

**Course Outcomes**  
**Doctor of Pharmacy**

<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD101T</b>	<b>Course ID</b>	<b>C101</b>
<b>Course Title</b>		<b>Human Anatomy And Physiology</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C101.1</b>		Explain general terminology, cell structure, function; interrelationships among molecular, cellular, tissue and organ functions in each system					
<b>C101.2</b>		Recognize the major organs and vessels of the hematopoietic, osseous, lymph, cardiovascular system, system and their functions.					
<b>C101.3</b>		Describe the anatomy and physiology of Respiratory, Digestive, Urinary systems					
<b>C101.4</b>		Describe the anatomy and physiology of Endocrine and Reproductive systems					
<b>C101.5</b>		Describe interlinked mechanisms of the nervous system (central, peripheral & autonomic), sense organs and skeletal system					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD102T</b>	<b>Course ID</b>	<b>C102</b>
<b>Course Title</b>		<b>Pharmaceutics</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C102.1</b>		Explain the concepts about prescription, powders, monophasic liquid dosage forms and biphasic Liquid dosage forms.					
<b>C102.2</b>		Calculate dose required for paediatric based on adult dose.					
<b>C102.3</b>		Identify different types of incompatibilities in prescription and its overcome.					
<b>C102.4</b>		Explain the methods of preparation of galenicals such as infusion, digestion, decoction, percolation and maceration process					
<b>C102.5</b>		Describes about surgical aids, sutures, ligatures and preparation of surgical catguts and sterilization methods					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD103</b>	<b>Course ID</b>	<b>C103</b>
<b>Course Title</b>		<b>Medicinal Biochemistry</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C103.1</b>		Explain biochemical reactions, catalytic activity of enzymes, and Importance of Isoenzymes.					
<b>C103.2</b>		Recognize the biochemical pathways of carbohydrate metabolism and protein metabolism.					
<b>C103.3</b>		Describe metabolic process of bimolecular in metabolic disorders.					
<b>C103.4</b>		Explain the genetic organization of mammalian genome, protein synthesis, replication, mutation, repair mechanism					
<b>C103.5</b>		Describe the electrolytic distribution and water balance in biological system					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD104T</b>	<b>Course ID</b>	<b>C104</b>

<b>Course Title</b>		<b>Pharmaceutical Organic Chemistry</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C104.1		Explain the physical and chemical properties, theories related to acid and base.					
C104.2		Explain IUPAC name of simple organic compounds.					
C104.3		Explain the theories, reaction, reaction mechanism related to organic compounds.					
C104.4		Explain the preparation methods, purity testing of medicinally important compounds					
C104.5		Explain the principle involved in the assay of some important organic compounds.					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD105T</b>	<b>Course ID</b>	<b>C105</b>
<b>Course Title</b>		<b>Pharmaceutical Inorganic Chemistry</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C105.1		Describe impurities, types, sources and the limit tests for certain impurities as per the Indian Pharmacopoeia.					
C105.2		Interpret the volumetric analysis and gravimetric analysis of inorganic Compounds.					
C105.3		Explain the method of preparation, assay, storage conditions and uses of Inorganic compounds such as GIT agents, electrolyte replenishes, antimicrobials, dental products, medicinal gases. Pharmaceutical aids and miscellaneous compounds.					
C105.4		Summaries radio pharmaceuticals, its measurements and applications.					
C105.5		Compare, contrast and minimize the different types of errors like instrumental, personal and methodological errors in the laboratory and to apply safety precautions and practice chemical safety in the laboratory.					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD106P</b>	<b>Course ID</b>	<b>C106</b>
<b>Course Title</b>		<b>Human Anatomy And Physiology Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C106.1		Describe the distinguishing features of each of the four types of tissue.					
C106.2		Locate and identify anatomical structures.					
C106.3		Demonstrate competency in blood parameters- recording observations, and analyzing data					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD107P</b>	<b>Course ID</b>	<b>C107</b>
<b>Course Title</b>		<b>Pharmaceutics Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C107.1		Formulate mono-phasic, biphasic liquid dosage forms, powders and suppositories.					
C107.2		Prepare the semisolids dosage forms such as ointments creams and					

