



RJSPM's COP, Pune
Subjectwise Course Outcome - [B. Pharmacy - 2021-22]

SEM 1

BP101T Human Anatomy and Physiology I (BP101T) [Theory | Regular]

CO ID.	Course Outcome
BP101T.1	Understand the gross morphology, structure and functions of various tissues, organs of the human body and know about cellular level of organisation in body.
BP101T.2	Know about structure and functions of skin and know about in detailed information of skeletal system and joints.
BP101T.3	Know about Blood and various body fluids with their significance and disorders. Understand about Lymphatic system and its functions.
BP101T.4	Understand classification and functions of Peripheral nervous system and different sense organs of body.
BP101T.5	Understand the anatomy and physiology of circulatory system and disorders of heart.

BP102T Pharmaceutical Analysis I (BP102T) [Theory | Regular]

CO ID.	Course Outcome
BP102T.1	Understands the concept of pharmaceutical analysis, its scope and methods of expressing concentration
BP102T.2	Develop analytical skills through lab exercises to minimize errors in qualitative and quantitative analysis. Apply concept accuracy, precision, significant figures with examples.
BP102T.3	Discuss significance of quality control in pharmaceutical analysis and Employ different theories(acid base theories, Neutralization curves, indicator theory, law of mass action, Henderson Hassalbach equation).
BP102T.4	Explain basic concepts and principles of aqueous acid base titrations and clarify need of non-aqueous acid base titrations as well as acknowledge the basic principle of redox titration, precipitation titration, Complexometric titration, Gravimetric analysis.
BP102T.5	Understands the electrochemical methods of analysis including conductometry, potentiometry and polarography.
BP102T.6	Acquire the knowledge of principle and theory of refractometry, refractive index, and instruments used in determination of refractometry.

BP103T Pharmaceutics I (BP103T) [Theory | Regular]

CO ID.	Course Outcome
BP103T.1	Know the history of profession of Pharmacy
BP103T.2	Understand the various dosage form, pharmaceutical calculation
BP103T.3	Gain knowledge about various pharmaceutical incompatibility
BP103T.4	Preparation of various dosage form

BP104T Pharmaceutical Inorganic Chemistry (BP104T) [Theory | Regular]

CO ID.	Course Outcome
BP104T.1	Recite the history of Pharmacopoeia.
BP104T.2	Understand different sources of impurities & method for determining the impurities in inorganic drugs & pharmaceuticals.
BP104T.3	Recognize types of water and methods for reducing hardness of water.
BP104T.4	Understand the basic concepts of acidity & basicity, buffers and tonicity applicable in pharmaceuticals & also explain the methods of adjusting isotonicity.
BP104T.5	Acquire knowledge of various major intra and extra cellular electrolytes and their physiological role along with pharmaceutical compounds.
BP104T.6	Recall the medicinal and pharmaceutical importance of inorganic compounds.
BP104T.7	Explain various aspects of radiopharmaceuticals



BP105T Communication Skills (BP105T) [Theory | Regular]

CO ID.	Course Outcome
BP105T.1	Knowledge of basic aspects & soft skills for effective communication.
BP105T.2	Distinguish the elements of communication & communication style & its application for effectively manage the team as a team player.
BP105T.3	Understand the basic listening skills & its importance in pharmacy practice.
BP105T.4	Acquire the knowledge of technical writing skill
BP105T.5	Develop the interview skills & group discussion skills.

BP107P Human Anatomy and Physiology (BP107P) [Practical | Regular]

CO ID.	Course Outcome
BP107P.1	Explain the gross morphology, structure and functions of various organs of the human body.
BP107P.2	Identify the various tissues and organs of different systems of human body
BP107P.3	Understand the parts of compound microscope and its function
BP107P.4	Determine the heart rate, pulse rate and parameters of blood such as bleeding time, clotting time, erythrocyte sedimentation rate and Haemoglobin content
BP107P.5	Know the basic knowledge of haemocytometry
BP107P.6	Record the blood pressure.

BP108P Pharmaceutical Analysis I (BP108P) [Practical | Regular]

CO ID.	Course Outcome
BP108P.1	Understand the apparatus and glasswares used in analytical chemistry
BP108P.2	Know the importance of calibration process during analysis of any compound.
BP108P.3	Understand the principles, reaction condition, factor calculations for various methods of volumetric and electrochemical methods of analysis.
BP108P.4	Study different errors during analysis
BP108P.5	Demonstrate and explain different titrimetric methods as well as preparation and standardization of solutions with different strength
BP108P.6	Study concept of refractometry.

