



**B. Pharmacy**  
**Course Outcome**

## B. Pharmacy Course Outcome (CO's)



Hon. Shri. Babanrao Pachpute Vichardhara Trust's Group of Institutions  
**Faculty of Pharmacy**

A/P-Kashti, Tal-Shrigonda, Dist-Ahmednagar, Pin- 414701  
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Website – www.parikrama.edu.in, Phone – 9786126772, Email – pariphr@gmail.com  
Vision – 'To serve with high quality education for development of students as competent pharmacy professionals for the upliftment of socio-economic status in rural areas'

**B. Pharmacy**  
**Academic Year 2020-21 & 2021-22**  
**Course Outcomes**

<b>First Year B. Pharmacy</b>	
<b>First Semester</b>	
<b>BP101T Human Anatomy and Physiology I: Theory</b>	
CO ID.	Course Outcome
BP101T.1	Clarify introduction of human body, the progression of structural levels contributes to bodys order, their function and stability
BP101T.2	Explain integumentary system, skeletal system and joints.
BP101T.3	Explain composition and function of blood component and hemostasis along with blood coagulation as well as lymphatic system.
BP101T.4	Discuss role of peripheral nervous system and special sense organs.
BP101T.5	Describe cardiovascular system.
<b>BP102T Pharmaceutical Analysis: Theory</b>	
CO ID.	Course Outcome
BP102T.1	Develop analytical skills
BP102T.2	Carryout various volumetric and electrochemical titrations
BP102T.3	Understand the principles of volumetric and electro chemical analysis
BP102T.4	Understand the factual, concept & Principle
<b>BP103T Pharmaceutics I: Theory</b>	
CO ID.	Course Outcome
BP103T.1	Know the history of profession of pharmacy, development of pharmacy profession industry in India, Pharmacy as career
BP103T.2	Understand the Prescription in detail and the professional way of handling the prescription
BP103T.3	Understand the concept of different dosage forms, route of administration of dosage forms, and thereason why there is a need of conversion of drug to dosage form
BP103T.4	Concept Posology , factors affecting dose of a drug , Pharmaceutical calculations
BP103T.5	Preparation of various conventional dosage forms and its detail study of dosage forms

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<b>BP104T Pharmaceutical Inorganic Chemistry: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP104T.1	Study the gastrointestinal agents with the mechanism of action and their preparation, properties, storage, assay, uses of inorganic compounds, illustrate the importance of topical and antimicrobial agents and discuss their method of preparation, properties, storage, assay and uses
BP104T.2	Study the various pharmacopeias currently in use, express the meaning of impure and pure chemical compound and evaluate official methods (limit tests) for control impurity, and different official tests of water
BP104T.3	Explain acid, base and buffers, demonstrate important functions of extracellular and intracellular ions in the body and extrapolate the knowledge regarding various therapies for disorders associated, describe the dental products and know the method of preparation, properties, storage, assay and uses of inorganic compounds used in dental products.
BP104T.4	Study of various inorganic medicinal agents like expectorants, emetics, haematinics, antidotes, astringents and different properties of radiopharmaceuticals used in diagnosis and treatment
<b>BP105T Communication Skills: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP105T.1	Understand the behavioral needs for a pharmacist to function effectively in the areas of pharmaceutical operation.
BP105T.2	Communicate effectively (Verbal and Non-Verbal)
BP105T.3	Effectively manage the team as a team player
BP105T.4	Develop interview skills
BP105T.5	Develop Leadership qualities and essentials
<b>BP106RBT Remedial Biology: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP106RBT.1	Explain the classification and salient features of five kingdoms of life.
BP106RBT.2	understand the basic components of anatomy & physiology of plant.
BP106RBT.3	understand the basic components of anatomy & physiology animal withspecial reference to human.



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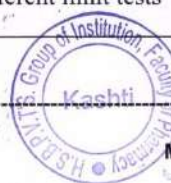
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<b>BP106RMT Remedial Mathematics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP106T1	Explain the theory and application of partial of partial fraction, logarithm, functions, limits and continuity
BP106T2	Solve matrices and determinants
BP106T3	Tell the applications of calculus with differentiation
BP106T4	Make use of analytical geometry in pharmacy
BP106T5	Apply Laplace transform and differential equation in solving chemical kinetics and pharmacokinetic equation
<b>BP107P Human Anatomy and Physiology I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP 107P.1	Memorize compound microscope and identification of various tissues and Bones.
BP 107P.2	Determine Blood Cell count.
BP 107P.3	Determine heart rate, pulse rate and blood pressure
<b>BP108P Pharmaceutical Analysis: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP108P.1	Determine limit test for various inorganic compounds.
BP 108P.2	Carry out preparation and standardisation of different compound.
BP 108P.3	Estimate assay and normality of different compounds.
<b>BP109P Pharmaceutics I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP109P.1	Preperation, Evaluation of Various Liquid Dosage forms
BP109P.2	Preperation and evaluation of Powders
BP109P.3	Preparation and Evaluation of Semisolid Dosage Forms
<b>BP110P Pharmaceutical Inorganic Chemistry: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP110P.1	Identify the sources of impurities methods to determine the impurities in the drugs and pharmaceuticals by using different limit tests

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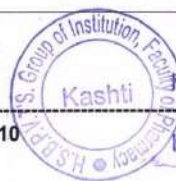


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BP110P.2	Demonstrate the impurities qualitatively by performing tests for purity.
BP110P.3	Utilize identification tests of inorganic compounds as per Indian Pharmacopoeia
BP110P.4	Use of different chemical methods to prepare inorganic pharmaceutical formulations
<b>BP111P Communication Skills: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP111P.1	Explain importance of communication
BP111P.2	Use of pronunciation for effective communication
BP111P.3	Apply various advanced learning techniques