								gels.
								<b>C107.3</b> Analyse the techniques used in the pharmaceutical formulations.
								<b>C107.4</b> Calculate the working formula with reference to official formula given in different pharmacopoeia
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD108P</b>	<b>Course ID</b>		<b>C108</b>
<b>Course Title</b>		<b>Medicinal Biochemistry Practical</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
								<b>C108.1</b> Explain biochemical reactions, catalytic activity of enzymes, and Importance of Isoenzymes.
								<b>C108.2</b> Describe metabolic process of biomolecules in metabolic disorders.
								<b>C108.3</b> Explain the genetic organization of mammalian genome, protein synthesis, replication, mutation, repair mechanism
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD109P</b>	<b>Course ID</b>		<b>C109</b>
<b>Course Title</b>		<b>Pharmaceutical Organic Chemistry Practical</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
								<b>C109.1</b> Synthesize small aromatic compounds.
								<b>C109.2</b> Identify the organic compounds such as phenols, amides, carbohydrates, amines and so on.
								<b>C109.3</b> Explain the use of stereo models such as methane, ethane, and ethylene and so on.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD110P</b>	<b>Course ID</b>		<b>C110</b>
<b>Course Title</b>		<b>Pharmaceutical Inorganic Chemistry Practical</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
								<b>C110.1</b> Carry out the volumetric analysis and gravimetric analysis of inorganic Compounds.
								<b>C110.2</b> Perform the limit test for certain impurities like chloride, sulphate, iron, arsenic, lead and heavy metals as per the Indian Pharmacopoeia.
								<b>C110.3</b> Explain the method of preparation, assay, storage conditions and uses of Inorganic compounds such as acidifiers, antacids, cathartics, electrolyte replenisher, antimicrobials, dental products, medicinal gases and miscellaneous compounds like expectorant, sedative, antidotes and Radiopharmaceuticals.
								<b>C110.4</b> Sort-out and minimize the different types of errors like instrumental, personal and methodological errors in the laboratory and to apply safety Precautions and practice chemical safety in the laboratory.
								<b>C110.5</b> Carry out the volumetric analysis and gravimetric analysis of inorganic Compounds.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course Code</b>	<b>PD201T</b>	<b>Course ID</b>		<b>C201</b>
<b>Course Title</b>		<b>Pathophysiology</b>						

Course Outcome No.		Course Outcome Statements					
C201.1		Describe the cellular morphology and pathologic changes of cells					
C201.2		Explain the cellular adaptation, inflammatory mediators, systemic effects, mechanism of cell injury & inflammation					
C201.3		Explain the immune deficiency disorders and Nutrition deficiency disorders and their pathophysiology .					
C201.4		Describe pathophysiology of the cardiac, respiratory, gastrointestinal, renal, neuronal and infectious diseases					
C201.5		To understand the biological effects of radiation					
Department	ACP	Year	II	Course Code	PD202T	Course ID	C202
Course Title		Pharmaceutical Microbiology					
Course Outcome No.		Course Outcome Statements					
C202.1		Identify microorganisms like bacteria, basis of their morphology and biochemical test. Isolate and cultivate bacteria and fungi in laboratory scale					
C202.2		Use appropriate methods of sterilization, preservation and disinfection for pharmaceuticals					
C202.3		Describe defense mechanism of the body, types of immunities, their components, antigen antibody reactions, bacterial toxins, significance of toxoids and immunization programs					
C202.4		Describe immunological diagnostic tests viz. ELISA, Schick's test, Western Blot, southern Blot, PCR, Widal, QBC, Mantoux Peripheral smear with advance tools of immunology. Test antibiotics for sensitivity towards microorganism and Illustrates microbiological assays of Penicillin, Streptomycin, Vitamin B2 and B12					
C202.5		Recognize signs and symptoms of microbial diseases like Typhoid, Tuberculosis, Malaria, Cholera, Hepatitis, Meningitis, Syphilis, Gonorrhoea and HIV and their treatment with measures of prevention					
Department	ACP	Year	II	Course Code	PD203	Course ID	C203
Course Title		Pharmacognosy And Phytopharmaceuticals					
Course Outcome No.		Course Outcome Statements					
C203.1		Explain history, scope, development of pharmacognosy, sources of drugs and describe the various cell wall constituents and cell inclusions					
C203.2		Elaborate the methods of classification, identification, adulteration and contamination of crude drug					
C203.3		Elaborate the Cultivation, Collection, Processing, Storage and Conservation of Medicinal Plants					
C203.4		Discuss regarding natural pesticides and their sources					
C203.5		Summarize the various plant fibers used in surgical dressings and related products					
Department	ACP	Year	II	Course	PD204T	Course	C204

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				Code		ID	
<b>Course Title</b>		<b>Pharmacology I</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C204.1</b>		Select the drugs in suitable dosage form on the basis of pharmacokinetics and pharmacodynamics					
<b>C204.2</b>		Describe development of drugs by preclinical and clinical evaluation.					
<b>C204.3</b>		Describe the pharmacological action, adverse effects, drug interaction, and therapeutic use of various drugs acting on autonomic nervous system, central nervous system, cardiovascular system, urinary system					
<b>C204.4</b>		Describe the pharmacological action, adverse effects, drug interaction, and therapeutic use of various drugs acting on endocrine system and respiratory system.					
<b>C204.5</b>		Describe the synthesis, storage and pharmacological actions of Autacoids					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course Code</b>	<b>PD205T</b>	<b>Course ID</b>	<b>C205</b>
<b>Course Title</b>		<b>Community Pharmacy</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C205.1</b>		Illustrate their roles & responsibilities as a community pharmacist in Primary healthcare.					
<b>C205.2</b>		Describe the business and professional practice management skills in community pharmacies					
<b>C205.3</b>		Understand the concept of Pharmaceutical care, patient counseling and patient medication adherence					
<b>C205.4</b>		Develop the skill for conducting screening services and manage minor Ailments and communicable diseases through medication.					
<b>C205.5</b>		Explain and interpret essential drug concept and the role of pharmacist in rational drug use and to the code of ethics for community pharmacists					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course Code</b>	<b>PD206T</b>	<b>Course ID</b>	<b>C206</b>
<b>Course Title</b>		<b>Pharmacotherapeutics I</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C206.1</b>		Describe the diagnosis and management of various diseases included in the curriculum					
<b>C206.2</b>		Explain the personalization of therapy based on patient -specific parameters relevant to drug therapy and its monitoring					
<b>C206.3</b>		Apply their knowledge of pathophysiology, therapeutic management including pharmacologic and non-pharmacologic methods to device patient education					
<b>C206.4</b>		Describe the role the of pharmacist in rational drug use					
<b>C206.5</b>		Describe the role the of pharmacist in prescribing guidelines in paed-iatrics, geriatrics, pregnancy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course</b>	<b>PD207P</b>	<b>Course</b>	<b>C207</b>

