



Course outcomes

2022-23

Course outcome for semester I

BP101T Human Anatomy and Physiology I

Course outcome	
CO-1	To understand the detail study and basic concepts in human anatomy and physiology and their significance with the basic organization of human body with details of cell and tissue organization
CO-2	To elaborate the mechanism of movement of the body and importance of skeletal system with joints
CO-3	To explain the circulation of blood and lymph with associated disorder
CO-4	To state the working of peripheral nervous system
CO-5	To clarify the physiology of sense organs
CO-6	To summarize the anatomy and physiology of cardiovascular system and associated diseases

BP102T Pharmaceutical Analysis I

Course outcome	
CO-1	Learn about titrimetric techniques for ensuring the quality and safety of medications, computing analytical data, and physiochemical analysis ideas.
CO-2	To inculcate the methods of comparing different standard parameters with those of the analytic under consideration.
CO-3	To illustrate ideas of precision, accuracy, and error in the creation and standardization of solutions of various strengths.
CO-4	Demonstrate both theoretical and practical uses for gravimetric, volumetric, complex metric, precipitation, redox, and non-aqueous titrations and analyses.
CO-5	To inculcate the industrial applications and uses of all analytical techniques.



BP103T Pharmaceutics-I

Course outcome	
CO-1	To know the historical background and profession of pharmacy and basics of pharmaceutical dosage forms.
CO-2	To understand the importance of prescription and posology.
CO-3	To solve pharmaceutical calculations and understand the formulation of powders and liquid dosage forms.
CO-4	To develop monophasic and biphasic liquid dosage forms.
CO-5	To explain the concepts of suppositories and pharmaceutical incompatibilities.

BP104T Pharmaceutical Inorganic Chemistry

Course outcome	
CO-1	After the completion of course students will able to understand the history of pharmacopoeia, sources of impurities and methods to determine the impurities in inorganic pharmaceuticals
CO-2	Explain the method of preparation, assay, properties, medicinal uses of acids, bases, buffers, major extra and intracellular electrolytes and dental products.
CO-3	Able to know the method of preparation, assay, properties, medicinal uses of acidifiers, antacids, cathartics and antimicrobials.
CO-4	Understand the method of preparation, assay, properties, medicinal uses of expectorants, emetics, hematinic, astringent and poison and antidote.
CO-5	Know about properties, storage condition and application of radiopharmaceuticals



BP105T-Communication skills

Course outcome	
CO-1	Understand the behavioural needs for a Pharmacist to function effectively in the areas of pharmaceutical operation through effective communication (Verbal and Non Verbal)
CO-2	Effectively manage the team as a team player. Know the elements, styles and barriers of communication and effectively overcome them.
CO-3	Know the importance of good listening skills, and be a good listener. And also to know the essentials of good writing skills and know the dos and don'ts of formal written communication.
CO-4	Develop interview skills and Develop Leadership qualities and essentials of group discussions.
CO-5	To become a good communicator in real life situations, and have a command over ones languages through forming grammatically correct sentences and perfect pronunciations.

BP106RMT-Remedial Mathematics

Course outcome	
CO-1	Know the theory and their application in Pharmacy
CO-2	Solve the different types of problems by applying theory
CO-3	Appreciate the important application of mathematics in Pharmacy

BP107P Human Anatomy and Physiology

Course outcome	
CO-1	To handle the compound microscope
CO-2	To Identify the bones and the tissues
CO-3	To Enumerate the total WBC and RBC count of own blood by using Haemocytometer
CO-4	To determine the bleeding time, clotting time, blood group and haemoglobin of own Blood
CO-5	To record their own pulse rate, heart rate and blood pressure



BP108P Pharmaceutical Analysis I

Course outcome	
CO-1	Basic concepts of electrochemical and volumetric analysis
CO-2	Carryout various volumetric and electrochemical titrations.
CO-3	Improve student's analytical abilities to improve their motor and cognitive attitudes.
CO-4	The impurities in inorganic medicines and pharmaceuticals, their origins, and techniques of detection.
CO-5	To comprehend the significance of inorganic chemicals in medicine and pharmaceuticals.

