

**COLLEGE OF PHARMACY, TS MISHRA UNIVERSITY,
Course Outcome D. Pharm.**

D Pharm I Year		
Course code/ Course name	CO Number	Course Outcome
ER20-11T Pharmaceutics – Theory	CO11T.1	Describe about the different dosage forms and their formulation aspects
	CO11T.2	Explain the advantages, disadvantages, and quality control tests of different dosage forms
	CO11T.3	Discuss the importance of quality assurance and good manufacturing practices
ER20-11P Pharmaceutics – PRACTICAL	CO11P.1	Calculate the working formula from the given master formula
	CO11P.2	Formulate the dosage form and dispense in an appropriate container
	CO11P.3	Design the label with the necessary product and patient information
	CO11P.4	Perform the basic quality control tests for the common dosage forms
ER20-12T Pharmaceutical Chemistry – Theory	CO12T.1	Describe the chemical class, structure and chemical name of the commonly used drugs and pharmaceuticals of both organic and inorganic nature
	CO12T.2	Discuss the pharmacological uses, dosage regimen, stability issues and storage conditions of all such chemical substances commonly used as drugs
	CO12T.3	Describe the quantitative and qualitative analysis, impurity testing of the chemical substances given in the official monographs
	CO12T.4	Identify the dosage form & the brand names of the drugs and pharmaceuticals popular in the marketplace
ER20-12P Pharmaceutical Chemistry – Practical	CO12P.1	Perform the limit tests for various inorganic elements and report
	CO12P.2	Prepare standard solutions using the principles of volumetric analysis
	CO12P.3	Test the purity of the selected inorganic and organic compounds against the monograph standards
	CO12P.4	Synthesize the selected chemical substances as per the standard synthetic scheme
	CO12P.5	Perform qualitative tests to systematically identify the unknown chemical substances
ER20-13T Pharmacognosy –	CO13T.1	Identify the important/common crude drugs of natural origin
	CO13T.2	Describe the uses of herbs in nutraceuticals and cosmeceuticals
	CO13T.3	Discuss the principles of alternative system of medicines

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Theory	CO13T.4	Describe the importance of quality control of drugs of natural origin
ER20-13P	CO13P.1	Identify given crude drugs based on the morphological the
Pharmacognosy – Practical	CO13P.2	Take a transverse section of the given crude drugs
	CO13P.3	Describe the anatomical characteristics of the given crude drug under microscopical conditions
	CO13P.4	Carry out the physical and chemical tests to evaluate the given crude drugs
ER20-14T	CO14T.1	Describe the various organ systems of the human body
Human Anatomy & Physiology – Theory	CO14T.2	Discuss the anatomical features of the important human organs and tissues
	CO14T.3	Explain the homeostatic mechanisms regulating the normal physiology in the human system
	CO14T.4	Discuss the significance of various vital physiological parameters of the human body
ER20-14P	CO14P.1	Perform the haematological tests in human subjects and interpret the results
Human Anatomy & Physiology – Practical	CO14P.2	Record, monitor and document the vital physiological parameters of human subjects and interpret the results
	CO14P.3	Describe the anatomical features of the important human tissues under the microscopical conditions
	CO14P.4	Discuss the significance of various anatomical and physiological characteristics of the human body
ER20-15T	CO15T.1	Discuss about roles of pharmacists in the various national health programs
Social Pharmacy – Theory	CO15T.2	Describe various sources of health hazards and disease preventive measures
	CO15T.3	Discuss the healthcare issues associated with food and nutritional substances
	CO15T.4	Describe the general roles and responsibilities of pharmacists in public health
ER20-15P	CO15P.1	Describe the roles and responsibilities of pharmacists in various National health programs
Social Pharmacy – Practical	CO15P.2	Design promotional materials for public health awareness
	CO15P.3	Design promotional materials for public health awareness
	CO15P.4	Describe various health hazards including microbial sources
	CO15P.5	Advice on preventive measures for various diseases
	CO15P.6	Provide first aid for various emergency conditions