BP109P Pharmaceutics I (BP109P) [Practical | Regular]

CO ID.	Course Outcome
BP109P.1	Explain formulation ,evaluation,and labeling of syrup,elixir powder,ointments
BP109P.2	Describe use of ingredients in formulation and category of formulation
BP109P.3	Compare various monophasic and biphasic liquid dosage form
BP109P.4	Compare various semisolid dosage forms

BP110P Pharmaceutical Inorganic Chemistry (BP110P) [Practical | Regular]

CO ID.	Course Outcome
BP110P.1	Understand & perform the limit test of chloride, sulfate , Iron, arsenic ,lead and heavy metals
BP110P.2	Know about identification test for the sodium bicarbonate, magnesium hydroxide, copper sulfate , calcium gluconate & ferrous sulphate.
BP110P.3	Understand and perform the test of purification of Bentonite by measuring swelling power/index
BP110P.4	Understand and perform the test for purification of neutralizing capacity of Aluminium hydroxide gel
BP110P.5	Determination of potassium iodate and iodine in potassium iodide
BP110P.6	Preparation of inorganic pharmaceuticals such as boric acid, potash alum and ferrous sulphate



BP111P Communication skills (BP111P) [Practical | Regular]

CO ID.	Course Outcome
BP111P.1	Understand basic communication skills to interact effectively.
BP111P.2	Knowledge of soft skills set to work cohesively with team as a team player.


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Subjectwise Course Outcome - [B. Pharmacy - 2021-22]

SEM 2

Human Anatomy and Physiology-II (BP207P) [Practical | Regular]

CO ID.	Course Outcome
BP207P.1	Understand various systems using specimen, models, etc.,
BP207P.2	Demonstrate the neurological examination, function of olfactory nerve, visual acuity, reflex activity and positive and negative feedback mechanism
BP207P.3	Record the body temperature and and basal mass index
BP207P.4	Determine different types of taste as well as tidal volume and vital capacity
BP207P.5	Study the family planning devices and pregnancy diagnosis test
BP207P.6	Study of different systems present in our body.
BP207P.7	Practice and understand the procedure for calculating Platelet count and differential leukocyte count.
BP207P.8	Study of some changes in our metabolism and reflex activity.

BP20IT Human Anatomy and Physiology II (BP20IT) [Theory | Regular]

CO ID.	Course Outcome
BP20IT.1	Understand the organization of nervous system.
BP20IT.2	Know the structure and functions of parts of Digestive system
BP20IT.3	Understand the functions, structure and anatomy of respiratory system.
BP20IT.4	Know the classification of hormones and details of Endocrine system.
BP20IT.5	Understand the functions and structure of male and female reproductive system and basics of genetics.

BP202T Pharmaceutical Organic Chemistry I (BP202T) [Theory | Regular]

CO ID.	Course Outcome
BP202T.1	Study the basic principles of organic chemistry like hybridization, bond fission, intermolecular forces, structural effects, concept of isomerism and tautomerism etc.
BP202T.2	Describe the classification of organic compounds and Practice the IUPAC nomenclature system
BP202T.3	Understand stabilities of alkenes, conjugated dienes, mechanism, orientation of elimination, Electrophilic, free radical and Nucleophilic addition reaction and mechanism, kinetics, stereochemistry and factors affecting SN1 & SN2 reaction.
BP202T.4	Discuss the acidity of carboxylic acids and basicity of amines and Know different qualitative test for the different functional group.
BP202T.5	Discuss the mechanism of some named reaction.
BP202T.6	Study structures, qualitative tests and uses of different functional groups and related organic compounds.

BP203T BIOCHEMISTRY THEORY (*BP203T) [Theory | Regular]

CO ID.	Course Outcome
BP203T.1	Understand the catalytic role of enzyme and importance of enzymes in biochemical process.
BP203T.2	Understand the metabolism of nutrient molecules in physiological and pathological conditions.
BP203T.3	Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.

