# D. Pharmacy Course Outcome

| Subject With Subject Code | Course Outcome |
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| PHARMACEUTICS – THEORY | 1. Describe about the different dosage forms and their formulation aspects<br>2. Explain the advantages, disadvantages, and quality control tests of different dosage forms<br>3. Discuss the importance of quality assurance and good manufacturing practices |
| PHARMACEUTICS – PRACTICAL | 1. Calculate the working formula from the given master formula<br>2. Formulate the dosage form and dispense in an appropriate container<br>3. Design the label with the necessary product and patient information<br>4. Perform the basic quality control tests for the common dosage forms |
| PHARMACEUTICAL CHEMISTRY – THEORY | 1. Describe the chemical class, structure and chemical name of the commonly used drugs and pharmaceuticals of both organic and inorganic nature<br>2. Discuss the pharmacological uses, dosage regimen, stability issues and storage conditions of all such chemical substances commonly used as drugs<br>3. Describe the quantitative and qualitative analysis, impurity testing of the chemical substances given in the official monographs<br>4. Identify the dosage form & the brand names of the drugs and pharmaceuticals popular in the marketplace |
| PHARMACEUTICAL CHEMISTRY – PRACTICAL | 1. Perform the limit tests for various inorganic elements and report<br>2. Prepare standard solutions using the principles of volumetric analysis<br>3. Test the purity of the selected inorganic and organic compounds against the monograph standards<br>4. Synthesize the selected chemical substances as per the standard synthetic scheme |

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| | 5. Perform qualitative tests to systematically identify the unknown chemical substances |
| PHARMACOGNOSY – THEORY | 1. Identify the important/common crude drugs of natural origin<br>2. Describe the uses of herbs in nutraceuticals and cosmeceuticals<br>3. Discuss the principles of alternative system of medicines<br>4. Describe the importance of quality control of drugs of natural origin |
| PHARMACOGNOSY – PRACTICAL | 1. Identify the given crude drugs based on the morphological characteristics<br>2. Take a transverse section of the given crude drugs<br>3. Describe the anatomical characteristics of the given crude drug under microscopical conditions<br>4. Carry out the physical and chemical tests to evaluate the given crude drugs |
| HUMAN ANATOMY AND PHYSIOLOGY – THEORY | 1. Describe the various organ systems of the human body<br>2. Discuss the anatomical features of the important human organs and tissues<br>3. Explain the homeostatic mechanisms regulating the normal physiology in the human system<br>4. Discuss the significance of various vital physiological parameters of the human body |
| HUMAN ANATOMY AND PHYSIOLOGY – PRACTICAL | 1. Perform the hematological tests in human subjects and interpret the results<br>2. Record, monitor and document the vital physiological parameters of human subjects and interpret the results<br>3. Describe the anatomical features of the important human tissues under the microscopical conditions<br>4. Discuss the significance of various anatomical and physiological characteristics of the human body |
| SOCIAL PHARMACY – THEORY | 1. Discuss about roles of pharmacists in the various national health programs |

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| | 2. Describe various sources of health hazards and disease preventive measures<br>3. Discuss the healthcare issues associated with food and nutritional substances<br>4. Describe the general roles and responsibilities of pharmacists in public health |
| SOCIAL PHARMACY – PRACTICAL | 1. Describe the roles and responsibilities of pharmacists in various National health programs 2. Design promotional materials for public health awareness<br>3. Describe various health hazards including microbial sources<br>4. Advice on preventive measures for various diseases 5. Provide first aid for various emergency conditions |
| PHARMACOLOGY – THEORY | 1. Describe the basic concepts of pharmacokinetics and pharmacodynamics<br>2. Enlist the various classes and drugs of choices for any given disease condition<br>3. Advice the dosage regimen, route of administration and contraindications for a given drug<br>4. Describe the common adverse drug reactions |
| PHARMACOLOGY – PRACTICAL | 1. Study and report the local anaesthetic, mydriatic and mitotic effects of the given drug on the rabbit eye<br>2. Choose appropriate animal experiment model to study the effects of the given drugs acting on the central nervous system and submit the report 3. Perform the effects of given tissues (simulated) on isolated organs / tissues and interpret the results<br>4. Interpret the dose dependent responses of drugs in various animal experiment models |
| COMMUNITY PHARMACY AND MANAGEMENT – THEORY | 1. Describe the establishment, legal requirements, and effective administration of a community pharmacy<br>2. Professionally handle prescriptions and dispense medications<br>3. Counsel patients about the disease, prescription and or non-prescription medicines |

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| | 4. Perform basic health screening on patients and interpret the reports in the community pharmacy settings |
| COMMUNITY PHARMACY AND MANAGEMENT – PRACTICAL | 1. Handle and fill prescriptions in a professional manner<br>2. Counsel patients on various diseases and minor ailments<br>3. Counsel patients on prescription and or non-prescription medicines<br>4. Design and prepare patient information leaflets<br>5. Perform basic health screening tests |
| BIOCHEMISTRY & CLINICAL PATHOLOGY – THEORY | 1. Describe the functions of biomolecules<br>2. Discuss the various functions of enzymes in the human system<br>3. Explain the metabolic pathways of biomolecules in both physiological and pathological conditions<br>4. Describe the principles of organ function tests and their clinical significances<br>5. Determine the biomolecules / metabolites in the given biological samples, both qualitatively and quantitatively<br>6. Describe the clinical pathology of blood and urine |
| BIOCHEMISTRY & CLINICAL PATHOLOGY – PRACTICAL | 1. Qualitatively determine the biomolecules / metabolites in the given biological samples<br>2. Determine the normal and abnormal constituents in blood and urine samples and interpret the results of such testing |
| PHARMACOTHERAPEUTICS - THEORY | 1. Help assessing the subjective and objective parameters of patients in common disease conditions<br>2. Assist other healthcare providers to analyse drug related problems and provide therapeutic interventions<br>3. Participate in planning the rational medicine therapy for common diseases<br>4. Design and deliver discharge counselling for patients |

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| PHARMACOTHERAPEUTICS – PRACTICAL | 1. Write SOAP (Subjective, Objective, Assessment and Plan) notes for the given clinical cases of selected common diseases<br>2. Counsel the patients about the disease conditions, uses of drugs, methods of handling and administration of drugs, life-style modifications, and monitoring parameters. |
| HOSPITAL AND CLINICAL PHARMACY – THEORY | 1. Explain about the basic concepts of hospital pharmacy administration<br>2. Manage the supply chain and distribution of medicines within the hospital settings<br>3. Assist the other healthcare providers in monitoring drug therapy and address drug related problems<br>4. Interpret common lab investigation reports for optimizing drug therapy |
| HOSPITAL AND CLINICAL PHARMACY – PRACTICAL | 1. Professionally handle and answer the drug information queries<br>2. Interpret the common laboratory reports<br>3. Report suspected adverse drug reactions using standard procedures<br>4. Understand the uses and methods of handling various medical/surgical aids and devices<br>5. Interpret and report the drug-drug interactions in common diseases for optimizing the drug therapy |
| PHARMACY LAW AND ETHICS – THEORY | 1. Describe the history and evolution of pharmacy law in India<br>2. Interpret the act and rules regulating the profession and practice of pharmacy in India<br>3. Discuss the various codes of ethics related to practice standards in pharmacy<br>4. Interpret the fundamentals of patent laws from the perspectives of pharmacy |