<b>First Year B. Pharmacy Second Semester</b>	
<b>BP201T Human Anatomy and Physiology II: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP201T.1	Explain basic fundamentals, structural features of neurons, mechanism of neurotransmitters as well as structure of brains parts along with role of autonomic nervous system
BP201T.2	Know about anatomy and physiology of organs involved in digestive and respiratory system, also clarify the term energetics.
BP201T.3	Describe anatomy of urinary tract, functions of kidney and urinary tract, physiology of urine formation, micturition reflex and role of kidneys in acid base balance, role of RAS in kidney and disorders of kidney.
BP201T.4	Discuss the role of Endocrine system involved in regulation and functions of hormones to control overall activity of human body
BP201T.5	Describe organs and process of human reproductive system.
<b>BP202T Pharmaceutical Organic Chemistry I: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP202T.1	Know the different types of Isomerism, Nomenclature and classes of organic compounds.



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BP202T.2	Summarize the Hybridization of Alkanes, Alkenes and stability study of conjugated dienes with their properties.
BP202T.3	Explain nucleophilic substitution reaction and structure, uses of various alkyl halides.
BP202T.4	Illustrate various reactions, structures and uses of aldehydes and ketones.
BP202T.5	Discuss structures, uses, effects of carboxylic acid and aliphatic amines.
<b>BP203T Biochemistry: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP203T.1	State the concept of biomolecules such as lipids, proteins, nucleic acids and carbohydrates. Describe the metabolic pathways along with the regulation of carbohydrates.
BP203T.2	Recognize the concept of Biological oxidation, oxidative phosphorylation, Energy transport chain, free energy and utilization of energy.
BP203T.4	Estimate the synthesis/formulation, utilization, biological significance of saturated fatty acids and amino acids.
BP203T.5	Express the biosynthesis, catabolism, transcription and genetic code information of nucleic acids.
BP203T.3	Describe the catalytic role of enzymes and the importance of enzyme in the biochemical process.
<b>BP204T Pathophysiology: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP204T.1	Describe basic principles of cell injury, adaptation and mechanism involved in process of pain and inflammation.
BP204T.2	Explain the pathophysiology of various diseases of CVS, Respiratory and renal system.
BP204T.3	Describe the Haematological diseases. pathophysiology of Endocrine system, Nervous system and Gastrointestinal system.
BP204T.4	Elaborate diseases of bones and joints. Describe and pathophysiology of cancer.
BP204T.5	Explain Infectious diseases and sexually transmitted diseases.
<b>BP205T Computer Applications in Pharmacy: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>

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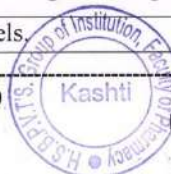
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BP205 T1	Classify the different types of numbering system, information system and software in computer programming.
BP205T2	Explain the different types of web technologies, web servers, database and their application in pharmacy.
BP205 T3	Relate application of computers in industry, research and hospital pharmacy.
BP205 T4	Outline the importance of bioinformatics and its role in vaccine discovery
BP205 T5	Illustrate the application of different software in data analysis in preclinical studies.
<b>BP206T Environmental sciences: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP206T.1	Explain about natural resources and associated problems
BP206T.2	Describe concept, structure and function of an ecosystem.
BP206T.3	Classify environmental pollution and its allied problems.
<b>BP207P Human Anatomy and Physiology II: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP 207 P1	Determine Platelet count, Arneht index, Osmotic fragility, DLC, Tidal volume and Vital capacity, Body temperature, Types of taste and demonstrate total blood count by cell analyzer.
BP 207 P2	Demonstrate the different parameters of neuron and CNS, BMI, Permanent slides of vital organs and gonads
BP 207 P3	Discuss the integumentary and special senses, family planning devices and pregnancy diagnosis test and different organ systems with help of models, charts and specimen
BP 207 P4	Visit to Hospital /Pathology lab
<b>BP208P Pharmaceutical Organic Chemistry I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP208P.1	Identify systematic qualitative analysis of unknown organic compound.
BP208P.2	Develop suitable solid derivatives from organic compounds.
BP208P.3	Show construction of molecular models.

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<b>BP209P Biochemistry: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP209P.1	Identify the various biomolecules (carbohydrates and proteins) by using various biochemical methods.
BP209P.2	Evaluate ketone bodies bile salts, albumin, glucose and total serum cholesterol level by a qualitative digital colorimeter.
BP209P.3	Demonstrate blood creatinine and blood sugar by using biochemical methods.
BP209P.4	Prepare buffer solutions and evaluate the pH and analyze the reducing sugar by the DNSA method.
BP209P.5	Demonstrate the salivary amylase activity on substrate concentration.
<b>BP210P Computer Applications in Pharmacy: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP210P1	Create Questionnaire, HTML web page, labels using Microsoft office.
BP210P2	Design the database, forms, reports, invoice, and queries in MS Access.
BP210P3	Execute the exporting of tables, queries, forms, and reports to web an XML Pages.
BP210P4	Utilize the various online tools and MS access for storage and retrieval of drug information.

<b>Second Year B. Pharmacy Third Semester</b>	
<b>BP301.T Pharmaceutical Organic Chemistry II: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP301T.1	Draw the structure, write name and type of isomerism of organic compound.
BP301T.2	Determine reactivity/ stability of compounds.
BP301T.3	Explain the reaction, name the reaction and orientation of reaction.
BP301T.4	Discuss qualitative test for different organic compound.
BP301T.5	Elaborate the medicinal uses of organic compounds.