BP109P Pharmaceutics I

Course outcome	
CO-1	To recall the principles used in the preparation of solid, liquid and semi-solid dosage forms.
CO-2	Understand formulation and evaluation of Pharmaceutical solution.
CO-3	Understand formulation and evaluation of Pharmaceutical dispersed system.
CO-4	Understand formulation and evaluation of pharmaceutical powders.
CO-5	Understand formulation and evaluation of semisolid dosage form.

BP110P Pharmaceutical Inorganic Chemistry

Course outcome	
CO-1	To know the level of specific impurities in the given inorganic compounds by performing different limit tests.
CO-2	To understand the different chemical methods to prepare inorganic pharmaceuticals
CO-3	To know the different identification tests as per Indian Pharmacopoeia.
CO-4	Determine the impurities qualitatively by performing tests for purity



BP111P Communication skills

Course outcome	
CO-1	To develop basic communication skills using English language.
CO-2	To learn and practice different types of pronunciations.
CO-3	To improve advanced learning using English language.
CO-4	To develop writing skills, interview handling skills, presentation skills and group discussion skills using English language lab software

Course outcome for semester II

BP201T Human Anatomy and Physiology II

Course outcome	
CO-1	Study the gross morphology, structure, and functions of various organs of the human body
CO-2	Describe the various homeostatic mechanisms and their imbalances
CO-3	Identify the various tissues and organs of Nervous system, respiratory system, endocrine System
CO-4	Understand coordinated working pattern of different organs of urinary system, digestive system, and reproductive system
CO-5	Explain the genetics of human body

BP202T Pharmaceutical Organic Chemistry I

Course outcome	
CO-1	Will classify organic compounds based on their general characteristics and functional groups present.
CO-2	Will be able to outline synthetic strategies of important organic compounds.
CO-3	Discuss the possible isomers of organic compounds.



CO-4	Describe the mechanisms in organic reactions.
CO-5	Outline the properties and uses of organic compounds studied.

BP203T Biochemistry

Course outcome	
CO-1	Understand biochemistry, classify biomolecules and state their biological importance
CO-2	Relate biochemical process in cell metabolism with the different biochemical reaction.
CO-3	Apply mechanism of enzymatic activity in routine life and in industrial development.
CO-4	Explain nucleic acids, genetic code & their function in cell synthesis
CO-5	Evaluation & estimation of biomolecules in disease investigations & their eco-friendly disposal

BP204T Pathophysiology

Course outcome	
CO-1	Elaborate the basic principle and mechanism of cell injury and inflammation
CO-2	Describe the Etiology and pathogenesis of the haematological diseases, endocrine system, nervous system, gastrointestinal system
CO-3	Explain the pathophysiology of the inflammatory bowel diseases and diseases of bones and joints
CO-4	State the complications of infectious diseases and sexually transmitted diseases
CO-5	Clarify the pathophysiology of cardiovascular system, renal system, respiratory system and Cancer



BP205T Computer Applications in Pharmacy

Course outcome	
CO-1	Explain the applications of computer in Pharmacy.
CO-2	Explain bioinformatics and their impact in vaccine discovery.
CO-3	Analyse the different types of databases.
CO-4	Create data bases using MS Access, SQL.
CO-5	Identify the role of computers for data analysis in the field of preclinical development.

BP206T Environmental sciences

Course outcome	
CO-1	Create the awareness about environmental problems among learners.
CO-2	Impart basic knowledge about the environment and its allied problems.
CO-3	Develop an attitude of concern for the environment.
CO-4	Motivate learner to participate in environment protection and environment improvement.
CO-5	Acquire skills to help the concerned individuals in identifying and solving environmental problems.