BP204T PATHOPHYSIOLOGY (BP204T) [Theory | Regular]

CO ID.	Course Outcome
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BP204T.3	Know the etiology of the selected disease states
BP204T.4	Explain the pathogenesis of the selected disease states
BP204T.5	Name the signs and symptoms of the selected disease states
BP204T.6	Know the clinical features and diagnostic tests for detection of the selected disease states
BP204T.1	Learn the basic principles of cell injury and cellular adaptation
BP204T.2	Study the basic mechanism involved in the process of inflammation and repair

BP205T COMPUTER APPLICATION IN PHARMACY (BP205T) [Theory | Regular]

CO ID.	Course Outcome
BP205T.1	Know various types of application of computers in pharmacy
BP205T.2	Know the various types of databases.
BP205T.3	.Know the various applications of databases in pharmacy.
BP205T.4	Know the number system used in computer
BP205T.5	know the concepts of information system and software
BP205T.6	know the various bioinformatics and its impact on vaccines

BP206T ENVIRONMENTAL SCIENCES (BP206T) [Theory | Regular]

CO ID.	Course Outcome
BP206T.1	Create the awareness about environmental problems among learners.
BP206T.2	Impart basic knowledge about the environment and its allied problems.
BP206T.3	Develop an attitude of concern for the environment.
BP206T.4	Motivate learner to participate in environment protection and environment improvement.
BP206T.5	Acquire skills to help the concerned individuals in identifying and solving environmental problems.
BP206T.6	Strive to attain harmony with Nature.

BP208P PHARMACEUTICAL ORGANIC CHEMISTRY I (BP208P) [Practical | Regular]

CO ID.	Course Outcome
BP208P.1	Explain and understand the principle and application of each experiment performed in laboratory.
BP202P.5	Discuss principle behind various qualitative tests and analyse the given unknown organic compounds having different functional groups.
BP202P.3	Understand the basic organic chemistry laboratory techniques, including calibration of thermometer, distillation, recrystallization, melting point and boiling determination.
BP202P.2	Understand and apply safe laboratory practices through the use of appropriate personal protective equipment and appropriate handling of all chemicals, including proper disposal of waste.
BP202P.6	Construct molecular models of compounds using atomic models sets.
BP202P.4	Know the Preparation methods of suitable solid derivatives from organic compounds with their reaction mechanism.

BP209P BIOCHEMISTRY (BP209P) [Practical | Regular]

CO ID.	Course Outcome
BP209P.1	Know about the qualitative analysis of carbohydrates (glucose,fructose,lactose,maltose,sucrose,and starch)
BP209P.2	Know about the identification test for proteins
BP209P.3	Know about the qualitative analysis of reducing sugars(DNSA method) and proteins (Biuret method)
BP209P.4	Understand the qualitative analysis of urine for abnormal constituents
BP209P.5	Study about the determination of blood creatinine, blood sugars
BP209P.6	Understand the determination of serum total cholesterol and preparation of buffer solution and measurement of PH



BP209P.7	Study of the enzymatic hydrolysis of starch.
BP209P.8	Determination of salivary amylase activity.
BP210P COMPUTER APPLICATION IN PHARMACY (BP210P) [Practical Regular]	
CO ID.	Course Outcome
BP210P.1	make a list of questionaries and label wizard using MS Word
BP210P.2	Understand and create HTML web page
BP210P.3	Retrieve information about drugs
BP210P.4	Creating (a database, working with queries, mailing labels with labeling wizard, invoice table) IN MS Access
BP210P.5	know how to export data and reports to and HTML and XML
DEG DEG (TH) [Theory Regular]	
CO ID.	Course Outcome
DEG1	Introduce the students meaning of democracy and its different models
DEG2	Know the role of the governance
DEG3	Understand the various approaches to the study of democracy and governance
DEG4	Understand and classify different parts of the constitution of india
DEG5	Understand and describe different amendments and provisions in the constitution of India

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RJSPM's COP, Pune
Subjectwise Course Outcome - [B. Pharmacy - 2021-22]

SEM 3

BP301T Pharmaceutical Organic Chemistry II (BP301T) [Theory | Regular]

CO ID. Course Outcome

- BP301T.1 Write the structure, name and the type of isomerism of the organic compound
- BP301T.2 Write the reaction, name the reaction, and orientation of the reactions
- BP301T.3 Account for reactivity/stability of compounds
- BP301T.4 Understand the preparation of various organic compounds.
- BP301T.5 Differentiate the polynuclear organic compounds with respect to their chemistry

BP302T Physical Pharmaceutics I (BP302T) [Theory | Regular]

