of herbal medicines	Understand	Lins Mary Joy

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Computer Aided Drug Design

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	Co 1	Able to understand the design and discovery of lead molecules		Understand	Saranya T S
2	CO 2	To describe the concept of QSAR and docking		Remember	Saranya T S
3	co 2	To design ad discover of lead molecules		Apply	Saranya T S
4	co 2	To design ad discover of lead molecules		Apply	Saranya T S
5	CO 3	To learn the concept of pharmacophore modelling technique		Apply	Saranya T S
6	CO 4	To design a new drug molecules using molecular modelling software		Apply	Saranya T S
7	CO 5	To explain the various strategies to develop new drug like molecules		Analyze	Saranya T S

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Cell and Molecular Biology

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	CO 1	introduction to the basics of cell and its components.		Remember	Hema S
2	CO 2	The students can explain the fundamental knowledge on the structure and functions of cellular components.		Understand	Hema S
3	CO 3	They would appreciate the interaction of these components with drugs. This would enable them to apply the knowledge in drug discovery process		Apply	Hema S
4	CO 4	They would have learnt to explain the molecular pathways affected by drugs		Understand	Hema S
5	CO 5	The student will gain a basic understanding on human genetics and hereditary		Remember	Hema S

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Cosmetic Science

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP 809 ET. 1	Gain knowledge about cosmetic principles and cosmetic excipients		Understand	Deepa M.K
2	BP 809 ET. 2	to understand the building blocks and formulation aspect of skin care, hair care and oral care products		Understand	Deepa M.K
3	BP 809 ET. 3	Learn about the classification of Sunscreens, SPF and also role of herbs as cosmetics and analysis of cosmetics as per BIS		Apply	Deepa M.K
4	BP 809 ET. 4	Know the evaluation methods for cosmetics and the standard instrument used in analysis		Understand	Deepa M.K
5	BP 809 ET. 5	Understand the common problems of skin and hair		Understand	Deepa M.K

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Experimental Pharmacology

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP810 ET1	Understand the guidelines and different experimental procedures to ensure the care of animals used in teaching and research purpose		Apply	Arya V S
2	BP810 ET2	Understand the dose calculations and dosage form preparations procedures in animal experiments		Apply	Arya V S
3	BP810 ET3	Analyze various preclinical models used in the screening of CNS activity		Understand	Arya V S
4	BP810 ET4	Analyze the screening models for evaluating a drugs ANS activity		Understand	Arya V S
5	BP810 ET5	Analyze various animal models used in the screening of drugs having activity on CVS		Understand	Arya V S

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## Course Outcome

Institute	Nirmala College of Pharmacy, Muvattupuzha
Course	B Pharm
Batch	2018-2022
Semester	8
Subject	Advanced Instrumentation Techniques

Sl.No	CO Code	Course Outcome	Description	Bloom Level	Created_by
1	BP 811 ET.1	understand the advanced instruments used and its applications in drug analysis	understand the advanced instruments used and its applications in drug analysis	Understand	Elseena Jose
2	BP 811 ET.2	understand the separation and analysis of drugs	understand the separation and analysis of drugs	Understand	Elseena Jose
3	BP 811 ET.3	understand the calibration of various analytical instruments know analysis of drugs using various analytical instruments.	understand the calibration of various analytical instruments know analysis of drugs using various analytical instruments.	Understand	Elseena Jose

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