BP207P Human Anatomy and Physiology II

Course outcome	
CO-1	Students will able to understand the gross morphology, structure and functions of various organs of the human body
CO-2	They will able to Identify the various tissues and organs of different systems of human body.
CO-3	They would have performed and learnt about the experiments like neurological reflex, body temperature measurement
CO-4	They would Understand interlinked mechanisms in the maintenance of normal functioning of human body
CO-5	They would have learnt and performed the experiments like Olfaction, gustation reflex and eye sight



BP208P Pharmaceutical Organic Chemistry I

Course outcome	
CO-1	Students will be able to Identify and characterize of simple organic compounds.
CO-2	Students will be able to synthesize simple organic and their derivatives.
CO-3	Students will be able to identify different preliminary test, functional group tests and detection of elements.

BP209P Biochemistry

Course outcome	
CO-1	To understand and classify biomolecules and their biological importance
CO-2	Identification of different biomolecules by the test employed for it.
CO-3	To study the different normal and abnormal constituents of body fluids and correlate them with different physiological conditions.
CO-4	Apply the knowledge acquired about enzymatic activity in routine life and industrial development and applications.
CO-5	Study of disease or disorder and its evaluation, estimation and investigations with reference

BP210P Computer Applications in Pharmacy

Course outcome	
CO-1	Use MS Word to create questionnaires and other documentation related to pharmacy.
CO-2	Use MS Access to modify the data bases created.
CO-3	Handle web and XML pages to export table, forms and queries.
CO-4	Generate report; work with queries on MS Access.
CO-5	Create database, HTML web page.



Course outcome for semester III

BP301T Pharmaceutical Organic Chemistry II

Course outcome	
CO-1	Write the structure, name and the type of isomerism of the organic compound
CO-2	Write the reaction, name the reaction and orientation of reactions
CO-3	Account for reactivity/stability of compounds,
CO-4	Prepare organic compounds

BP302T Physical Pharmaceutics I

Course outcome	
CO-1	Understand the mechanisms of solute solvent interactions and Study the limitations and applications of Distribution law
CO-2	Acquire the knowledge of physical principles of states of matter and phase rule.
CO-3	Learn the steps involved in the preparation of pharmaceutical buffers and its importance
CO-4	Assess the importance of pH and buffers in manufacturing pharmaceutical dosage forms and maintaining stability.
CO-5	Acquire skills and working knowledge of the principles and concepts of surface tension and its measurement and Study the role of surfactants in various drug delivery applications.
CO-6	Understand the various intermolecular forces involved in the formation of complexes and its applications.

BP303T Pharmaceutical Microbiology

Course outcome	
CO-1	To acquire knowledge about anatomy, identification, growth factors of microorganisms which include bacteria, virus, and fungus.
CO-2	Discuss the cultivation and identification of the microorganisms in the laboratory
CO-3	To explain different methods of sterilization and its properties and applications in pharmaceutical microbiology
CO-4	Identification of diseases by performing the diagnostic tests



CO-5	Estimation of potency of antibiotic by various microbial assay
CO-6	Understand infectious diseases its history, pathogenesis and control

BP304T Pharmaceutical Engineering

Course outcome	
CO-1	Student will understand the theoretical principles, basic concept involved in unit operations.
CO-2	Studies of various processes involved in pharmaceutical manufacturing processes.
CO-3	Explain the process of heat exchangers, filters, centrifuges, dryers, refrigeration systems etc. required for the manufacturing of various pharmaceutical formulations.
CO-4	Analyze the efficiency of equipments of important operations such as filtration, drying and evaporation.
CO-5	Knows the various preventive methods used for corrosion control in Pharmaceutical industries

BP305P Pharmaceutical Organic Chemistry II

Course outcome	
CO-1	Demonstration of recrystallisation and Steam distillation
CO-2	Perform separation and identification of qualitative analysis of solid-solid organic binary mixtures.
CO-3	Determine the saponification value of oil sample
CO-4	Synthesize the different organic compounds and understand the reaction mechanisms

BP306P Physical Pharmaceutics I

Course outcome	
CO-1	Understand various physicochemical properties of drug molecules in the designing the dosage forms
CO-2	Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations
CO-3	Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.