CO ID. Course Outcome

- BP302T.1 Investigate and apply various theories, laws and equations related to different states of matter
- BP302T.2 Distinguish the principles of complexation/ protein binding & to use them for calculations of drug release and stability constant
- BP302T.3 Demonstrate use of physicochemical properties of drugs in the formulation development and evaluation of dosage forms
- BP302T.4 Compare and contrast between one, two & three component system
- BP302T.5 Know about crystallization as well as various parameters of crystal like crystal forms, habits, lattice angle, methods of crystal analysis, polymorphism
- BP302T.6 Adapt knowledge of Non-electrolytic and Electrolytic solutions regarding their types and properties mostly colligative properties
- BP302T.7 Explain and apply the key physical pharmacy concepts of solubility and dissolution, partitioning phenomena, surface phenomena, etc.
- BP302T.8 Acquire sufficient knowledge of surface and interfacial tension between the surfaces

BP303T Pharmaceutical Microbiology (BP303T) [Theory | Regular]

CO ID. Course Outcome

- BP303T.1 Study historical development of microbiology, it's scope, branches and classification of microbes
- BP303T.2 Compare and contrast the various structural features, biology & characteristics of microbes
- BP303T.3 Describe the classification, methods of identification, isolation, microbial growth/reproduction, cultivation, quantification, preservation and staining of microorganisms
- BP303T.4 Understand microbial control techniques such as sterilization, sterility tests, disinfection and preservation of pharmaceutical products
- BP303T.5 Enumerate microbial spoilage, microbial contamination and it's assessment
- BP303T.6 Describe the cell culture technology and its applications in pharmaceutical industries
- BP303T.7 Understand the concept of sterility and laminar air flow pattern
- BP303T.8 understand the different techniques of sterilization

BP304T Pharmaceutical Engineering (BP304T) [Theory | Regular]

CO ID. Course Outcome

- BP304T.1 Gain knowledge about various unit operations used in Pharmaceutical industries
- BP304T.2 Procure knowledge about the basics of various material handling techniques in pharmaceutical industry



BP304T.3	Understand the significance of plant layout design for optimum use of resources and gain the knowledge of various materials used for pharmaceutical plant construction.
BP304T.4	Understand the various types of corrosion and the preventive methods that can be adopted for corrosion control in Pharmaceutical industries.
BP304T.5	Appreciate various preventive methods used for corrosion control in pharmaceutical industry.
BP304T.6	Analyze fundamentals of centrifuge for particle separation as well as mixer for particle mixing in pharmacy practice

BP305P PHARMACEUTICAL ORGANIC CHEMISTRY II (BP305P) [Practical | Regular]

CO ID.	Course Outcome
BP305P.1	Learn different techniques like recrystallization and steam distillation
BP305P.2	Separate the given organic binary mixture
BP305P.3	Understand saponification value and its determination of different oil samples.
BP305P.4	Understand how to prepare small organic compound.

BP306P PHYSICAL PHARMACEUTICS - I (BP306P) [Practical | Regular]

CO ID.	Course Outcome
BP306P.1	Analyze the physicochemical properties such as solubility, pH, refractive index, partition coefficient, PKa values etc. experimentally.
BP306P.2	Study the effect of electrolyte on upper consolute temperature in phase diagram.
BP306P.3	Demonstrate the various adsorption isotherms by experimentally.
BP306P.4	Determine the surface tension, critical micellar concentration, HLB value of various surfactants.
BP306P.5	Complexation, Stability Constant, Donor-Acceptor ratio

BP307P PHARMACEUTICAL MICROBIOLOGY (BP307P) [Practical | Regular]

CO ID.	Course Outcome
BP307P.1	Know the principle, construction and working of equipments and skill to handle microscope for observation of microbes
BP307P.2	Prepare and sterilize nutrient broth, nutrient agar, slants, stabs and plates and adopt the skills required for maintaining strictly aseptic condition & handling inoculating loop, its sterilization and inoculation procedure
BP307P.3	Practice aseptic procedures for inoculation and examine sterility testing of pharmaceuticals
BP307P.4	Practice different methods of sterilization and isolate pure culture of microorganism
BP307P.5	Adapt the technique involved to see motility of bacteria i.e. hanging drop technique
BP307P.6	Develop skill to execute morphology of bacteria by staining and determine quality of water by Most probable number test (bacteriological analysis)
BP307P.7	Differentiate Gram negative intestinal bacteria by performing IMVIC test
BP307P.8	Learn standardization of pharmaceutical products microbiologically

BP308P PHARMACEUTICAL ENGINEERING (BP308P) [Practical | Regular]

CO ID.	Course Outcome
BP308P.1	Study various pharmaceutical machines and the equipment's used in pharmaceutical industry.
BP308P.2	Perform various processes used in pharmaceutical manufacturing process
BP308P.3	Study the different methods used for determination of humidity
BP308P.4	Develop rigorous experimental and analytical skills for extraction and drying of sample in laboratory
BP308P.5	Study various unit operations used in pharmaceutical industry and the effect of factors influencing them.