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<b>BP302T Physical Pharmaceutics – I: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP302T.1	Utilize the knowledge of solubility of drugs in formulation and also know the importance of phase rule and distribution law.
BP302T.2	Understand various physicochemical properties of drug molecules with different properties of state of matter.
BP302T.3	Acquire sufficient knowledge about surface and interfacial tension with its measurement methods.
BP302T.4	Outline physicochemical properties, complexation and protein binding of drug molecules.
BP302T.5	Explain the importance of pH, buffer and isotonic solution in pharmaceutical and biological system.
<b>BP303T Pharmaceutical Microbiology: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP303.T1	Impart basic knowledge about the microbiology.
BP303.T2	Explain methods of identification, cultivation and preservation of various microorganisms.
BP303.T3	Understand the importance and implementation of sterilization in pharmaceutical processing and industry.
BP303.T4	Learn sterility testing of pharmaceutical products.
BP303.T5	Carry out microbiological standardization of pharmaceuticals.
BP303.T6	State the cell culture technology and its applications in pharmaceutical industries.
<b>BP304T Pharmaceutical Engineering: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP304T.1	To learn basic in the pharmaceutical engineering and apply their knowledges to their respective fields.
BP304T.2	To know various unit operations used in pharmaceutical industries.

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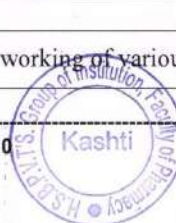
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BP304T.3	Explain the process of heat exchangers, dryers, filters, centrifuges, refrigeration systems etc. required for the manufacturing of various pharmaceutical formulations.
BP304T.4	Explain the principle, construction working of equipments used in pharmaceutical industry.
BP304T.5	Explain the theoretical principles involved in unit operations
BP304T.6	Describe the basic concepts involved in pharmaceutical operations.
BP304T.7	Perform various processes involved in pharmaceutical manufacturing processes.
<b>BP305P Pharmaceutical Organic Chemistry II: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP305P.1	Explain and understand the principle behind various qualitative tests and analyze the given unknown organic compound having different functional groups.
BP305P.2	synthesize organic compounds.
BP305P.3	Understand, explain and apply various techniques of purification of synthesized compounds using recrystallization and steam distillation.
BP305P.4	Determine saponification value of different oils.
BP305P.5	Identify different binary mixtures.
<b>BP306P Physical Pharmaceutics – I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP306P.1	Determine the effect of temperature, pH, Solvent, Co-solvent on solubility of drug.
BP306P.2	Determine Surface tension, partition co-efficient, Pka, HLB number & Critical micellar concentration of surfactant.
BP306P.3	Determine CST, Refractive index, Stability constant & donor acceptor ratio of given sample.
BP306P.4	Determine the effect of temperature, pH, solvent, co-solvent on solubility, Determination of Partition co- efficient of organic and aqueous solvent, Determination of HLB number of a surfactant.
<b>BP307P Pharmaceutical Microbiology: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP307.P1	Explain the principle, construction and working of various instruments.

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BP307.P2	Handle microscope for observation microbes.
BP307.P3	prepare and sterilize nutrient broth, nutrient agar, slants, stabs and plates.
BP307.P4	Demonstrate skills required for maintaining strictly aseptic condition and handling innoculating loop, its sterilization and inoculation procedure.
BP307.P5	Isolate microorganisms by streak plate technique and count them by pour plate technique.
BP307.P6	evaluate motility of bacteria by hanging drop technique.
<b>BP308P Pharmaceutical Engineering: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP308T.1	Perform experiments related to unit operations.
BP308T.2	Operate equipments used in the manufacture of pharmaceutical products.
BP308T.3	Interpret results of the experiments conducted.
BP308T.4	Illustrate the material and energy requirements for optimizing the pharmaceutical unit processes.
<b>BP105T Communication Skill: Theory (Direct Second Year Students)</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP105T.1	Describe the concept of communication along with perspectives.
BP105T.2	Illustrate verbal, non-verbal types and styles of communications.
BP105T.3	Adapt basic skills required for effective communication.
BP105T.4	Develop interview and presentation skills.
BP105T.5	Build Confidence and Leadership qualities.

<b>Second Year B. Pharmacy: Fourth Semester</b>	
<b>BP401T Pharmaceutical Organic Chemistry III: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP401T.1	Explain the stereochemical aspects of organic compounds and stereochemical reactions.

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BP401T.2	Describe Heterocyclic chemistry.
BP401T.3	Know the medicinal uses and other applications of organic compounds.
BP401T.4	Illustrate different name reactions.
<b>BP402T Medicinal Chemistry I: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP402T.1	Explain and relate physicochemical properties with action of drugs.
BP402T.2	Illustrate drug metabolic pathways, adverse effect and therapeutic values of drugs.
BP402T.3	Discuss biosynthesis of adrenaline and acetylcholine.
BP402T.4	Explain the structure activity relationship (SAR) of different classes of drugs.
BP402T.5	Classify different medicinal agents.
<b>BP403T Physical Pharmaceutics II: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP403T.1	Explain various type, characteristics and properties of colloidal dispersion along with its stability.
BP403T.2	Illustrate fundamentals and applications of rheology in pharmaceutical formulation along with deformation of solid.
BP403T.3	Explain formulation, evaluation and stability of coarse dispersion.
BP403T.4	Estimate the properties of particles with its determination methods and explain derived properties of powder.
BP403T.5	Describe chemical kinetics and accelerated stability testing
<b>BP404T Pharmacology I: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP404T.1	Describe basics of pharmacology, various route of drug administration and pharmacokinetics.
BP404T.2	Explain pharmacodynamics, adverse drug reaction, drug interaction and process of new drug discovery.
BP404T.3	Explain pharmacology of drugs acting on peripheral nervous system.