				Code			ID
<b>Course Title</b>		<b>Pharmaceutical Microbiology Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C207.1</b>		Identify microorganisms like bacteria based on their morphology and biochemical tests					
<b>C207.2</b>		Isolate and cultivate bacteria and fungi in laboratory scale.					
<b>C207.3</b>		Use appropriate methods to obtain sterilization, preservation and disinfection for pharmaceuticals					
<b>C207.4</b>		Describe defense mechanism of the body, types of immunities and, their components, antigen antibody reactions, bacterial toxins, significance of toxoids and immunization programs.					
<b>C207.5</b>		Describe immunological diagnostic tests viz. ELISA, Schick's test, Western Blot, southern Blot, PCR, Widal, QBC, Mantoux Peripheral smear with advance tools of immunology					
<b>C207.6</b>		Test antibiotics for sensitivity towards microorganism and Illustrates Microbiological assays of Penicillin, Streptomycin, Vitamin B2 and, B12.					
<b>C207.7</b>		Recognize signs and symptoms of microbial diseases like Typhoid, Tuberculosis, Malaria, Cholera, Hepatitis, Meningitis, Syphilis, Gonorrhoea and, HIV and their treatment with measures of prevention					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course Code</b>	<b>PD208P</b>	<b>Course ID</b>	<b>C208</b>
<b>Course Title</b>		<b>Pharmacognosy And Phytopharmaceuticals Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C208.1</b>		Describe the various cell wall constituents and cell inclusions					
<b>C208.2</b>		Perform the microscopic and morphological evaluation of crude drugs					
<b>C208.3</b>		Detect adulterant by performing the identification test for phyto-constituents from crude drugs					
<b>C208.4</b>		Estimate the active principles and detect adulteration					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course Code</b>	<b>PD209P</b>	<b>Course ID</b>	<b>C209</b>
<b>Course Title</b>		<b>Pharmacotherapeutics I Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C209.1</b>		Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case					
<b>C209.2</b>		Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases to patient cases					
<b>C209.3</b>		Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios					
<b>C209.4</b>		Develop the ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy					



<b>C209.5</b>		Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD301T</b>	<b>Course ID</b>	<b>C301</b>
<b>Course Title</b>		<b>Pharmacology II</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C301.1</b>		Describe the therapeutic profile for haemopoietic diseases, and drugs used in therapy					
<b>C301.2</b>		Describe the biochemical process including inhibition of cell wall synthesis in bacteria and fungi, membrane synthesis, synthesis of proteins, nucleic acid, mode of action and physiological response of diuretic and anti-diuretic agents.					
<b>C301.3</b>		Explain about the immunology and mode of drugs for immunology diseases					
<b>C301.4</b>		Explain the significance and application of toxicological studies					
<b>C301.5</b>		Describe the capabilities of cell organization, DNA replication, transcription, protein synthesis, DNA recombination as well as gene structure, function and regulation					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD302T</b>	<b>Course ID</b>	<b>C302</b>
<b>Course Title</b>		<b>Pharmaceutical Analysis</b>					
<b>Course Outcome</b>		<b>Course Outcome Statements</b>					
<b>C302.1</b>		Define and classify pharmaceutical analytical techniques					
<b>C302.2</b>		Describe the principle and applications of various chromatographic techniques.					
<b>C302.3</b>		Explain the principle, instrumentation and applications of various spectroscopic techniques					
<b>C302.4</b>		Enumerate the application of thermogravimetric, electrochemical methods, X-ray crystallography and polarimetry in drug analysis.					
<b>C302.5</b>		Explain the concepts of QC& QA and approaches to maintain the quality of pharmaceutical products					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD303T</b>	<b>Course ID</b>	<b>C303</b>
<b>Course Title</b>		<b>Pharmacotherapeutics II</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C301.1</b>		Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case					
<b>C301.2</b>		Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases of musculoskeletal disorders, dermatology, Cancer, Renal failure and Infectious diseases.					
<b>C301.3</b>		Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios					
<b>C301.4</b>		Develop an ability to set desirable therapeutic goals, identify					

		pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy					
<b>C301.5</b>		Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD304T</b>	<b>Course ID</b>	<b>C304</b>
<b>Course Title</b>		<b>Pharmaceutical Jurisprudence</b>					
<b>Course Outcome</b>		<b>Course Outcome Statements</b>					
<b>C303.1</b>		Explain various Acts and Rules related to the pharmacy profession in India					
<b>C303.2</b>		Describe manufacturing of alcoholic preparation in bonded and non-bonded laboratory.					
<b>C303.3</b>		Explain prohibited and exempted advertisement and various provisions of narcotic drugs and psychotropic substances					
<b>C303.4</b>		Describe the Moral responsibilities of pharmacists towards society in Relation to his profession, medical profession, job and trade					
<b>C303.5</b>		Understand the procedures for pricing and patenting of pharmaceuticals.					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD305T</b>	<b>Course ID</b>	<b>C305</b>
<b>Course Title</b>		<b>Medicinal Chemistry</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C305.1</b>		Describe the basic principles of drug design such as physicochemical Properties, CADD and mathematical equations such as Hansch analysis and Free-Wilson analysis.					
<b>C305.2</b>		Elaborate the chemical classification, nomenclature, chemistry, SAR, mechanism of action, uses, side effects and brand names of various medicinally useful drugs.					
<b>C305.3</b>		Reproduce the synthetic procedures, calculations, safety precautions of 4- methyl-7-hydroxy coumarin, benzotriazole, benzimidazole, benzoxazole, phenytoin, benzocaine, chlorobutanol, 2, 5-dioxopiperazine, fluorescein, phenothiazine and 2, 3-diphenylquinoxaline.					
<b>C305.4</b>		Explain the basic principle and assay of aspirin tablets, paracetamol drug, ibuprofen tablets, isonicotinic acid tablets, ascorbic acid tablets, chlorocresol, metronidazole tablets and dapsone tablets.					
<b>C305.5</b>		Enlist the monograph analysis of aspirin, paracetamol, caffeine, isoniazide, diclofenac, nicotinic acid, piperazine and quinine sulphate					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD306T</b>	<b>Course ID</b>	<b>C306</b>
<b>Course Title</b>		<b>Pharmaceutical Formulations</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C306.1</b>		Describe the basics of formulations of unit dosage forms such as					



							tablets, capsules, and quality control test for tablets and capsules.
<b>C306.2</b>							Explain about formulation and evaluation of liquid orals dosage form such as syrup, suspension and emulsions.
<b>C306.3</b>							Discuss about the sterile dosage forms parenterals, ophthalmic semi-solid dosage forms formulation aspects and their quality control test.
<b>C306.4</b>							Describe the basics of formulations of unit dosage forms such as tablets, capsules, and quality control test for tablets and capsules.
<b>C306.5</b>							Explain about formulation and evaluation of liquid orals dosage form such as syrup, suspension and emulsions.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD307P</b>	<b>Course ID</b>	<b>C307</b>
<b>Course Title</b>		<b>Pharmacology II Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C307.1</b>							Understand the laboratory equipments, methodology and techniques in experimental pharmacology.
<b>C307.2</b>							Demonstrate the route of drug administration and use of anesthetics in lab animals
<b>C307.3</b>							Determine the unknown concentration of drug by using the animal tissue and evaluate the pharmacology of drug acting on CNS.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD308P</b>	<b>Course ID</b>	<b>C308</b>
<b>Course Title</b>		<b>Pharmaceutical Analysis Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C308.1</b>							Apply various chromatographic techniques for the separation of mixtures
<b>C308.2</b>							Perform & interpret quantitative analysis using different spectroscopic methods
<b>C308.3</b>							Perform the electrochemical analysis of drugs.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD309P</b>	<b>Course ID</b>	<b>C309</b>
<b>Course Title</b>		<b>Pharmacotherapeutics II Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C309.1</b>							Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case
<b>C309.2</b>							Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases to patient cases
<b>C309.3</b>							Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios
<b>C309.4</b>							Develop an ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy
<b>C309.5</b>							Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for

		monitoring and assessing response to therapy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD310P</b>	<b>Course ID</b>	<b>C310</b>
<b>Course Title</b>		<b>Medicinal Chemistry Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C310.1</b>		Perform the chemical synthesis of intermediates/medicinal compounds by following the safety guidelines					
<b>C310.2</b>		Determine and product yield and atom economy through calculations					
<b>C310.3</b>		Assess the purity of organic/medicinal compounds using quantitative analysis					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>III</b>	<b>Course Code</b>	<b>PD311P</b>	<b>Course ID</b>	<b>C311</b>
<b>Course Title</b>		<b>Pharmaceutical Formulations Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C311.1</b>		Formulate the unit dosage forms such as tablets, capsules, and carryout the quality control test tablets and capsules.					
<b>C311.2</b>		Demonstrate the Formulation and Evaluation the different parenterals preparation.					
<b>C311.3</b>		Formulate and evaluate the liquid orals such as syrups and suspensions.					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD401T</b>	<b>Course ID</b>	<b>C401</b>
<b>Course Title</b>		<b>Pharmacotherapeutics III</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C401.1</b>		Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case					
<b>C401.2</b>		Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases of Gastrointestinal system, Hematological system, Nervous system, Psychiatry disorders, Pain management					
<b>C401.3</b>		Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios					
<b>C401.4</b>		Develop an ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy					
<b>C401.5</b>		Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD402T</b>	<b>Course ID</b>	<b>C402</b>
<b>Course Title</b>		<b>Hospital Pharmacy</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					