Non University Sub AECC Environment Studies [Theory | Regular]

CO ID.	Course Outcome
AECCES.1	Understand basics of environment like ecology, ecosystem, food chain, food web and Ecological pyramids.



AECES.2 Know the different natural sources and their conservation to save the environment.

AECES.3 Know the current problems of environment and how to solve them, Role of individual in conservation of environment and natural resources.

AECES.4 Understand the different factors of environmental pollution and measures to minimize it.


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Subjectwise Course Outcome - [B. Pharmacy - 2021-22]

Direct Second Year 2021-22

BP105T Communication Skills (BP105T) [Theory | Regular]

CO ID. Course Outcome

BP105T.1 Knowledge of basic aspects & soft skills for effective communication.

BP105T.2 Distinguish the elements of communication & communication style & its application for effectively manage the team as a team player.

BP105T.3 Understand the basic listening skills & its importance in pharmacy practice.

BP105T.4 Acquire the knowledge of technical writing skill

BP105T.5 Develop the interview skills & group discussion skills.

BP111P Communication skills (BP111P) [Practical | Regular]

ID. Course Outcome

BP111P.1 Understand basic communication skills to interact effectively.

BP111P.2 Knowledge of soft skills set to work cohesively with team as a team player.

BP205T COMPUTER APPLICATION IN PHARMACY (BP205T) [Theory | Regular]

CO ID. Course Outcome

BP205T.1 Know various types of application of computers in pharmacy

BP205T.2 Know the various types of databases.

BP205T.3 .Know the various applications of databases in pharmacy.

BP205T.4 Know the number system used in computer

BP205T.5 know the concepts of information system and software

BP205T.6 know the various bioinformatics and its impact on vaccines

BP210P COMPUTER APPLICATION IN PHARMACY (BP210P) [Practical | Regular]

CO ID. Course Outcome

BP210P.1 Create questionnaires, mailing labels and other documentation related to pharmacy by using MS WORD.

BP210P.2 Retrieve the information using online tools.

BP210P.3 Create databases and webpages using HTML.

BP210P.4 Create, View, Add, Delete and modify the data bases using MS Access.

BP210P.5 Generate report; work with queries, invoice tables using MS Access.

BP210P.6 Export table, forms and queries using web and XML pages to

BP301T Pharmaceutical Organic Chemistry II (BP301T) [Theory | Regular]

CO ID. Course Outcome

BP301T.1 Write the structure, name and the type of isomerism of the organic compound

BP301T.2 Write the reaction, name the reaction and orientation of reactions

BP301T.3 Account for reactivity/stability of compounds

BP301T.4 Describe the chemistry of fats and oils.



BP301T.5 Differentiate the polynuclear organic compounds with respect to their chemistry

BP302T Physical Pharmaceutics I (BP302T) [Theory | Regular]

CO ID. Course Outcome

BP302T.1 Investigate and apply various theories, laws and equations related to different states of matter

BP302T.2 Distinguish the principles of complexation/ protein binding & to use them for calculations of drug release and stability constant

BP302T.3 Demonstrate use of physicochemical properties of drugs in the formulation development and evaluation of dosage forms

BP302T.4 Compare and contrast between one, two & three component system

BP302T.5 Know about crystallization as well as various parameters of crystal like crystal forms, habits, lattice angle, methods of crystal analysis, polymorphism

BP302T.6 Adapt knowledge of Non-electrolytic and Electrolytic solutions regarding their types and properties mostly colligative properties

BP302T.7 Explain and apply the key physical pharmacy concepts of solubility and dissolution, partitioning phenomena, surface phenomena, etc.