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BP404T.4	Describe neurohumoral transmission in CNS, general anesthetics, Sedative-hypnotics, Anti-epileptics with their classification and pharmacology of drugs.
BP404T.5	Explain pharmacology of drugs acting on CNS
<b>BP405T Pharmacognosy and Phytochemistry I: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP405T1	Discus on basic concept of Pharmacognosy, classification and quality control of crude drug.
BP405T2	Explain cultivation, collection, processing and storage of drug from natural origin.
BP405T3	Summarize the application of plant tissue culture techniques in the production of secondary metabolites.
BP405T4	Explain plant description, morphology, and anatomy along with secondary metabolites.
BP405T5	Describe the importance of primary and secondary metabolites.
<b>BP406P Medicinal Chemistry I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP406P.1	Outline scheme and synthesize medicinal compounds
BP406P.2	Estimate partition coefficient of drugs
BP406P.3	Analyse purity of synthesized compounds.
BP406P.4	Devlop skills involved in purification of synthesized compounds by column chromatography
BP406P.5	Determine melting point of synthesized compound
<b>BP407P Physical Pharmaceutics II: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP407P.1	Determine of particle size, bulk density, true density, porosity and angle of repose of given sample.
BP407P.2	Determine viscosity and sedimentation volume of given sample
BP407P.3	Determine reaction rate constant, order of reaction and stability studies of given sample.



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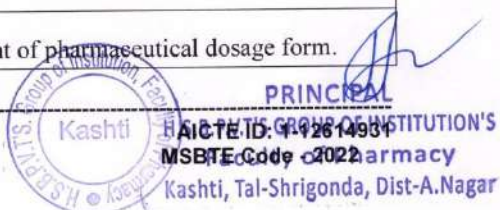
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<b>BP408P Pharmacology I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP408P.1	To Perform common laboratory techniques in animals
BP408P.2	To Know basics of pharmacology like history, scope & general principles.
BP408P.3	Understand the process of new drug discovery and development of drug.
BP408P.4	Demonstrate routes of drug administration in animals
BP408P.5	Identify the appliances used in experimental pharmacology
BP408P.6	Choose suitable anesthetics for animal studies
<b>BP 409 P Pharmacognosy and Phytochemistry I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP409P1	Analyze the given crude drug by chemical test and determine the morphology of leaves.
BP409P2	Determine the macroscopic characteristics of the powdered crude drug.
BP409P3	Carry out the determination of the extractive values, moisture content, and swelling index of the crude drug.

<b>Third Year B. Pharmacy: Fifth Semester</b>	
<b>BP501T Medchem Medicinal Chemistry-II: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP501T1	Understand the chemistry of drugs with respect to their pharmacological activity
BP501T2	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs
BP501T3	Know the Structural Activity Relationship of different class of drugs
BP501T4	Study the chemical synthesis of selected drugs
<b>BP502T Industrial Pharmacy-I: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP502T.1	Know various consideration in development of pharmaceutical dosage form.

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BP502T.2	Know the various pharmaceutical dosage forms and their manufacturing techniques.
BP502T.3	Formulate solid, liquid and semisolid dosage form and evaluate them for their quality
BP502T.4	Understand the physicochemical properties of drug / excipients for the development of pharmaceutical dosage form
<b>BP503.T Pharmacology – II: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP503T.1	Understand the mechanism of drug action and its relevance in the treatment of cardiovascular diseases
BP503T.2	Explain appropriate drug therapy and management of patients with Inflammatory disorders and the essential pharmacotherapy of Rheumatoid Arthritis, Osteoarthritis, and Gout.
BP503T.3	Describe Various endocrine hormones, its types, receptors and mechanisms involved
BP503T.4	Describe indications, mechanism of action, adverse effects and contraindications for the major classes of drugs used in the treatment of Hormonal Diseases, thyroid hormone Disorders and Endocrine Disorders i.e. Diabetes Mellitus
BP503T.5	Understand basic principles of bioassay, types of bioassay along with advantages and disadvantages.
<b>BP504T Pharmacognosy and Phytochemistry II: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP504T.1	Outline the Metabolic pathway in higher plants and their Biogenetic studies.
BP504T.2	Explain pharmacognostic account of secondary metabolites like alkaloids, glycosides, tannins, volatile oil.
BP504T.3	Demonstrate the different steps involved in isolation, identification and analysis of phytoconstituents like terpenoids, alkaloids and resins.
<b>BP505T Pharmaceutical Jurisprudence: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP505T.1	Discuss about the drug cosmetic act 1940 and its rules.
BP505T.2	Explain pharmaceutical legislations and various schedules in D and C act 1940.

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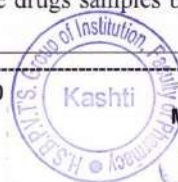
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BP505T.3	Tell about various Indian laws and acts of 1948, 1955, 1985.
BP505T.4	Recall the regulatory authorities and agencies governing the manufacture and sale of Pharmaceuticals.
BP505T.5	Illustrate the code of ethics during the Pharmaceutical practice and IPR.
BP505T.6	Summarize features of drug and Magic remedies Act and rules
<b>506 P Industrial Pharmacy-I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP506P.1	Understand various physicochemical properties of drug molecules in the designing of dosage form.
BP506P.2	Demonstrate use of physicochemical properties in evaluation of dosage form
BP506P.3	Know various dosage forms their formulations and manufacturing aspects
BP506P.4	Know various excipients used in the formulation of pharmaceutical dosage form
<b>BP507.P Pharmacology – II: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP507P.1	Explain the basic concept behind experimental pharmacology.
BP507P.2	Describe the composition of physiological salt solutions and basic instruments used in experimental pharmacology
BP507P.3	Estimate the effects of drugs on animal by simulated experiments.
BP507P.4	Understand basic principles of bioassay, types of bioassay along with advantages and disadvantages
BP507P.5	Understand the Effect of spasmogens, spasmolytic, Anti-inflammatory and Analgesic activity of Drug
<b>BP508 P Pharmacognosy and Phytochemistry II: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP508P.1	Identify the wide variety of crude drugs and remember the sources.
BP508P.2	Carry out the identification of the powder mixture and report the types of adulterants and substitutes present in the drug.
BP508P.3	Analyze and evaluate the powdered crude drugs samples by morphological and microscopical characters.