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<b>C402.1</b>	Recognize their roles & responsibilities as a hospital pharmacist in primary healthcare						
<b>C402.2</b>	Develop ability to understand the preparation and implementation of budget in a hospital						
<b>C402.3</b>	Develop ability to recognize the function and working of various committees of the hospital						
<b>C402.4</b>	Understand various hospital pharmacy services like inventory control, patient counseling and drug information provision						
<b>C402.5</b>	Understand the roles and responsibilities of Community Pharmacist						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD403</b>	<b>Course ID</b>	<b>C403</b>
<b>Course Title</b>		<b>Clinical Pharmacy</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C403.1</b>	Describe the daily activities of a clinical pharmacist in the hospitals						
<b>C403.2</b>	Interpret & analyse the laboratory parameters for appropriateness of diagnosis						
<b>C403.3</b>	Describe the establishment of a drug & poison information centre						
<b>C403.4</b>	Explain the principles of Pharmaceutical care						
<b>C403.5</b>	Evaluate biomedical literature.						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD404T</b>	<b>Course ID</b>	<b>C404</b>
<b>Course Title</b>		<b>Biostatistics &amp; Research Methodology</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C404.1</b>	Explain the designs of clinical studies, designing methodology, sample size determination and report writing of clinical studies						
<b>C404.2</b>	Explain basis of biostatistics, Data graphics, testing of hypothesis and methods of epidemiological studies						
<b>C404.3</b>	Calculate and resolve problems using various statistical formulas						
<b>C404.4</b>	Develop skills in drug information retrieval and storage						
<b>C404.5</b>	Develop the ability of using computers in hospital and community pharmacy						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD405T</b>	<b>Course ID</b>	<b>C405</b>
<b>Course Title</b>		<b>Biopharmaceutics &amp; Pharmacokinetics</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C405.1</b>	Study the factors affecting absorption, distribution, metabolism and elimination of drug and apply these principles for the optimum utilization of the drug in the patient.						
<b>C405.2</b>	Calculate the pharmacokinetic parameters of IV bolus, IV infusion and extra vascular routes of administration by using compartment models						
<b>C405.3</b>	Assess the pharmacokinetics by using non compartment methods such as mean residential theory, statistically moment theory and physiological model.						
<b>C405.4</b>	Determine the bioavailability by using different methods as well as						

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								prepare a bioavailability protocol as per clinical guidelines.
<b>C405.5</b>								Discuss about the causes and application of nonlinearity to assess the pharmacokinetic parameters.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD406T</b>	<b>Course ID</b>	<b>C406</b>	
<b>Course Title</b>		<b>Clinical Toxicology</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
<b>C406.1</b>								Apply the general principles of management of poisoning.
<b>C406.2</b>								Identify the symptoms of acute and chronic poisoning and suggest appropriate supportive measures and antidotes for various causative agents.
<b>C406.3</b>								Recognize the symptoms of envenomation's, identify the cause and provide general management
<b>C406.4</b>								Recognize the signs and symptoms and types of plant and food poisoning and provide first aid and general management.
<b>C406.5</b>								Identify signs and symptoms of substance abuse and provide treatment for dependence.
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD407P</b>	<b>Course ID</b>	<b>C407</b>	
<b>Course Title</b>		<b>Pharmacotherapeutics III Practical</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
<b>C407.1</b>								Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case
<b>C407.2</b>								Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases to patient cases
<b>C407.3</b>								Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios
<b>C407.4</b>								Develop an ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy
<b>C407.5</b>								Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD408P</b>	<b>Course ID</b>	<b>C408</b>	
<b>Course Title</b>		<b>Hospital Pharmacy Practical</b>						
<b>Course Outcome</b>		<b>Course Outcome Statements</b>						
<b>C408.1</b>								Identify the drug interaction and methods to prevent drug interactions
<b>C408.2</b>								Analyse drug information queries and to provide solution
<b>C408.3</b>								Prepare parenteral and powders
<b>C408.4</b>								Acquire the skill to analyses various methods of inventory control
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course</b>	<b>PD409P</b>	<b>Course</b>	<b>C409</b>	