BP302T.8 Acquire sufficient knowledge of surface and interfacial tension between the surfaces

BP303T Pharmaceutical Microbiology (BP303T) [Theory | Regular]

CO ID. Course Outcome

BP303T.1 Study historical development of microbiology, its scope, branches and classification of microbes

BP303T.2 Compare and contrast the various structural features, biology & characteristics of microbes

BP303T.3 Describe the classification, methods of identification, isolation, microbial growth/reproduction, cultivation, quantification, preservation and staining of microorganisms

BP303T.4 Understand microbial control techniques such as sterilization, sterility tests, disinfection and preservation of pharmaceutical products

BP303T.5 Enumerate microbial spoilage, microbial contamination and its assessment

BP303T.6 Describe the cell culture technology and its applications in pharmaceutical industries

BP303T.7 Understand the concept of sterility and laminar air flow pattern

BP303T.8 understand the different techniques of sterilization

BP304T Pharmaceutical Engineering (BP304T) [Theory | Regular]

CO ID. Course Outcome

BP304T.1 Gain knowledge about various unit operations used in Pharmaceutical industries

BP304T.2 Procure knowledge about the basics of various material handling techniques in pharmaceutical industry

BP304T.3 Understand the significance of plant layout design for optimum use of resources and gain the knowledge of various materials used for pharmaceutical plant construction.

BP304T.4 Understand the various types of corrosion and the preventive methods that can be adopted for corrosion control in Pharmaceutical industries.

BP304T.5 Appreciate various preventive methods used for corrosion control in pharmaceutical industry.

BP304T.6 Analyze fundamentals of centrifuge for particle separation as well as mixer for particle mixing in pharmacy practice

BP305P PHARMACEUTICAL ORGANIC CHEMISTRY II (BP305P) [Practical | Regular]

CO ID. Course Outcome

BP305P.1 Learn different techniques like recrystallization and steam distillation

BP305P.2 Separate the given organic binary mixture

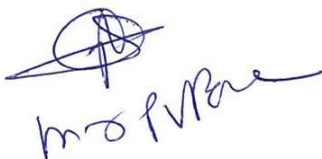
BP305P.3 Understand saponification value and its determination of different oil samples.

BP305P.4 Understand how to prepare small organic compound.

BP306P PHYSICAL PHARMACEUTICS - I (BP306P) [Practical | Regular]



CO ID.	Course Outcome
BP306P.1	Analyze the physicochemical properties such as solubility, pH, refractive index, partition coefficient, PKa values etc. experimentally.
BP306P.2	Study the effect of electrolyte on upper consolute temperature in phase diagram.
BP306P.3	Demonstrate the various adsorption isotherms by experimentally.
BP306P.4	Determine the surface tension, critical micellar concentration, HLB value of various surfactants.
BP306P.5	Complexation, Stability Constant, Donor-Acceptor ratio
BP307P PHARMACEUTICAL MICROBIOLOGY (BP307P) [Practical Regular]	
CO ID.	Course Outcome
BP307P.1	Know the principle, construction and working of equipments and skill to handle microscope for observation of microbes
BP307P.2	Prepare and sterilize nutrient broth, nutrient agar, slants, stabs and plates and adopt the skills required for maintaining strictly aseptic condition & handling inoculating loop, its sterilization and inoculation procedure
BP307P.3	Practice aseptic procedures for inoculation and examine sterility testing of pharmaceuticals
BP307P.4	Practice different methods of sterilization and isolate pure culture of microorganism
BP307P.5	Adapt the technique involved to see motility of bacteria i.e. hanging drop technique
BP307P.6	Develop skill to execute morphology of bacteria by staining and determine quality of water by Most probable number test (bacteriological analysis)
BP307P.7	Differentiate Gram negative intestinal bacteria by performing IMVIC test
BP307P.8	Learn standardization of pharmaceutical products microbiologically
BP308P PHARMACEUTICAL ENGINEERING (BP308P) [Practical Regular]	
CO ID.	Course Outcome
BP308P.1	Study various pharmaceutical machines and the equipment's used in pharmaceutical industry.
BP308P.2	Perform various processes used in pharmaceutical manufacturing process
BP308P.3	Develop rigorous experimental and analytical skills for extraction and drying of sample in laboratory
BP308P.4	Study various unit operations and process used in pharmaceutical industry and the effect of factors influencing them.
Non University Sub AECC Environment Studies [Theory Regular]	
CO ID.	Course Outcome
AECCES.1	Understand basics of environment like ecology, ecosystem, food chain, food web and Ecological pyramids.
AECCES.2	Know the different natural sources and their conservation to save the environment.
AECCES.3	Know the current problems of environment and how to solve them, Role of individual in conservation of environment and natural resources.
AECCES.4	Understand the different factors of environmental pollution and measures to minimize it.






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RJSPM's COP, Pune
Subjectwise Course Outcome - [B. Pharmacy - 2021-22]

SEM 4

AECC Environment Studies [Theory | Regular]

CO ID. Course Outcome

AECCES.1 Understand human community and its impact on environment

AECCES.2 Get knowledge about environmental policies

AECCES.3 Understand about environmental pollution and its control measures

AECCES.4 Motivate to students about environmental awareness by field visit

BP401T Pharmaceutical Organic Chemistry III (BP401T) [Theory | Regular]

CO ID. Course Outcome

BP401T.1 Understand the methods of preparation and properties of organic compounds.

