Course Outcomes(COs)

Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations. Understand the professional way of handling the prescription, develop analytical skills, understanding of name the signs and symptoms of the diseases.

S. No.	Course Name and Code	Course Outcomes
1	HUMAN ANATOMY AND PHYSIOLOGY I– THEORY (BP101)	• Understand the relevance and significance of Human Anatomy and Physiology to Pharmaceutical Sciences. • Understand the basic terminologies used in anatomy and physiology as well as prefixes & suffixes used to identify body parts and directional terms. • Understand the composition and functions of blood component and mechanism of blood coagulation. • Understand the anatomy, physiology & disorders of skeletal muscle, smooth muscle, cardiovascular system, lymphatic system and digestive system. • Understand the importance of health education and health promotion.
2	HUMAN ANATOMY AND PHYSIOLOGY – PRACTICAL(BP108)	• Understand the construction, working, care and handling of instruments, glassware's and equipment's required for practical. • Understand the significance of Bleeding time, Blotting time, Blood group detection,Haemoglobin detection and measurementof blood pressure. • Knowledge of mechanism of White Blood Cell Count and Red Blood Cell Count of blood sample. • Demonstration of human cardiovascular system and digestive system with the help of charts and models.
3	PHARMACEUTICAL ANALYSIS I – THEORY(BP102)	• Illustrate relevance & significance of Organic Chemistry to Pharmaceutical Sciences and clarify basic principles concepts of organic chemistry, explain the factors affecting strength of acid & base. • Explain basic functional groups & IUPAC Nomenclature of Organic Compounds. • Clarify Isomerism & apply that knowledge in

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		understanding the Structure Property Relationship. • Explain different reaction intermediates; clarify different reagents & their application in reaction mechanism. • Comprehend & explain how addition & elimination reactions are performed with respect to alkenes and alkynes. • Explain meaning of term 'aromaticity' & different reactions involved in the formation of aromatic compounds.
4	PHARMACEUTICAL ANALYSIS I – PRACTICAL(BP109)	• Explain correct use of various equipment's & Safety measures in Pharmaceutical Chemistry laboratory. • Calibration of thermometer & understand the simple laboratory techniques. • Understand the significance and able to analyze organic compounds qualitatively, synthesis of derivatives. • Understand the synthesis of different organic compounds along with reaction & mechanism.
5	PHARMACEUTICS I – THEORY(BP103)	• Describe the history of pharmacy, development of pharmacy profession and industry in India. • Describe various routes of drug administration, concept of dosage forms, unit operations involved in preparation of these dosage forms. • Describes alternative system of medicines. • Explain the factors which influence the design of pharmaceutical dosage forms. • Summarize the factors influencing formulation of various dosage form like solution.
6	PHARMACEUTICS I – PRACTICAL(BP110)	• Explain formulation, evaluation and labelling of aromatic water, glycerides, syrups,elixirs and powder preparations. • Perform pharmaceutical calculations to determine evaluation parameters like density, viscosity, specific gravity, angle of repose, Carr's index, Hausner ratio of preparations. • Describe use of ingredients in formulation and category of formulation. • Compare various monophasic preparations depending upon their formulation. • Selection of suitable packaging material (container-closure) for the preparation.
7	PHARMACEUTICAL INORGANIC CHEMISTRY – THEORY(BP104)	• Explain history of Indian pharmacopoeia • Discuss types of water and methods for reducing hardness of water • Classify GIT agents • Write note on Saline cathartics • Discuss properties, method of preparation and uses of some GIT agents

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		• Write a note on Physiology of acid-base balance • Explain physiological role of trace elements • Write assay of hydrogen peroxide • Explain cyanide poisoning and any one inorganic compound as antidote
8	PHARMACEUTICAL INORGANIC CHEMISTRY – PRACTICAL(BP111)	• Perform qualitative analysis of given inorganic mixtures. • Cary out identification test of given inorganic compounds • Perform limit test for chlorides, sulphates etc. • Prepare inorganic compounds
9	COMMUNICATION SKILLS – THEORY(BP105)	• Understand the knowledge of softskills and communicationskill. • Understand the concept of teamwork, leadership, personal developmentskills. • Acquire the knowledge of technical writing skill. • Acquire the knowledge of body language and presentation skill. • Identify the concept of positive thinking that keeps the students in a good stead at thetime of crisis. • Sharpen memory skills and other study skills that are vital for academic excellence.
10	COMMUNICATION SKILLS – PRACTICAL(BP112)	• To improve the overall personality and development of communication skill
11	REMEDIAL BIOLOGY (BP106)	• know the classification and salient features of five kingdoms of life • understand the basic components of anatomy & physiology of plant • know understand the basic components of anatomy & physiology animal with special reference to human
12	HUMAN ANATOMY AND PHYSIOLOGY II – THEORY(BP201)	• Understand the basic fundamentals structural features of neurons, mechanism ofneurotransmitters along with processes of neuroconduction and neurotransmission. • Clarify the anatomy and physiology of various sense organs involved in body homeostasis. • Understand the organs and mechanism involve in respiration along with disorders of respiratory system. • Understand the essential organs ofurinary systems and process of urine formation.
13	HUMAN ANATOMY AND PHYSIOLOGY II – PRACTICAL(BP207)	• Understand the construction, working, care and handling of instruments, glassware's and equipment's required for practical. • Knowledge of mechanism of Differential Blood Cell Count and Reticulocyte Count of blood sample. • Demonstration of human axial and appendicular skeleton system with the help of bones.

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		• Knowledge of construction and working of Spirometer for the measurement of lung volume and capacities.
14	PHARMACEUTICAL ORGANIC CHEMISTRY I – THEORY(BP202)	• write the structure, name and the type of isomerism of the organic compound • write the reaction, name the reaction and orientation of reactions • account for reactivity/stability of compounds, • identify/confirm the identification of organic compound
15	PHARMACEUTICAL ORGANIC CHEMISTRY I– PRACTICAL(BP208)	• Systematic qualitative analysis of unknown organic compounds
16	BIOCHEMISTRY – THEORY(BP203)	• Understand the catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzymes. • Understand the metabolism of nutrient molecules in physiological and pathological conditions. • Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.
17	BIOCHEMISTRY – PRACTICAL(BP209)	• Qualitative analysis of carbohydrates • Identification tests for Proteins
18	PATHOPHYSIOLOGY – THEORY(BP204)	• Describe the etiology and pathogenesis of the selected disease states; • Name the signs and symptoms of the diseases; and • Mention the complications of the diseases.
19	COMPUTER APPLICATIONS IN PHARMACY – THEORY(BP205)	• know the various types of application of computers in pharmacy • know the various types of databases • know the various applications of databases in pharmacy
21	ENVIRONMENTAL SCIENCES – THEORY(BP206)	• Create the awareness about environmental problems among learners. • Impart basic knowledge about the environment and its allied problems. • Develop an attitude of concern for the environment. • Motivate learner to participate in environment protection and environment improvement.

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