				Code			ID	
<b>Course Title</b>		<b>Clinical Pharmacy</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
<b>C409.1</b>		Provide patient care in cooperation with patients, prescribers, and other members of an inter professional health care team based on sound therapeutic principles and evidence-based data, considering various factors that may impact therapeutic outcome.						
<b>C409.2</b>		Provide relevant, unbiased, and well-referenced drug and poison information service to the members of the healthcare team and to the society						
<b>C409.3</b>		Function in multidisciplinary teams, working ethically, creatively, and responsibly as a team member						
<b>C409.4</b>		Participate in pharmacovigilance activities, provide management to ADRs and function effectively in prevention of ADRs						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>IV</b>	<b>Course Code</b>	<b>PD410P</b>	<b>Course ID</b>	<b>C410</b>	
<b>Course Title</b>		<b>Biopharmaceutics &amp; Pharmacokinetics Practical</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
<b>C410.1</b>		Carry out the dissolution of marketed different brands of same dosage forms and assess the dissolution rate.						
<b>C410.2</b>		Interpret the results of dissolution studies and correlate with in vivo performance of dosage form.						
<b>C410.3</b>		Correlate results of in vitro dissolution studies of different dosage forms with in vivo performance of dosage form.						
<b>C410.4</b>		Analyze the pharmacokinetics data through compartment models and non-compartment method.						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>V</b>	<b>Course Code</b>	<b>PD501T</b>	<b>Course ID</b>	<b>C501</b>	
<b>Course Title</b>		<b>Clinical Research</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
<b>C501.1</b>		Explain the various approaches of drug development process						
<b>C501.2</b>		Describe the phases of clinical trials and regulatory systems involved in clinical research globally						
<b>C501.3</b>		Interpret the various guidelines and ethical requirements for the conduct of clinical research						
<b>C501.4</b>		Design the clinical research documents						
<b>C501.5</b>		Analyse the safety monitoring in clinical trials and importance of data in clinical trials						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>V</b>	<b>Course Code</b>	<b>PD502T</b>	<b>Course ID</b>	<b>C502</b>	
<b>Course Title</b>		<b>Pharmacoepidemiology And Pharmacoeconomics</b>						
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>						
<b>C502.1</b>		Explain the Concept of Pharmacoepidemiology and outcomes measures						
<b>C502.2</b>		Describe the various Pharmacoepidemiologic methods and source						

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	of data for Pharmacoepidemiologic studies.						
<b>C502.3</b>	Understand the various applications of Pharmacoepidemiology for various situations						
<b>C502.4</b>	Explain the concept of Pharmacoeconomics with various techniques						
<b>C502.5</b>	Perform Pharmacoeconomic Evaluation						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>V</b>	<b>Course Code</b>	<b>PD503T</b>	<b>Course ID</b>	<b>C503</b>
<b>Course Title</b>		<b>Clinical Pharmacokinetics &amp; Therapeutic Drug Monitoring</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C503.1</b>	Understand the need for studying clinical pharmacokinetics and its role in designing dosage regimen						
<b>C503.2</b>	Calculate doses based on individual patient requirement and convert oral dose to IV dose and vice-versa						
<b>C503.3</b>	Explain types and mechanism of drug interaction and methods to overcome it						
<b>C503.4</b>	Describe the concepts of TDM in therapeutic management						
<b>C503.5</b>	Understand the population pharmacokinetic model in designing dosage regimen						
<b>C503.6</b>	Explain the concept of pharmacogenetics.						
<b>C503.7</b>	Interpret the impact of genetic polymorphisms of individuals on pharmacokinetics and or pharmacodynamics of drugs						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>V</b>	<b>Course Code</b>	<b>PD504P</b>	<b>Course ID</b>	<b>C504</b>
<b>Course Title</b>		<b>Clerkship</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C504.1</b>	Deliver clinical pharmacy services						
<b>C504.2</b>	Provide pharmaceutical care planning						
<b>C504.3</b>	Develop knowledge in therapeutics						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>V</b>	<b>Course Code</b>	<b>PD505P</b>	<b>Course ID</b>	<b>C505</b>
<b>Course Title</b>		<b>Project</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C505.1</b>	Reviewing published articles and recording the findings in impartial manner						
<b>C505.2</b>	Develop data collection and reporting skills in the area of community, hospital and clinical pharmacy						
<b>C505.3</b>	Analysis and interpretation of the collected data						



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**Course Outcomes**

**Doctor of Pharmacy Post Bacculerate**



<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB101T</b>	<b>Course ID</b>	<b>C101</b>
<b>Course Title</b>		<b>Pharmacotherapeutics I&amp;II</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C101.1</b>		Describe the diagnosis and management of various diseases included in the curriculum					
<b>C101.2</b>		Explain the personalization of therapy based on patient -specific parameters relevant to drug therapy and its monitoring					
<b>C101.3</b>		Apply their knowledge of pathophysiology, therapeutic management including pharmacologic and non-pharmacologic methods to device patient education					
<b>C101.4</b>		Describe the role the of pharmacist in rational drug use and promotion of pharmacist in prescribing guidelines in pediatrics, geriatrics, pregnancy					
<b>C101.5</b>		Describe the role the of pharmacist in rational use of antibiotics and essential drug concept					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB102T</b>	<b>Course ID</b>	<b>C102</b>
<b>Course Title</b>		<b>Pharmacotherapeutics III</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C102.1</b>		Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case					
<b>C102.2</b>		Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases of Gastro-intestinal system, Hematological system, Nervous system, Psychiatry disorders, Pain management					
<b>C102.3</b>		Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios					
<b>C102.4</b>		Develop an ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy					
<b>C402.5</b>		Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB103T</b>	<b>Course ID</b>	<b>C103</b>
<b>Course Title</b>		<b>Hospital &amp; Community Pharmacy</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C103.1</b>		Recognize their roles & responsibilities as a hospital pharmacist in primary healthcare					
<b>C103.2</b>		Develop ability to understand the preparation and implement-					