BP401T.2 Explain the stereochemical aspects of organic compounds and stereo chemical reactions.

BP401T.3 Know the medicinal uses and other applications of organic compounds

BP401T.4 Understand the reactions and mechanism of name reactions.

BP402T Medicinal Chemistry I (BP402T) [Theory | Regular]

CO ID. Course Outcome

BP402T.1 Know the connection in between physicochemical properties, mechanism of action, uses and structural features of various drugs with respect to pharmacological activities.

BP402T.2 Understand the drug metabolic pathways, adverse effect and therapeutic value of Drugs

BP402T.3 Write synthesis of drugs and remember the structure of important drugs with its activity.

BP402T.4 Know the Structural Activity Relationship (SAR) of different class of drugs.

BP402T.5 Understand classification, Mechanism of action, Uses of Drugs acting on Autonomic nervous system and Central nervous system.

BP403T Physical Pharmaceutics II (BP403T) [Theory | Regular]

CO ID. Course Outcome

BP403T.1 Understand various physicochemical properties of drug & excipient molecules in designing the dosage form

BP403T.2 Describe the flow behavior of fluids and the concept of thixotropy in pharmaceutical formulations

BP403T.3 Explain the concept of surface and interfacial tension and HLB scale & method of formulation.

BP403T.4 Understand the fundamentals of chemical kinetics and stability of the drugs under accelerated conditions.

BP403T.5 Know the behavior and mechanism of drugs and excipients in the formulation development and evaluation of dosage forms.

BP403T.6 Determine the concept of micromeritics along with methods & its applications.

BP404T Pharmacology I (BP404T) [Theory | Regular]

CO ID. Course Outcome

BP404T.1 Know basics of Pharmacology like history, scope and general principles.

BP404T.2 Explain the mechanism of drug action at organ system/sub cellular/ macromolecular levels

BP404T.3 Know basics of Peripheral nervous system and pharmacology of drugs acting on PNS.

BP404T.4 Know basics of Central nervous system and pharmacology of drugs acting on CNS.



BP404T.5 Know the basics pharmacology of drugs acting on CNS and action of drugs in treatment of diseases.

BP405T Pharmacognosy and Phytochemistry I (BP405T) [Theory | Regular]

CO ID. Course Outcome

BP405T.1 know the techniques in the cultivation and production of crude drugs

BP405T.2 know the crude drugs, their uses and chemical nature

BP405T.3 know the evaluation techniques for the herbal drugs

BP405T.4 carry out the microscopic and morphological evaluation of crude drugs

BP405T.5 Understand the concept of plant tissue culture and its applications in pharmacognosy

BP405T.6 Understand the classification of crude drugs, its sources and scope of Pharmacognosy

BP406P Medicinal Chemistry I (BP406P) [Practical | Regular]

CO ID. Course Outcome

BP406P.1 Study the different purification techniques including Recrystallization, TLC.

BP406P.2 Prepare small organic compounds / drugs / drug intermediates.

BP406P.3 Perform purification of synthesized compounds by Column chromatography.

BP406P.4 Determine the Partition coefficient and Ionisation constants.

BP407P Physical Pharmaceutics II (BP407P) [Practical | Regular]

CO ID. Course Outcome

BP407P.1 Determine the particle size, particle size distribution by various methods.

BP407P.2 Evaluate bulk density, true density, porosity, the angle of repose of powder & study the influence of lubricant on angle of repose..

BP407P.3 Determine the viscosity of liquids by using different viscometer.

BP407P.4 Evaluate sedimentation volume of suspension.

BP407P.5 Calculate energy of activation of acid hydrolysis, order of given reaction, relative strength of two acids.

BP408P Pharmacology I (BP408P) [Practical | Regular]

CO ID. Course Outcome

BP408P.1 Understand the pharmacological actions of different categories of drugs

BP408P.2 Observe the effect of drugs on animals by simulated experiments

BP408P.3 Appreciate correlation of pharmacology with other bio medical sciences

BP408P.4 Get knowledge about pharmacology lab, eg. animals, instruments, animal handling skills etc...

