Geethanjali College of Pharmacy

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Cheeryal (V), Keesara (M), Medchal-Malkajgiri Dist, Telangana State- 501301.

PROGRAM: DOCTOR OF PHARMACY (POST BACCALAUREATE)

BATCH (18-21) AY (2020-2021) REGULATION R08

COURSE OUTCOMES WITH KNOWLEDGE LEVEL & ITSRELEVANCE TO PROGRAM OUTCOMES

Course Name	Code	Course Outcome No	CO Statement	Knowledge Level	Relevance to PO's
PROGRAM: DOCTOR OF PHARMACY(PB) I/III					
PHARMA CO THERAPE UTICS-III	PD.C4 1	PD.C.41. 1	Describe the pathophysiologyof selected disease states and the rationale for drug therapy	K3	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO1 0
		PD.C.41. 2	Discover the therapeutic approach to manage diseases	K4	
		PD.C.41. 3	Appreciate the controversies in drug therapy	K4	
		PD.C.41. 4	Analyze the importance of preparation of individualizedtherapeutic plans based on	K4	

			Diagnosis		PO11
		PD.C.41.5	Choose the latest available evidence to manage diseases	K3	
		PD.C.41.6	Identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy	K3	
HOSPITAL PHARMACY	PD.C42	PD.C.42.1	Use professional practice management skills in hospital pharmacies	K3	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11
		PD.C.42.2	Recommend unbiased drug information to the doctors	K5	
		PD.C.42.3	Develop the manufacturing practices of various formulations in hospital set up	K3	
		PD.C.42.4	Select the practice based research methods	K4	
		PD.C.42.5	Adapt the stores management and inventory control skills	K4	
CLINICAL PHARMACY	PD.C43	PD.C.43.1	Monitor drug therapy of patient through medication chart review and clinical review	K4	PO1 PO2 PO4 PO6 PO7 PO8 PO9 PO10 PO11
		PD.C.43.2	Analyse medication history interview and counsel the patients	K4	
		PD.C.43.3	Determine and resolve drug related problems	K6	
		PD.C.43.4	Determine, assess and investigate adverse drug reaction	K4	
		PD.C.43.5	Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states	K6	
		PD.C.43.6	Adapt, analyse, interpret and formulate drug or medicine	K5	

			information		
BIOSTATIST ICS &RESEARC H METHODOL OGY	PD.C44	PD.C44.1	Choose the appropriate research design and develop research hypothesis for a research project.	K3	PO3 PO4 PO9 PO11
		PD.C44.2	Discuss the various steps involved in conducting research and describe the sample size calculation methods.	K3	
		PD.C44.3	Construct a frequency table, histogram, pie chart to represent a data set	K3	
		PD.C44.4	Identify the fundamentals ofthe most parametric and non parametric techniques for statistical inference	K3	
		PD.C44.5	Compute and interpret the Spearman correlation coefficient and test the significance	K3	
		PD.C44.6	Operate various softwares for statistical analysis of data and appreciate the importance of Computers in hospital and Community Pharmacy	K3	
BIOPHARM ACEUTICS & PHARMACO KINETICS	PD.C45	PD.C.45.1	Discuss and broader understanding about the concepts of biopharmaceutics and pharmacokinetics.	K4	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10
		PD.C.45.2	Select the correct pharmacokinetic model basedon plasma level or urinary excretion data that best describes the process of drug absorption, distribution,metabolism and elimination(ADME)	K6	

		PD.C.45.3	Ability to calculate the various pharmacokinetic parameters by using various mathematical models.	K5	
		PD.C.45.4	Carry out biopharmaceutical studies and use data so obtained in the development ofnew drugs or dosage forms	K4	
		PD.C.45.5	Calculate various pharmacokinetic parameters from plasma and urinary excretion data applying compartment modeling and model independent methods	K4	
		PD.C.45.6	Design dosage regimens for patients based on calculated pharmacokinetic parameters	K4	
		PD.C.45.7	Design Bioavailability and Bioequivalence studies of new drugs or dosage form	K6	
		PD.C.45.8	Evaluate drug-protein bindingas a tool to predict pharmacokinetics of drugs	K5	
CLINICAL TOXICOLOGY	PD.C46	PD.C.46.1	Illustrate general principles and management practice of poisoning	K3	PO1 PO3 PO4 PO6 PO7 PO9 PO10 PO11
		PD.C.46.2	Differentiate the history, assessment, and therapy considerations associated withthe management of a toxic exposure	K4	
		PD.C.46.3	Demonstrating and understanding of the characteristics of and treatment	K3	