BP307P Pharmaceutical Microbiology

Course outcome	
CO-1	Understand the basic microbial structure and functions of various physiological groups of prokaryotes and eukaryotes and also learn the theory and practical skills in microscopy handling and staining techniques
CO-2	Know various Culture media and their applications and understand various physical and chemical means of sterilization and also learn various techniques for isolation of pure cultures
CO-3	Comprehend the various methods for identification of unknown microorganisms and study microbial metabolism – Autotrophy and heterotrophy modes of nutrition
CO-4	Understand the microbial physiology and know the various Physical and Chemical growth requirements of bacteria and get equipped with various methods of bacterial growth measurement

BP 308P Pharmaceutical Engineering

Course outcome	
CO-1	Perform experiments related to unit operations.
CO-2	Operate equipment's used in the manufacture of pharmaceutical products.
CO-3	Illustrate the material and energy requirements for optimizing the pharmaceutical unit processes.

Course outcome for semester IV

BP401T Pharmaceutical Organic Chemistry III

Course outcome	
CO-1	Understand the structures and method of preparation of organic compounds.
CO-2	Properties and uses of organic compounds.
CO-3	Explain the stereo chemical aspects of organic compounds and stereochemical reactions.
CO-4	Know the medicinal uses and other applications of organic compounds.
CO-5	Understand the nomenclature of organic compounds.



BP402T Medicinal Chemistry I

Course outcome	
CO-1	To understand the Physicochemical properties in relation to biological action of the Drug.
CO-2	To acknowledge Drug metabolism principles- Phase I and Phase II. Factors affecting drug metabolism including stereo chemical aspects.
CO-3	Know the classification, Mechanism of action, SAR, metabolism, adverse effect with chemistry of drugs acting on Autonomic Nervous System. (Adrenergic and Anti-adrenergic drugs, Cholinergic and Anti-cholinergic drugs)
CO-4	Detail study of classification, Mechanism of action, SAR, metabolism, adverse effect with chemistry of drugs acting on Central Nervous System. (Sedatives and Hypnotics, Antipsychotics, Anticonvulsants, General Anesthetics, Narcotics and non-narcotics analgesics)
CO-5	To understand the chemical synthesis of some pharmacologically important drugs.

BP403T Physical Pharmaceutics II

Course outcome	
CO-1	Understand and acquire working knowledge with the concept of colloids and its Applications
CO-2	Know various physicochemical properties of drug molecule in designing of the dosage form.
CO-3	Understand the flow behavior of fluid and also to identify suitable characteristic of each formulations, Study different types of deformation of solids and stress strain relationship.
CO-4	Know the method to determine particle size and its role in formulation development.
CO-5	Understand Reaction Kinetics and Accelerate stability Studies.

BP404T Pharmacology I

Course outcome	
CO-1	To clarify pharmacology and pharmacokinetics' foundational ideas.
CO-2	To earn the purpose of comprehending the fundamentals of pharmacodynamics, adverse effects, drug interactions, and drug discovery.
CO-3	To describe the function of drugs that affects the peripheral nervous system and neurohumoral transmission.
CO-4	To explore how drugs and neurotransmitters affect the central nervous system
CO-5	To evaluate the pharmacology of psychopharmacological substances and to predict the effects of medications used to treat neurodegenerative diseases.



BP405T Pharmacognosy and Phytochemistry I

Course outcome	
CO-1	To know the history, basic concept & scope of Pharmacognosy in depth.
CO-2	Understand the Cultivation, Collection, Processing, Storage and Conservation of Medicinal Plants.
CO-3	Learn drug adulteration & the different types of drug evaluations.
CO-4	Understand the various Edible Vaccines and Marine Pharmacognosy.
CO-5	Able to understand traditional system of medicine & different types of secondary metabolites.