	ation of budget in a hospital						
<b>C103.3</b>	Develop ability to recognize the function and working of various committees of the hospital						
<b>C102.4</b>	Understand various hospital pharmacy services like inventory control, patient counseling and drug information provision						
<b>C102.5</b>	Understand the roles and responsibilities of Community Pharmacist						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB104T</b>	<b>Course ID</b>	<b>C104</b>
<b>Course Title</b>		<b>Clinical Pharmacy</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C104.1</b>	Describe the daily activities of a clinical pharmacist in the hospitals						
<b>C104.2</b>	Interpret & analyze the laboratory parameters for appropriateness of diagnosis						
<b>C104.3</b>	Describe the establishment of a drug & poison information centre						
<b>C104.4</b>	Explain the principles of Pharmaceutical care						
<b>C104.5</b>	Evaluate biomedical literature.						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD105T</b>	<b>Course ID</b>	<b>C105</b>
<b>Course Title</b>		<b>Biostatistics &amp; Research Methodology</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C104.1</b>	Explain the designs of clinical studies, designing methodology, sample size determination and report writing of clinical studies						
<b>C104.2</b>	Explain basis of biostatistics, Data graphics, testing of hypothesis and methods of epidemiological studies						
<b>C104.3</b>	Calculate and resolve problems using various statistical formulas						
<b>C104.4</b>	Develop skills in drug information retrieval and storage						
<b>C104.5</b>	Develop the ability of using computers in hospital and community pharmacy						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB106T</b>	<b>Course ID</b>	<b>C406</b>
<b>Course Title</b>		<b>Biopharmaceutics &amp; Pharmacokinetics</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C106.1</b>	Study the factors affecting absorption, distribution, metabolism and elimination of drug and apply these principles for the optimum utilization of the drug in the patient.						
<b>C106.2</b>	Calculate the pharmacokinetic parameters of IV bolus, IV infusion and extra vascular routes of administration by using compartment models						
<b>C106.3</b>	Assess the pharmacokinetics by using non compartment methods such as mean residential theory, statistically moment theory and physiological model.						
<b>C106.4</b>	Determine the bioavailability by using different methods as well as prepare a bioavailability protocol as per clinical guidelines.						
<b>C106.5</b>	Discuss about the causes and application of nonlinearity to assess the pharmacokinetic parameters.						

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<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB107T</b>	<b>Course ID</b>	<b>C107</b>
<b>Course Title</b>		<b>Clinical Toxicology</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C107.1</b>		Apply the general principles of management of poisoning.					
<b>C107.2</b>		Identify the symptoms of acute and chronic poisoning and suggest appropriate supportive measures and antidotes for various causative agents.					
<b>C107.3</b>		Recognize the symptoms of envenomation's, identify the cause and provide general management					
<b>C107.4</b>		Recognize the signs and symptoms and types of plant and food poisoning and provide first aid and general management.					
<b>C107.5</b>		Identify signs and symptoms of substance abuse and provide treatment for dependence.					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD108P</b>	<b>Course ID</b>	<b>C108</b>
<b>Course Title</b>		<b>Pharmacotherapeutics I&amp;I Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C108.1</b>		Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case					
<b>C108.2</b>		Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases to patient cases					
<b>C108.3</b>		Apply pathology and other laboratory data to patient assessment and management in a range of clinical scenarios					
<b>C108.4</b>		Develop an ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy					
<b>C108.5</b>		Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy					
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PD109P</b>	<b>Course ID</b>	<b>C109</b>
<b>Course Title</b>		<b>Pharmacotherapeutics III Practical</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C109.1</b>		Demonstrate the ability to effectively gather information from patients, health care professionals and other sources of data such as medication charts, medical records in managing a patient case					
<b>C109.2</b>		Develop an ability to apply their knowledge and understanding of the pathophysiology and management of diseases to patient cases					
<b>C109.3</b>		Apply pathology and other laboratory data to patient assess-					