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BP508P.4	Isolate the drug from given crude drug sample.
BP508P.5	Predict the crude drug by performing chromatography techniques.

<b>Third Year B. Pharmacy: Sixth Semester</b>	
<b>BP601T Medicinal Chemistry III: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP601T.1	Write classification, nomenclature, structure activity relationship, mechanism of action, adverse effects, and therapeutic uses of various Antibiotics and antimalarial agents.
BP601T.2	Describe Antimycobacterial and Antiviral agents.
BP601T.3	Explain various Anti-Infective agents.
BP60 T.4	Summarize different Anti-neoplastic agents and drug design techniques.
BP601T.5	Draw the scheme of synthesis of different medicinal compounds.
<b>BP602 T Pharmacology III: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP602T.1	Categorize different drugs depending upon their pharmacological role and mechanism of action in any disease.
BP602T.2	Explain pharmacology of various anaesthetic agents, psychotropic agents.
BP602T.3	Discuss various drugs used in treatment of CNS disorders Parkinson disease and Alzheimer disease
BP602T.4	Explain pharmacology of drugs used in the treatment of G.I. tract disorders
BP602T.5	Describe pharmacology of Rheumatoid arthritis, Osteoarthritis and Gout.
<b>BP603T Herbal Drug Technology: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP603T1	Describe herbs as raw material, biodynamic agriculture and various system of medicine.
BP603T2	Explain nutraceuticals, interaction of herbs with drug and food.
BP603T3	Illustrate the role of herbal excipients in herbal cosmetics and formulations.

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BP603T4	Explain patenting and regulatory requirements of natural products.
BP603T5	Summarize the concept of evaluation of herbal drug, herbal industry and Schedule T.
<b>BP604T Biopharmaceutics and Pharmacokinetics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP604T1	Describe the process of absorption and distribution along with importance of bioavailability.
BP604T2	Explain the concept of elimination and biotransformation.
BP604T3	Explain the concept of Bioavailability and Bioequivalence.
BP604T.4	Describe various compartment models along with different pharmacokinetic parameters.
BP605T5	Outline the concept of nonlinear pharmacokinetics.
<b>BP605T Pharmaceutical Biotechnology: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP605T.1	Know concepts of Biotechnology, Enzyme Biotechnology, Biosensors, Protein Engineering, and microbes.
BP605T.2	Explain rDNA technology, genetic engineering, and PCR
BP605T.3	Explain the importance of biotechnological products along with immunity.
BP605T.4	Outline the concepts immunoblotting techniques, microbial transformation, mutation along with microbial genetics.
BP605T.5	Describe fermentation process and blood products.
BP605T6	Understand the concept of enzymes and their uses by immobilization.
<b>BP606T Quality Assurance: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP606T1	Understand the cGMP aspects in a pharmaceutical industry
BP606T3	Appreciate the importance of documentation
BP606T4	Understand the scope of quality certifications applicable to pharmaceutical industries

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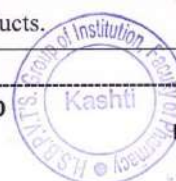
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BP606T2	Understand the responsibilities of QA & QC departments
<b>BP607P Medicinal Chemistry III: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP607P.1	Carry out synthesis of different drugs and intermediates.
BP607P.2	Experiment on preparation of different medicinally important compounds by microwave synthesis.
BP607P.3	Determine different physicochemical properties
BP607P.4	Demonstrate chemistry softwares.
<b>BP608P Pharmacology III: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP608P.1	Demonstrate the dissection of G.I. tract of chicken to isolate ileum and explain and perform various Bioassay.
BP608P.2	Demonstrate and discuss recording of effects of CNS acting drugs in rats/mice using Actophotometer and anti-epileptic activity using Convulsimeter with the help of software.
BP608P.3	Demonstrate recording of effects of skeletal muscle relaxant drugs in rats/mice using Rota-rod apparatus and Analgesic activity using Eddys Hot Plate with the help of software
<b>BP609 P Herbal Drug Technology: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP609P.1	Determine various phytochemicals parameter of crude drug with preliminary screenings.
BP609P.2	Prepare and evaluate various herbal formulations with standardized extract.
BP609P.3	Carry out analysis of herbal drug as per pharmacopieas.

<b>Final Year B. Pharmacy:</b>	
<b>Seventh Semester</b>	
<b>4.7.1 T Sterile Products: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.1T.1	Describe the general requirements, routes of administration, significance and pre-formulation parameters of sterile products.