BP406P Medicinal Chemistry I

Course outcome	
CO-1	Study the significance and establish relevance of Medicinal Chemistry in Pharmaceutical Sciences.
CO-2	Discuss the Chemistry of drugs with respect to their physicochemical properties in relation to Pharmacological activity.
CO-3	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs.
CO-4	Describe, study and understand drugs acting on Autonomic Nervous System.
CO-5	Discuss, study and elaborate drugs acting on Central Nervous System.

BP407P Physical Pharmaceutics II

Course outcome	
CO-1	Understand various experiment of Particle size, Density, Viscosity, Sedimentation Volume.
CO-2	Describe principle and working of applications of basic and advanced equipment's used in determination of viscosity, particle size and density.
CO-3	Illustrate and determine reaction rate constant and accelerated stability



BP408P Pharmacology I

Course outcome	
CO-1	To become knowledgeable about fundamental tools, common laboratory animals used in experimental pharmacology, and how to establish an animal house in accordance with CPCSEA guidelines.
CO-2	To demonstrate the standard lab processes used for research on animals, such as blood withdrawal, administration routes, anaesthetics, and euthanasia
CO-3	To interpret how various drugs affect a rabbit's eye and a frog's oesophagus' ciliary motility as well as To examine the impact of drugs on laboratory animals' locomotor activity, skeletal muscle relaxation, and enzyme inducers
CO-4	To assess the anticatatonic and stereotypic effects of medications in rats and mice
CO-5	To forecast different screening models for anticonvulsant and calming effect

BP409P Pharmacognosy and Phytochemistry I

Course outcome	
CO-1	Able to determine the leaf constants.
CO-2	Learn to analyze and determine ash value.
CO-3	To apprehend analytical constant values, e.g.: extractive values of crude drugs.
CO-4	To Acquire process to determination of Moisture content of crude drugs.
CO-5	To perform the Swelling index and Foaming index.

Course outcome for semester V

BP501T Medicinal Chemistry II

Course outcome	
CO-1	Describe the detailed chemistry of antihistaminic agents and anti- neoplastic agents.
CO-2	Compare the chemistry of anti-anginal and anti-hypertensive Agents.
CO-3	Illustrate all basics involved in Anti-arrhythmic drugs, anti-hyperlipidemic agents, coagulant & anticoagulants along with drugs used in congestive heart failure.
CO-4	Write in detail drugs acting on endocrine system also various Sex hormones, Thyroid and anti-thyroid drugs.

CO-5	Explain various anti-diabetic agents and local anaesthetics
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BP502T Industrial Pharmacy I

Course outcome	
CO-1	Carry out assessment of physicochemical properties of drugs as a tool in the optimization of solid and liquid dosage forms
CO-2	Formulate and prepare tablets, capsules and liquid orals using established procedures and technology.
CO-3	Describe the facilities and standards necessary for the industrial production of sterile dosage forms. also Formulate and prepare different types of parenteral and ophthalmic dosage forms.
CO-4	Evaluate the pharmaceutical dosage forms for quality and stability and compare with standards prescribed in the pharmacopoeia.
CO-5	Select ingredients and formulate cosmetics such as lipsticks, shampoos, cold cream and vanishing cream, tooth pastes, hair dyes and sunscreens.
CO-6	Identify containers, closures, valves and propellants for different types of aerosol systems, and Select and evaluate appropriate packaging materials for various pharmaceutical dosage form.

BP503T Pharmacology II

Course outcome	
CO-1	They would have understood Pathophysiology of diseases.
CO-2	Understand the mechanism of drug action and its relevance in the treatment of different diseases.
CO-3	Appreciate correlation of pharmacology with related medical sciences
CO-4	They would have observed the various receptor actions using isolated tissue preparation and bioassay.
CO-5	Students would understand the Use, Side effect and contraindication of drugs.