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D Pharm II Year		
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ER20-21T Pharmacology – Theory	CO21T.1	Describe the basic concepts of pharmacokinetics and pharmacodynamics
	CO21T.2	Enlist the various classes and drugs of choices for any given disease condition
	CO21T.3	Advise the dosage regimen, route of administration and contraindications for a given drug
	CO21T.4	Describe the common adverse drug reactions
ER20-21P Pharmacology – Practical	CO21P.1	Study and report the local anaesthetic, mydriatic and mitotic effects of the given drug on the rabbit eye
	CO21P.2	Choose appropriate animal experiment model to study the effects of the given drugs acting on the central nervous system and submit the report
	CO21P.3	Perform the effects of given tissues (simulated) on isolated organs / tissues and interpret the results
	CO21P.4	Interpret the dose dependent responses of drugs in various animal experiment models
ER20-22T Community Pharmacy & Management – Theory	CO22T.1	Describe the establishment, legal requirements, and effective administration of a community pharmacy
	CO22T.2	Professionally handle prescriptions and dispense medications
	CO22T.3	Counsel patients about the disease, prescription and or non-prescription medicines
	CO22T.4	Perform basic health screening on patients and interpret the reports in the community pharmacy settings
ER20-22P Community Pharmacy & Management –	CO22P.1	Handle and fill prescriptions in a professional manner
	CO22P.2	Counsel patients on various diseases and minor ailments
	CO22P.3	Counsel patients on prescription and or non-prescription medicines
	CO22P.4	Design and prepare patient information leaflets

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Practical	CO22P.5	Perform basic health screening tests
ER20-23T Biochemistry & Clinical Pathology	CO23T.1	Describe the functions of biomolecules
	CO23T.2	Discuss the various functions of enzymes in the human system
	CO23T.3	Explain the metabolic pathways of biomolecules in both physiological and pathological conditions
	CO23T.4	Describe the principles of organ function tests and their clinical significances
– Theory		
	CO23T.5	Determine the biomolecules / metabolites in the given biological samples, both qualitatively and quantitatively
	CO23T.6	Describe the clinical pathology of blood and urine
ER20-23P Biochemistry & Clinical Pathology – Practical	CO23P.1	Qualitatively determine the biomolecules / metabolites in the given biological samples
	CO23P.2	Determine the normal and abnormal constituents in blood and urine samples and interpret the results of such testing
ER20-24T Pharmacotherapeutics – Theory	CO24T.1	Help assessing the subjective and objective parameters of patients in common disease conditions
	CO24T.2	Assist other healthcare providers to analyse drug related problems and provide therapeutic interventions
	CO24T.3	Participate in planning the rational medicine therapy for common diseases
	CO24T.4	Design and deliver discharge counselling for patients
ER20-24P Pharmacotherapeutics – Practical	CO24P.1	Write SOAP (Subjective, Objective, Assessment and Plan) notes for the given clinical cases of selected common diseases
	CO24P.2	Counsel the patients about the disease conditions, uses of drugs, methods of handling and administration of drugs, life-style modifications, and monitoring parameters
ER20-25T Hospital & Clinical	CO25T.1	Explain about the basic concepts of hospital pharmacy administration
	CO25T.2	Manage the supply chain and distribution of medicines within the hospital settings

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Pharmacy – Theory	CO25T.3	Assist the other healthcare providers in monitoring drug therapy and address drug related problems
	CO25T.4	Interpret common lab investigation reports for optimizing drug therapy
ER20-25P Hospital & Clinical Pharmacy – Practical	CO25P.1	Professionally handle and answer the drug information queries
	CO25P.2	Interpret the common laboratory reports
	CO25P.3	Report suspected adverse drug reactions using standard procedures
	CO25P.4	Understand the uses and methods of handling various medical/surgical aids and devices
	CO25P.5	Interpret and report the drug-drug interactions in common diseases for optimizing the drug therapy
ER20-26T	CO26T.1	Describe the history and evolution of pharmacy law in India
Pharmacy Law & Ethics	CO26T.2	Interpret the act and rules regulating the profession and practice of pharmacy in India
	CO26T.3	Discuss the various codes of ethics related to practice standards in pharmacy
	CO26T.4	Interpret the fundamentals of patent laws from the perspectives of pharmacy