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4.7.1T.2	Identify various packaging materials used for sterile products with their quality control tests.
4.7.1T.3	Illustrate the GMP, design and layout of parenteral production facility.
4.7.1T.4	Explain formulation and evaluation of small and large volume parenteral products.
4.7.1T.5	Discuss formulation and evaluation of ophthalmic products, blood products, surgical products and parenteral devices.
<b>4.7.1 P Sterile Products: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.1P.1	Explain basic concepts, importance of ingredients and packaging material used in sterile formulations.
4.7.1P.2	Formulate the sterile products and label with Pharmacopoeial standards.
4.7.1P.3	Determine quality control test for prepared and marketed sterile formulations.
<b>4.7.2T Pharmaceutical Analysis V: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.2T.1	Describe the principle and instrumentation of GC
4.7.2T.2	Describe the principle and instrumentation of IR
4.7.2T.3	Explain principle, instrumentation and applications of HPLC and UPLC.
4.7.2T.4	Illustrate principle, instrumentation and applications of SEM and TEM and
4.7.2T.5	Explain principle, instrumentation and application of Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM)
4.7.2T.6	Adopt various sampling techniques employed in analysis of solid, semisolid and liquid dosage forms while working in industry/laboratory
<b>4.7.2 P Pharmaceutical Analysis V: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.2P.1	Carry out Uv- spectrophotometric estimation of two component formulations
4.7.2P.2	Determine and interpret IR spectra of compound with different functional groups.
4.7.2P.3	Demonstrate GC/AAS/SEM

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4.7.2P.4	understand the appropriate safety measures while handling instruments, chemicals and apparatus.
4.7.2P.5	Able to handle sophisticated instruments like UV/FTIR etc.
<b>4.7.3 T Medicinal Chemistry III: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.3T.1	Explain history and general aspects of medicinal chemistry-III
4.7.3T.2	Write classification, nomenclature, structure activity relationship, mechanism of action, adverse effects, therapeutic uses of Antibiotics.
4.7.3T.3	Describe Antineoplastic agents including recent drugs and monoclonal antibodies
4.7.3T.4	Explain history and general aspects of the design & development of drugs including classification, nomenclature, structure activity relationship (SAR), mechanism of action, adverse effects, therapeutic uses and recent developments of Anti-Infective agents.
4.7.3T.5	Sketch the scheme of synthesis of different medicinal compounds.
<b>4.7.3 P Medicinal Chemistry III: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.3P.1	Make correct use of various equipments and take safety measures while working in laboratory.
4.7.3P.2	Carry out synthesis and purification of various medicinal compounds and monitor intermediates over chromatographic techniques.
4.7.3P.3	Interpret IR and NMR spectra of synthesized medicinal compounds.
4.7.3P.4	Demonstrate GC / AAS / SEM
<b>4.7.4 Pharmacology I Pharmacology IV: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.4T.1	Study about Classification, mechanism of action, antibacterial spectrum, resistance, therapeutic uses, adverse effects and contraindications of various antibiotics.
4.7.4T.3	Describe functions, receptor and mechanisms of hormone actions of endocrine system,

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4.7.4T.2	Discuss various chemotherapeutic agents depending upon mechanism of action, antibacterial spectrum, resistance, therapeutic uses, adverse effects and contraindications.
4.7.4T.4	Discuss pharmacotherapy of thyroid and parathyroid glands, androgens, oestrogens, progestin and oral contraceptives.
4.7.4T.5	Explain the hormones responsible for the cause of diabetes and pharmacotherapy of diabetes.
<b>4.7.4 P Pharmacology IV: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.4P.1	Carry out and explain three point and four-point bioassay to find unknown concentration of Acetylcholine/histamine.
4.7.4P.2	Discuss the fixed dose combination of various drugs based on possible indications, dose, route of drug administration, justification of inclusion of each ingredient, adverse reactions, contraindications, precautions and special instruction to patients.
4.7.4P.3	Describe rational and irrational drug therapy for treatment of various diseases, justify whether rational drug therapy is followed from the prescription by RMP for specific patient
4.7.4P.4	Understanding Prescription auditing and standard treatment protocols
<b>4.7.5.T Natural Drug Technology: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.5 T.1	Explain cultivation, harvesting and storage of crude drug with application of plant biotechnology analysis.
4.7.5 T.2	Recall In-vitro screening of natural products & principles of traditional system of medicines
4.7.5 T.3	Elaborate novel drug delivery systems for herbal drugs & cosmeceuticals
4.7.5 T.4	Evaluate the structural elucidation of natural products and phytoconstituents by chemicals.
<b>4.7.5. P Natural Drug Technology: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
BP475P.1	Formulate & evaluate Different natural drugs.

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BP475P.2	Carry out the evaluation of cosmetic & Nutraceutical product.
BP475P.3	Evaluate marketed cosmetic & nutraceutical formulations
<b>4.7.6 T Biopharmaceutics and Pharmacokinetics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.6 T.1	Explain the concept of ADME and its applications in formulation development.
4.7.6 T.2	Describe various compartmental models and non compartmental analysis methods.
4.7.6 T.3	Illustrate the concept of Non-Linear Pharmacokinetics.
4.7.6 T.4	Outline the concept and mechanisms of dissolution along with its in vitro in vivo correlation.
4.7.6 T.5	Explain bioavailability and bioequivalence studies.
<b>4.7.7 T Pharmaceutical Jurisprudence: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.7.7T.1	Describe about Patents, procedure for patent application and IPR
4.7.7T.2	Understand the significance and relevance of Pharmaceutical laws, important rules and regulations and procedures in India
4.7.7T.3	Explain the definitions in the act and different acts established for the controlling of formulation distribution and marketing of medicinal products in India.
4.7.7T.4	Understand the regulatory system for safety and effectiveness of medicine and quality of product.

<b>Final Year B. Pharmacy: Eighth Semester</b>	
<b>4.8.1 T Advance Drug Delivery System: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.1T.1	Describe the fundamental concept of modified drug release system along with various approaches and classification.
4.8.1T.2	Explain importance of polymers in drug delivery systems and basic concept of optimization.