BP504T Pharmacognosy and Phytochemistry II

Course outcome	
CO-1	Able to understand basic metabolic pathways of plants and formation of different secondary metabolites through various biosynthetic pathways in plants & utilization of radioactive isotopes in the investigation of biosynthetic pathways.
CO-2	Explain source, chemistry, therapeutic uses of various secondary metabolites containing drugs & application of latest techniques for analysis of phytoconstituents.
CO-3	Learn methods of extraction, analysis and commercial application of various secondary metabolites containing drugs.
CO-4	Learn methods for industrial production, estimation and utilization of some therapeutically important phytoconstituents.
CO-5	To apprehend the process of isolation, purification and identification of crude drugs.

BP505T Pharmaceutical Jurisprudence

Course outcome	
CO-1	To understand the detail study of drug and cosmetics act, 1940 and its rule 1945, objectives, legal definition of schedule, import of drug, manufacturing of drug, condition for grant of license for manufacture of drugs.
CO-2	To Understand the pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals. Detail study of schedule, Labeling & packing of drug, sale of drugs, administration of the act and rules.
CO-3	To explain the various objectives of pharmaceutical act 1958, Medicinal and toilet preparation act 1955 in detail, Narcotic drugs and psychotropic substances act 1985 and its rules, objectives,
CO-4	To understand the study of silent feature of drug and magic remedies act and its rules, prevention of cruelty to animal act 1960 , National pharmaceutical pricing authority detail study.
CO-5	To adapt the pharmaceutical legislations, code of pharmaceutical ethics, medical termination of pregnancy act, right to information act, introduction to intellectual property rights.



BP506P Industrial Pharmacy I

Course outcome	
CO-1	Know the various pharmaceutical dosage forms and their manufacturing techniques, preformulation technique.
CO-2	To know the various consideration in development of pharmaceutical dosage forms, preparation and evaluation of Tablets, capsules.
CO-3	To understand and formulate solid, liquid and semisolid dosage forms and evaluate them for their quality, preparation of injection, eye ointments, eye drops, vanishing creams, cold cream.
CO-4	To understand and appreciate the influence of pharmaceutical additives and various pharmaceutical dosage forms on the performance of the drug product, quality control test of marketed tablets and capsule.
CO-5	Able to handle the different apparatus and evaluation of glass container & Understand the basics of drug development.

BP507P Pharmacology II

Course outcome	
CO-1	Understand the guidelines for animal experimentations and Learn the composition of physiological salt solutions
CO-2	To Understand principal and working basic instruments used in experimental pharmacology
CO-3	Students would have understood the pharmacological actions of different categories of drugs.
CO-4	They would have studied in detailed about mechanism of drug action at organ system/sub cellular/ macromolecular levels.
CO-5	They would have observed the effect of drugs on animals by simulated experiments

BP508P Pharmacognosy and Phytochemistry II

Course outcome	
CO-1	Identify crude drugs by morphological and microscopical characteristics.
CO-2	Isolate phytoconstituents from crude drugs.
CO-3	Perform Paper and Thin Layer Chromatography.
CO-4	Isolate and analyze volatile oils.
CO-5	Carryout chemical tests for the identification of unorganized crude drugs.



Course outcome for semester VI

BP601T Medicinal Chemistry III

Course outcome	
CO-1	Student will understand the chemistry of drug with respect to their biological activity, MOA, metabolism, adverse effects and SAR of different Antibiotics and Prodrug.
CO-2	Know about structure, classification, MOA and the structure activity relation of some important class of drugs.
CO-3	Understand about physico chemical properties related to QSAR
CO-4	Students will able to understand Pharmacophore modeling and docking techniques.
CO-5	They will know concept and application of Combinatorial chemistry.

BP602T Pharmacology III

Course outcome	
CO-1	To learn about the pharmacology and mechanisms of action of medications used to treat respiratory and gastrointestinal complications
CO-2	To comprehend the fundamentals of chemotherapy and to demonstrate the way that antibiotics work.
CO-3	To describe how anti-mycobacterial, anti-fungal, and anti-viral medications work.
CO-4	Analyse chemotherapy used to treat STDs, cancer, and UTIs; categorise immunopharmacology.
CO-5	To evaluate various toxicity studies, poisoning treatment philosophies, and management of different poisoned conditions and also compile information about the biological clock as well as its importance for chronotherapy.

