Kalinga University
Pharmacy
Master Of Pharmacy (Pharmacology)

PO

S. No.	Program Outcome (PO) Description
1	LLife-long learning : Acquiring knowledge relating to molecular mechanism, therapeutic effects and adverse effects of drugs.
2	Pharmacovigilance : Ensure safe and effective therapeutic regimens by the application of skills attained in drug discovery and Pharmacovigilance.
3	SoSociety welfare : Exhibit the importance of pharmaceutical knowledge for the benefit of the society and create awareness on serious healthcare issues.
4	Professional knowledge : Imparting the knowledge and ability with recent technologies in order to communicate scientific knowledge.
5	SkSkill Enhancement : Build skills using modern educational methods and advanced techniques for students and health care professionals.
6	ScScientific writing : Developing the skills of writing research findings in the form of scientific papers, conference presentations, popular articles annual drug reviews.
7	Communication : Attain good communication and writing skills for life learning practice

PSO

S. No.	Program Specific Outcome (PSO) Description
1	ExExpress the ability to use thinking and problem-solving skills for the stipulation of quality based pharmacy services and patient care system.
2	Provide training to pharmacy students and colleagues for growth of pharmacy profession.
3	PPertain theoretical knowledge and practical skills through classroom learning, laboratories and team project experiences for specialized research in the field of pharmaceutical sciences.

CO

S.No.	Course Code	Course Name	Course Outcome (CO's) - Description
1	MPL101T	Modern Pharmaceutical Analytical Techniques	**CO1:** To understand the basic knowledge on assay of single and multiple component pharmaceuticals by using various analytical instruments
			CO2: Student's will gain knowledge about the basic practical skills using instrumentation techniques
			CO3: Student's will able to understand the suitable techniques for analysis of drugs and pharmaceuticals.
			CO4: They are able to expand the theoretical knowledge on various instrumental techniques available for analysis of organic substances
			CO5: To apply the knowledge learnt in developing new procedures of their own design, comparing various methods of analysis and their outcomes
2	MPL102T	ADVANCED PHARMACOLOGY – I	**CO1:** Student's will gain knowledge about general pharmacological concepts such as pharmacodynamics and pharmacokinetic
			CO2: Student's willknow the general concept of Neurotransmission, neuritransmitters and drug affecting it and Explain the Pharmacology of sympathetic and parasympathetic
			CO3: Student's willknow the different Classes of drugs used in various CNS disorders like anxiety, depression, mania, psychosis, epilepsy, neurodegenerative diseases, neurotransmitters including their agonist and antagonist
			CO4: Student's willgain knowledge about the Pharmacology of cardiovascular drugs such as diuretics, antihypertensives, anti-ischemic, anti hyperlipidemic, drugs used in CCF, hematinics, coagulants, anti-coagulants, fibrinolytics and antiplatlet drugs
			CO5: Student's will gain knowledge about the physiological and pathological role of histamine,5-HT,Kinins,prostaglandins, opioid autacoids and Pharmacology of antihistamines and 5-HT antagonist
3	MPL103T	Pharmacological And Toxicological Screening Methods - I	**CO1:** To understand about the regulations and ethical requirement for the usage of various species and strains of experimental animals and explain CPCSEA guidelines, GLP.
			CO2: Students will learn how to classify and explain various preclinical possible animal alternative models for the screening of following classes of drugs such as behavioral and muscle coordination, CNS stimulants and depressants, anxiolytics, anti-psychotics, anti-epileptics and nootropics.
			CO3: Students will get understanding of drugs for neurodegenerative diseases like Parkinsonism, Alzheimers and multiple sclerosis. They will gain knowledge about drugs acting on Autonomic Nervous System.

			CO4: To get understanding of various preclinical possible animal alternative models for the screening of following classes of drugs such as Immunomodulators, Immunosuppressants andimmunostimulants.
			CO5: To understand and classify and explain various preclinical cardiovascular pharmacology: antihypertensives models for invitro and invivo study.
4	MPL104T	Cellular And Molecular Pharmacology	**CO1:** To explain cellular structure and functions and understand cell regulation and cell cycle.
			CO2: To describe molecular and cellular cell signaling pathways, principles and applications of genomic and proteomic tools in understanding molecular mechanisms.
			CO3: Students will understand principles, applications and recent advances in gene therapy and gene delivery.
			CO4: To create understanding of the Principles and applications of proteomics science.
			CO5: To describe about cell culture techniques and biosimilars.
5	MPL201T	ADVANCED PHARMACOLOGY - II	**CO1:** Understand the Endocrine Pharmacology
			CO2: Understand the Cellular and molecular mechanism of actions and resistance of antimicrobial agents
			CO3: Understand the pharmacology of anti-protozoal, anticancer and immunotherapeutics.
			CO4: Understand the various aspects of GIT pharmacology and Chronopharmacology
			CO5: Understand the free radical pharmacology with its importance in various diseases and recent advances in treatment different diseases
6	MPL202T	Pharmacological And Toxicological Screening Methods - II	**CO1:** To create knowledge about basics and the types of toxicology in animal experimentation.
			CO2: To create understanding of the regulatory guidelines for conducting toxicological studies.
			CO3: To help in understanding various toxicity studies as per OECD guidelines.
			CO4: Students will learn about toxicity studies and will explain the Importance and applications of toxicokinetics.
			CO5: To get understanding of various methods employed i drug discovery and development and explain alternative methods to animal toxicity testing.
7	MPL203T	PRINCIPLES OF DRUG DISCOVERY – Theory	**CO1:** Student's will gain knowledge detail about various stages involved in modern drugdiscovery process
			CO2: Student's will know the role of genomics, proteomics and bioinformatics in drugdiscovery
			CO3: Students will know about various targets for drug discovery.
			CO4: Student's will know about various lead seeking method and lead optimization
			CO5: Student's will gain knowledge about the concept of Rational Drug Design
8	MPL204T	Clinical Research and	**CO1:** The students would appreciate the knowledge on the clinical research.
			CO2: They would get a better understanding in the regulatory requirements for conducting clinical trial. They would have understand the types of clinical trial designs.

8	MPL2041	Pharmacovigilance– Theory	**CO3:** They would have studied the responsibilities of key players involved in clinical trials
			CO4: They would have an understand on the safety monitoring, reporting and close-out activities.
			CO5: They would have studied the principles of Pharmacovigilance