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4.8.1T.3	Illustrate merits, demerits, application and evaluation of various Novel Drug Delivery Systems
4.8.1T.4	Describe Therapeutic Aerosols along with typical formulations from, metered dose, intranasal and topical applications
4.8.1T.5	Explain concept of microencapsulation with evaluation parameters
<b>4.8.1 P Advance Drug Delivery System: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.1P.1	Explain importance of polymers and excipients used in formulation of various drug delivery systems.
4.8.1P.2	Formulate and evaluate various Advanced Drug Delivery Systems
4.8.1P.3	Determine basic quality control test for prepared and marketed pharmaceuticals.
<b>4.8.2 T Cosmetic Science: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.2T.1	Describe Fundamentals and Scope of Cosmetic Science.
4.8.2T.2	Explain the formulation, manufacturing and evaluation of various cosmetic products.
4.8.2T.3	Illustrate the concept of Cosmeceuticals
<b>4.8.2 P Cosmetic Science: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.2 P.1	Explain importance of excipients used in formulation of various cosmetic products.
4.8.2 P.2	Formulate various cosmetic products.
4.8.2 P.3	Evaluate various cosmetic products.
<b>4.8.3 T Pharmaceutical Analysis VI: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.3T.1	Explain principle, instrumentation of NMR and ESR spectroscopy
4.8.3T.2	Describe various chromatographic techniques and automated methods of analysis.
4.8.3T.3	Explain different Mass spectrometry techniques.

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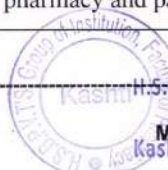
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<b>4.8.3 P Pharmaceutical Analysis VI: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.3P1	Summarise validation of various analytical methods.
4.8.3P2	Discuss the system suitability parameters
4.8.3P3	Explain quantitation techniques of HPLC.
4.8.3P4	Interpret UV, IR, NMR and MS spectra of simple organic compounds.
<b>4.8.4 T Medicinal Chemistry IV: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.4T.1	Explain Antihistaminic agents and proton pump inhibitors.
4.8.4T.2	Discuss Autocoids, NSAID's, Analgesics and Antipyretics.
4.8.4T.3	Describe Narcotics and Steroids.
4.8.4T.4	Summarize hormones, antihyperglycemic drugs, diagnostics agents and serotonergic agents.
<b>4.8.4 P Medicinal Chemistry IV: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.4P.2	Carry out synthesis and purification of various medicinally important compounds and monitor by cinematographic techniques.
4.8.4P.3	Interpret IR spectra of synthesized compounds
4.8.4P.4	Demonstrate high vacuum distillation / CADD
4.8.4P1	Make correct use of various equipment and its safety precautions while working in laboratory
<b>4.8.5 T Pharmacology V: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.5T.1	Describe important aspects, classification, mechanism of drug-drug interaction and ADRs.
4.8.5T.2	Explain Basic aspects of drug safety and Pharmacovigilance in relation to monitoring and reporting of ADRs.
4.8.5T.3	Illustrate the functioning and role of hospital pharmacy and patient compliance

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4.8.5T.4	Describe clinical trials, ethics and practice of GCP guidelines; Schedule Y, involved in clinical trials
4.8.5T.5	Explain the process, working and personnel involved in clinical data management.
<b>4.8.5 P Pharmacology V: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.5P.1	Demonstrate use of isolated tissue preparations for antagonistic bioassay methods
4.8.5P.2	Explain Basic aspects to carry out neurobehavioral characterization for determination of CNS activities.
4.8.5P.3	Describe various parametric and non-parametric tests used in bio statistics and perform statistical calculation of the given data using suitable statistical method.
<b>4.8.6 T Natural Product Commerce, Industry and Regulation: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.6T1	Adapt the concepts of commerce with global and domestic market size of natural products, their demand, supply status with import and export.
4.8.6T2	Discuss detailing of herbal drugs industry with their regulation and patenting.
4.8.6T3	Summarize toxicity in herbals with their interaction & pharmacovigilance of herbal medicine
4.8.6T4	Analyze the plant allergens in detail.
<b>4.8.7 T Quality Assurance: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
4.8.7T1	Understand the importance of quality in pharmaceutical M.F.G. and explain the documents BPCR and MPCR.
4.8.7T2	Describe various aspects of Qualification and calibration with its equipment qualification and instrumentation.
4.8.7T3	Importance of GMP, GLp and Good documentation practices in Pharmaceutical industry.
4.8.7T4	Elaborate role of regulatory agencies, Qbd, Validation Quality risk management and pharmaceutical quality management system in Quality Assurance

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**M. Pharmacy  
Course Outcome**



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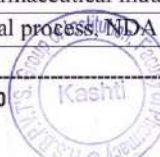
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**M. Pharmacy**  
**Course Outcome**  
**Academic Year 2020-21 and 2021-22**

<b>First Year M. Pharmacy</b>	
<b>Semester I</b>	
<b>MPH101T Modern Pharmaceutical Analytical Techniques: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH 101T.1	Discus about UV Visible Spectroscopy and Fluorimeter with AAS and flame emission spectroscopy.
MPH 101T.2	Explain about NMR.
MPH 101T.3	Demonstrate the mass spectroscopy.
MPH 101T.4	Illustrate different types of Chromatographic techniques.
MPH 101T.5	Summarise electrophoresis and x-ray chromatography
MPH 101T.6	Justify the thermal chromatograph.
<b>MPH102T Drug Delivery System: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH102T.1	Discuss on sustained release and controlled release
MPH102T.2	Explain rate-controlled drug delivery system
MPH102T.3	Describe gastro-retentive drug delivery system
MPH102T.4	To study ocular drug delivery system
MPH102T.5	Acquire knowledge of transdermal DDS
MPH102T.6	Discuss protein peptide delivery and vaccine delivery system
<b>MPH103T Modern Pharmaceutics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH103T.1	Study on preformulation concepts.
MPH103T.2	Knowledge on pharmaceutical validation
MPH103T.3	Knowledge on cGMP & Industrial Management
MPH103T.4	Knowledge on compression and compaction
MPH103T.5	Knowledge on consolidation parameters
MPH103T.6	Discuss optimization techniques in pharmaceutical formulations
<b>MPH 104 T Regulatory Affair: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH104T.1	Illustrate about Documentation in Pharmaceutical industry.
MPH104T.2	Explain the ANDA regulatory approval process, NDA approval process.