BP603T Herbal Drug Technology

Course outcome	
CO-1	The recognition, collection, preservation, analyses and dosage of active ingredients and biological effects of medicinal plants.
CO-2	Learn toxicological aspects of active ingredients and finished products.
CO-3	To understand the study, design, management, control and conduction of the processing systems of medicinal plants and derivatives.

CO-4	The possible application of medicinal plants and derivatives as health Products, including the food.
CO-5	To apprehend the WHO guidelines for Good agricultural and collection practices of herbal raw materials with WHO and ICH guidelines for the assessment of herbal drugs.

BP604T Biopharmaceutics and Pharmacokinetics

Course outcome	
CO-1	Understand the basic concepts in biopharmaceutics and pharmacokinetics and their significance.
CO-2	Use of plasma drug concentration-time data to calculate the pharmacokinetic parameters to describe the kinetics of drug absorption, distribution, metabolism, excretion, elimination.
CO-3	To understand the concepts of bioavailability and bioequivalence of drug products and their significance
CO-4	Understand various pharmacokinetic parameters, their significance & applications.
CO-5	Design dosage regimens for patients based on calculated pharmacokinetic parameters

BP605T Pharmaceutical Biotechnology

Course outcome	
CO-1	To understand the application of biotechnology, basic principles of genetic engineering and enzyme technology.
CO-2	Students will understand the principles of biosensors and protein engineering in Pharmaceutical Industry.
CO-3	Students can explain the concepts of rDNA technology and its applications.
CO-4	To Understand the concept of immunity and production of vaccine.
CO-5	To acquire Knowledge on genetic multiplication and Biotransformation.

BP606T Quality Assurance

Course outcome	
CO-1	To identify the various aspects and significance of quality in pharmaceutical manufacturing, testing, packing, storage and distribution.
CO-2	Insight of Current GMP and GLP.

CO-3	Know how of documentation, SOPs and records for pharmaceutical operations.
CO-4	To understand detail process of validation, qualification and calibration in assurance of quality in pharmaceutical Industry.
CO-5	Concept quality by design and ICH guidelines in stability testing and QMS

BP607P Medicinal chemistry III

Course outcome	
CO-1	Understands about synthesis of medicinal compounds.
CO-2	Determines purity of drug compound by assay methods.
CO-3	Able to understand method of Preparation of medicinally important compounds or intermediates by Microwave irradiation technique.
CO-4	Understand chemical structure and reactions by chem draw software.
CO-5	Students will able to determine Physicochemical Properties using drug design software.

BP608P Pharmacology III

Course outcome	
CO-1	Explain the calculation of dose and pharmacokinetic parameters
CO-2	Discuss the action of drug by using different animal models
CO-3	Describe the different irritation test
CO-4	Explain the biostatistics methods for result interpretation

BP609P Herbal Drug Technology

Course outcome	
CO-1	Perform phytochemical screening of the extracts.
CO-2	Prepare herbal formulations and herbal cosmetics using standardized extracts.
CO-3	Evaluate excipients of natural origin.
CO-4	Carryout monograph analysis of herbal drugs.

CO-5	Determine alcohol content, aldehyde content, total alkaloids and phenol content.
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Course outcome for semester VII

BP701T Instrumental Methods of Analysis

Course outcome	
CO-1	The way in which matter interacts with electromagnetic radiations and the rationale behind their use in drug analysis.
CO-2	Arrange the chromatographic separation techniques into categories and select the best approach for drug analysis.
CO-3	Create procedures for analyzing pharmaceuticals quantitatively and qualitatively with a range of analytical tools.
CO-4	Describe the theoretical underpinnings, real-world applications, and uses of certain contemporary analytical tools.
CO-5	Understand the regulatory requirements for quality aspects and apply it to the analytical techniques

BP702T Industrial Pharmacy II

Course outcome	
CO-1	Know the process of pilot plant and scale up of pharmaceutical dosage forms.
CO-2	Understand the process of technology transfer from lab scale to commercial batch.
CO-3	Know different Laws and Acts that regulate pharmaceutical industry.
CO-4	Understand the approval process and regulatory requirements for drug products
CO-5	Describe the organization and responsibilities of national and state licensing authority.