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	ment and management in a range of clinical scenarios						
<b>C109.4</b>	Develop an ability to set desirable therapeutic goals, identify pharmacological and non-pharmacological therapies, usual doses, dosage forms, common drug related problems, monitoring parameters and outcome for therapy						
<b>C109.5</b>	Identify and prioritize therapeutic problems and appropriately select patient specific management regimens, and requirements for monitoring and assessing response to therapy						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB110P</b>	<b>Course ID</b>	<b>C4110</b>
<b>Course Title</b>	<b>Hospital &amp; Community Pharmacy Practical</b>						
<b>Course Outcome</b>	<b>Course Outcome Statements</b>						
<b>C110.1</b>	Identify the drug interaction and methods to prevent drug interactions						
<b>C110.2</b>	Analyze drug information queries and to provide solution						
<b>C110.3</b>	Prepare parenteral and powders						
<b>C110.4</b>	Acquire the skill to analyses various methods of inventory control						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB111T</b>	<b>Course ID</b>	<b>C111</b>
<b>Course Title</b>	<b>Clinical Pharmacy Practical</b>						
<b>Course Outcome No.</b>	<b>Course Outcome Statements</b>						
<b>C111.1</b>	Provide patient care in cooperation with patients, prescribers, and other members of an inter professional health care team based on sound therapeutic principles and evidence-based data, considering various factors that may impact therapeutic outcome.						
<b>C111.2</b>	Provide relevant, unbiased, and well-referenced drug and poison information service to the members of the healthcare team and to the society						
<b>C111.3</b>	Function in multidisciplinary teams, working ethically, creatively, and responsibly as a team member						
<b>C111.4</b>	Participate in pharmacovigilance activities, provide management to ADRs and function effectively in prevention of ADRs						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>I</b>	<b>Course Code</b>	<b>PB112T</b>	<b>Course ID</b>	<b>C112</b>
<b>Course Title</b>	<b>Biopharmaceutics &amp; Pharmacokinetics Practical</b>						
<b>Course Outcome No.</b>	<b>Course Outcome Statements</b>						
<b>C112.1</b>	Carry out the dissolution of marketed different brands of same dosage forms and assess the dissolution rate.						
<b>C112.2</b>	Interpret the results of dissolution studies and correlate with <i>in vivo</i> performance of dosage form.						
<b>C112.3</b>	Correlate results of <i>in vitro</i> dissolution studies of different dosage forms with <i>in vivo</i> performance of dosage form.						
<b>C112.4</b>	Analyze the pharmacokinetics data through compartment models and non-compartment method.						
<b>Department</b>	<b>ACP</b>	<b>Year</b>	<b>II</b>	<b>Course Code</b>	<b>PB201T</b>	<b>Course ID</b>	<b>C201</b>

<b>Course Title</b>		<b>Clinical Research</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C201.1		Explain the various approaches of drug development process					
C201.2		Describe the phases of clinical trials and regulatory systems involved in clinical research globally					
C201.3		Interpret the various guidelines and ethical requirements for the conduct of clinical research					
C201.4		Design the clinical research documents					
C201.5		Analyze the safety monitoring in clinical trials and importance of data in clinical trials					
<b>Department</b>	ACP	<b>Year</b>	II	<b>Course Code</b>	PB202T	<b>Course ID</b>	C202
<b>Course Title</b>		<b>Pharmacoepidemiology And Pharmacoeconomics</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C202.1		Explain the Concept of Pharmacoepidemiology and outcomes measures					
C202.2		Describe the various Pharmacoepidemiologic methods and source of data for Pharmacoepidemiologic studies.					
C202.3		Understand the various applications of Pharmacoepidemiology for various situations					
C202.4		Explain the concept of Pharmacoeconomics with various techniques					
C202.5		Perform Pharmacoeconomic Evaluation					
<b>Department</b>	ACP	<b>Year</b>	II	<b>Course Code</b>	PB203T	<b>Course ID</b>	C203
<b>Course Title</b>		<b>Clinical Pharmacokinetics &amp; Therapeutic Drug Monitoring</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C203.1		Understand the need for studying clinical pharmacokinetics and its role in designing dosage regimen					
C203.2		Calculate doses based on individual patient requirement and convert oral dose to IV dose and vice-versa					
C203.3		Explain types and mechanism of drug interaction and methods to overcome it					
C203.4		Describe the concepts of TDM in therapeutic management					
C203.5		Understand the population pharmacokinetic model in designing dosage regimen					
C203.6		Explain the concept of pharmacogenetics.					
C203.7		Interpret the impact of genetic polymorphisms of individuals on pharmacokinetics and or pharmacodynamics of drugs					
<b>Department</b>	ACP	<b>Year</b>	II	<b>Course Code</b>	PB204P	<b>Course ID</b>	C204
<b>Course Title</b>		<b>Clerkship</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
C204.1		Deliver clinical pharmacy services					
C204.2		Provide pharmaceutical care					
C204.3		Develop knowledge in therapeutics					

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Department	ACP	Year	II	Course Code	PB205P	Course ID	C205
<b>Course Title</b>		<b>Project</b>					
<b>Course Outcome No.</b>		<b>Course Outcome Statements</b>					
<b>C205.1</b>		Reviewing published articles and recording the findings in impartial manner					
<b>C205.2</b>		Develop data collection and reporting skills in the area of community, hospital and clinical pharmacy					
<b>C205.3</b>		Analysis and interpretation of the collected data					