			guidelines for specific toxic substances		
		PD.C.46.4	Relationship of the pharmacist to function as contributing health care team in poison management	K4	
		PD.C.46.5	Comparing symptoms and management of various types of toxic exposures	K2	
		PD.C.46.6	Proposing several preventive approaches to reduce unintentional drug, plant and animal poisonings	K5	
PHARMACO THERAPEUT ICS-III LAB	PD.C47	**PD.C.47.1**	Explain the rationale for drug therapy	K5	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11
		PD.C.47.2	Apply the therapeutic approach to management of diseases including reference to the latest available evidence	K3	
		PD.C.47.3	Identify the controversies in drug therapy	K3	
		PD.C.47.4	Recommend individualized therapeutic plans based on diagnosis	K5	
		PD.C.47.5	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)	K3	
HOSPITAL PHARMACY LAB	PD.C48	**PD.C.48**.1	Analyze prescriptions for drug interactions	K4	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8
		PD.C.48.2	Illustrate, Formulate and prepare parenteral formulations and powders	K3	
		PD.C.48.3	Perform inventory analysis	K3	
		PD.C.48.4	Analyze and Answer drug information queries through	K4	

			literature search		PO9 PO10 PO11
		PD.C.48.5	Conduct planned experiments and prepare laboratory report in a standard format	K5	
CLINICAL PHARMACY LAB	PD.C49	**PD.C.49**.1	Discuss Drug information questions and answering	K4	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11
		PD.C.49.2	Discuss effective Patient medication counselling	K6	
		PD.C.49.3	Discuss case studies related to laboratory investigations and examine laboratory values	K5	
		PD.C.49.4	Discuss Patient medication history interview	K4	
		PD.C.49.5	Find drug drug interactions in case studies	K4	
BIOPHARMACEUTICS & PHARMACOKINETICS LAB	PD.C410	PD.C410.1	Compare the invitro drug release profile of different marketed products	K4	PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11
		PD.C.410.2	Perform the solubility enhancement techniques for improvement of drug release of poorly water soluble drug	K4	
		PD.C.410.3	Estimate the bioavailability (absolute and relative) and bioequivalence from the given clinical data	K6	
		PD.C.410.4	Calculate the drug content in blood sample using Area Under Curve approach	K4	
		PD.C.410.5	Calculate and interpret various pharmacokinetic parameters from the given clinical data	K6	
		PD.C.410.6	Conduct planned experiments and prepare laboratory report ina standard format	K5	
DOCTOR OF PHARMACY (POST BACCALAUREATE) II/III					

CLINICAL RESEARCH	PD.C51	PD.C51.1	Outline the new drug development process as per regulatory and ethical requirements	K2	PO1
		PD.C51.2	Explain the roles and responsibilities of various personnel involved in clinical trials as per ICH-GCP	K2	PO2 PO3 PO4
		PD.C51.3	Demonstrate competencies in evaluating clinical research data and communicating results	K3	PO5 PO6 PO7 PO8
		PD.C51.4	List out various clinical trial activity & its documentation asper regulatory and ethical requirements	K4	PO9 PO10 PO11
		PD.C51.5	Distinguish about various regulatory submissions & its environment in India, USA & Europe	K4	
PHARMACO EPIDEMIOL OGY AND PHARMACO ECONOMICS	PD.C52	PD.C52.1	Explain about definition and scope of pharmacoepidemiology and discuss measurement of outcomes in pharmacoepidemiology.	K6	
		PD.C52.2	Measure concept of risk in pharmacoepidemiology	K6	PO1 PO2 PO3
		PD.C52.3	Classify various methods of pharmacoepidemiology and Classify sources of data for pharmacoepidemiological studies	K4	PO4 PO5 PO6 PO7 PO8
		PD.C52.4	Explain about selected special applications of pharmacoepidemiology	K6	PO9 PO10 PO11
		PD.C52.5	Explain about role in formulary management decision	K6	
		PD.C52.6	Explain the methods used in pharmacoeconomic analysis and Discuss about applications of pharmacoeconomics	K6	
CLINICAL PHARMACO	PD.C53	PD.C.53.1	Describing Pharmacokinetic principles in drug monitoring	K4	

KINETICS & PHARMACO THERAPEUTIC DRUG MONITORING		PD.C.53.2	Demonstrating the Conversion of dosage forms	K3	
		PD.C.53.3	Interpretation of Pharmacokinetic drug interactions	K3	PO1 PO2 PO3 PO4 PO6 PO7 PO9 PO10 PO11
		PD.C.53.4	Make up the individualizationof dosage regimen as per demographic parameters	K5	
		PD.C.53.5	Prioritize the dosage adjustments in Renal and Hepatic diseases	K4	
		PD.C.53.6	Assess the use of pharmacogenetics in Pk and pharmacodynamic principles	K6	