BP703T Pharmacy Practice

Course outcome	
CO-1	Students will understand knowledge of and ability to use principles of therapeutics, quality improvement, communication, economics, health behavior, social and administrative aspects, health policy and legal issues in the practice of pharmacy.
CO-2	Students will utilize knowledge of drug distribution methods in hospital and apply it in the practice of pharmacy.
CO-3	Students will effectively apply principles of drug store management and inventory control to medication use.
CO-4	Students will provide patient-centered care to diverse patients using the best available evidence and monitor drug therapy of patient through medication chart review, obtain medication history interview and counsel the patients, identify drug related problems.
CO-5	Students will engage in innovative activities by making use of the knowledge of clinical trial and will exhibit professional ethics by producing safe and appropriate medication use throughout society.

BP704T Novel Drug Delivery System

Course outcome	
CO-1	To know about controlled drug delivery systems (CDDS) and polymers used for CDDS.
CO-2	Summarize various drug delivery systems like microencapsulation, Mucosal and Implantable systems.
CO-3	Formulate drug delivery transdermal, Gastro-retentive pulmonary drug delivery system and naso-pulmonary drug delivery system.
CO-4	Develop targeted drug delivery systems.
CO-5	Design Ocular and Intrauterine Drug Delivery Systems.



BP705P Instrumental Methods of Analysis

Course outcome	
CO-1	Illustrate the interaction of matter with electromagnetic radiations and justify its applications in drug analysis.
CO-2	Classify the chromatographic separation methods and choose appropriate technique for analysis of drugs.
CO-3	Design methods for performing quantitative & qualitative analysis of drugs using various analytical instruments.
CO-4	Explain the theoretical, practical principles and applications of different modern analytical instruments.

Course outcome for semester VIII

BP801T Biostatistics and Research Methodology

Course outcome	
CO-1	Know the operation of M.S. Excel, SPSS, R and MINITAB ®, DoE (Design of Experiment)
CO-2	Know the various statistical techniques to solve statistical problems
CO-3	Appreciate statistical techniques in solving the problems. Course content:

BP802T Social and Preventive Pharmacy

Course outcome	
CO-1	To understand the importance of health, nutrition and prevention of diseases in community health
CO-2	To acquire the current issues related to health and importance of medicines in prevention of diseases
CO-3	To explain the different national health programmes to promote the community health
CO-4	To focus on the current healthcare development
CO-5	To integrate the current health related issues with primary health care for attainment of the goals



BP804ET Pharmaceutical Regulatory Science

Course outcome	
CO-1	Explain the process of drug discovery, development and generic product development.
CO-2	Describe the regulatory approval process and registration procedures for API and drug products in various countries.
CO-3	Understand the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals.
CO-4	Explain basic understanding of developing clinical trial protocols and concept of pharmacovigilance and its significance.
CO-5	Learn the basic understanding the importance of Orange book, Federal Register, Code of Federal Regulatory, and Purple book.

BP809ET Cosmetic Science

Course outcome	
CO-1	Classify and define Cosmetics and Cosmeceuticals as per Indian and EU regulations
CO-2	Describe the role of cosmetic excipients and building blocks in the formulation of cosmetics and Explain the structure and function of the skin, hair, teeth and gums
CO-3	Describe the fundamentals of sun protection and the formulation of Sunscreens, antiperspirants and deodorants
CO-4	Formulate cosmetics for skin care and hair care as well as dental and oral care. And Design herbal cosmetics for skin care, hair care and oral care.
CO-5	Evaluate cosmetics for various physico-chemical properties.