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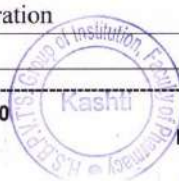
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MPH104T.3	Summarize Regulatory requirement for product approval.
MPH104T.4	Elaborate CMC, post approval regulatory affairs
MPH104T.5	Describe about Non clinical drug development.
MPH104T.6	Explain about Clinical trials.
<b>MPH 105P Pharmaceutics Practical I: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH105P.1	Inspect the simultaneous estimation of Pharmacopoeial compounds by UV Vis spectrophotometer.
MPH105P.2	Perform the experiments based on Chromatography, FTIR and Fluorimetry.
MPH105P.3	Preformulate, formulate and evaluate Sustained release, controlled release, mucoadhesive tablet and transdermal patch
MPH105P.4	Formulate and evaluate osmotically controlled, hydro dynamically balanced drug delivery system.
MPH105P.5	Compare Micromeritics properties of powders and granulation, effect of compressional force, particle size, binders on dissolution of a tablet.
MPH105P.6	Predict the similarity factors by Heckel plot, Higuchi and Peppas Plot.

<b>M. Pharmacy Second Year Semester II</b>	
<b>MPH 201T Molecular Pharmaceutics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH201T.1	Explain Targeted Drug Delivery Systems.
MPH201T.2	Discuss Types, preparation and evaluation of Nano Particles and Liposomes
MPH201T.3	Discuss Types, preparation and evaluation of Micro Capsules and Micro Spheres
MPH201T.4	Explain in details Pulmonary Drug Delivery Systems
MPH201T.5	Describe Nucleic acid based therapeutic delivery system.
MPH201T.6	Explain therapeutic antisense molecules and aptamers as drugs of future
<b>MPH202 T Advanced Biopharmaceutics and Pharmacokinetics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH202T.1	Explain absorption from GIT
MPH202T.2	Discuss on Biopharmaceutical consideration
MPH202T.3	To study Pharmacokinetics

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MPH202T.4	To Describe pharmacokinetics
MPH202T.5	To study drug product performance
MPH202T.6	Study application of pharmacokinetics
<b>MPH203T Computer Aided Drug Development: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH203T.1	explain the history of computers in pharmaceutical research and development
MPH203T.2	describe the computational modeling of drug dispensation
MPH203T.3	demonstrate the computer aided formulation development in pharmacy.
MPH203T.4	elaborate the computer aided biopharmaceutical characteristics.
MPH203T.5	determine the role of computer in clinical development.
MPH203T.6	define and summarize concept of artificial intelligence(AI) and robotics
<b>MPH204T Cosmetic and Cosmeceuticals: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH204T.1	Describe regulatory provisions relating to manufacturing offences and penalties.
MPH204T.2	Explain different biological aspects related to cosmetics.
MPH204T.3	Describe in detail building blocks for different formulations of cosmetics.
MPH204T.4	Discuss on building blocks for formulation of creams and EU regulations.
MPH204T.5	Explain in detail design of cosmeceutical products.
MPH204T.6	Summarize the formulation challenges of herbal cosmetics
<b>MPH205 T Pharmaceutics Practical -II: Practical</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH205P.1	Inspect the simultaneous estimation of Pharmacopoeial compounds by UV Vis spectrophotometer.
MPH205P.2	Perform the experiments based on Chromatography, FTIR and Fluorimetry.
MPH205P.3	Preformulate, formulate and evaluate Sustained release, controlled release, mucoadhesive tablet and transdermal patch

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MPH205P.4	Formulate and Evaluate osmotically controlled, hydro dynamically balanced drug delivery system.
MPH205P.5	Compare Micromeritics properties of powders and granulation, effect of compressional force, particle size, binders on dissolution of a tablet.
MPH205P.6	Predict the similarity factors by Heckel plot, Higuchi and Peppas Plot.

<b>M. Pharmacy Second Year Semester III</b>	
<b>MRM301T Research Methodology and Biostatistics: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MRM301T.1	Understand some basic concepts of research and its methodologies.
MRM301T.2	Outline the importance of review of literature, study design and apply different strategies to eliminate errors/bias in research study
MRM301T.3	Raise the various statistical methods to solve different types of pharmaceutical problems.
MRM301T.4	Know the history and ethical values in medical research.
MRM301T.5	Recall the CPCSEA guidelines for laboratory animal care.
MRM301T.6	Illustrate the basic principles for medical research combined with medical care.
<b>MPH395 Introduction to Constitution: Theory</b>	
<b>CO ID.</b>	<b>Course Outcome</b>
MPH395.1	To introduce the philosophy of constitution of india to student.
MPH395.2	To discuss the fundamental rights in details.
MPH395.3	Explain in details acquqint them with their freedoms and responsibilities.
MPH395.4	To understand the directive principle of state policy to the students.
MPH395.5	Understand and remember the fundamental duties of citizen to the students.
MPH395.6	Disuss right and duty of citizen to the student.



  
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