BP409P Pharmacognosy and Phytochemistry I (BP409P) [Practical | Regular]

CO ID. Course Outcome

BP409P.1 Analyze unorganized crude drug by chemical tests

BP409P.2 Evaluate and identify crude drug by microscopical study

BP409P.3 Evaluate crude drugs by physicochemical parameter

BP409P.4 Explain use of equipment's in Pharmacognosy lab

BP409P.5 Compare, interpret, and calculate the results



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SEM 5

BP501T Medicinal Chemistry II (BP501T) [Theory | Regular]

CO ID.	Course Outcome
BP501T.1	Helps in correlating between pharmacology of a disease and its mitigation or cure of different drug classes and their side effects
BP501T.2	Know the structural activity relationship of different class of drugs.
BP501T.3	Explain synthesis of drugs and also recall the structure of some important drugs.
BP501T.4	Apply the core theoretical knowledge and explain the rational use of autacoids and related drugs.
BP501T.5	Understand classification, Mechanism of action, Uses of Drugs acting on Cardiovascular systems.
BP501T.6	Understand drugs acting on Endocrine system : Sexhormones, Drugs for erectile dysfunction, Oral contraceptives, Corticosteroids,Thyroid and Antithyroid drugs
BP501T.7	Learn Drugs used as Local anesthetics & anti diabetic agents

BP502T Industrial Pharmacy - I (BP502T) [Theory | Regular]

CO ID.	Course Outcome
BP502T.1	Describe the physicochemical properties which are important for formulation development of solid, liquid and sterile dosage forms.
BP502T.2	Interpret formulation data and subsequent analysis data towards selection of the most stable and effective formulations.
BP502T.3	Prepare quality pharmaceutical formulations from known references which are suitable for patient use.
BP502T.4	Explain the concept and importance of evaluation of product performance and interpret such data
BP502T.5	Describe the principles of sterile preparations and also why quality assurance and validation of critical steps in the production process are of significant importance.
BP502T.6	Develop cosmetic preparations with desired Safety, stability, and efficacy
BP502T.7	Develop aerosol formulations and understand the importance of evaluation tests for aerosols.
BP502T.8	Understand the importance of pharmaceutical packaging and its applications.

BP503T Pharmacology II (BP503T) [Theory | Regular]

CO ID.	Course Outcome
BP503T.1	Analyze the mechanism of drugs acting on cardiovascular system
BP503T.2	Express in depth knowledge about pharmacology and pharmacotherapy of drugs used in against autacoids
BP503T.3	Summarize the detail classification, mechanism of action, pharmacokinetics, therapeutic uses, adverse effects drug interactions of drugs acting on cardiovascular drugs and endocrine system
BP503T.4	Summarize the detail mechanism of Principles, applications and types of bioassay
BP503T.5	Study of Principles, applications and types of bioassay

BP504T Pharmacognosy and Phytochemistry II (BP504T) [Theory | Regular]

CO ID.	Course Outcome
BP504T.1	Highlight applicability and understand the relevance and significance of pharmacognosy and phytochemistry to pharmaceutical sciences
BP504T.2	Clarify principles of modern extraction techniques & explain how these can be applied in characterization and identification of the herbal drug and phytoconstituents..
BP504T.3	Explain correct use of various equipment in pharmacognosy laboratory.



BP504T.4	Understand the principle & applications of chromatographic & non-chromatographic separation methods
BP504T.5	Understand the metabolic pathway in formation of secondary metabolites and application of bio genetic Study.
BP504T.6	Know the different classes of secondary metabolites with their composition, chemistry and chemical classes, biological source, method of extraction, uses and application.

BP505T Pharmaceutical Jurisprudence (BP505T) [Theory | Regular]

CO ID.	Course Outcome
BP505T.1	The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals.
BP505T.2	Various Indian pharmaceutical Acts and Laws
BP505T.3	The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals
BP505T.4	The code of ethics during the pharmaceutical practice.

BP506P Industrial Pharmacy-I (BP506P) [Practical | Regular]

CO ID.	Course Outcome
BP506P.2	Understand and evaluate the concept of preformulation and develop the stable and efficient dosage forms
BP506P.1	Prepare and evaluate different solid dosage forms such as tablets capsules, pellets etc.
BP506P.3	Demonstrate the coating procedure of the tablets with proper understanding of steps involved in the film coating as well as sugar coating
BP506P.4	Practice the aseptic technique while preparing parenteral formulations.
BP506P.5	Practice the preparation and development of ophthalmic formulations.
BP506P.6	Understand Importance of pharmaceutical packaging and able to perform the various tests of packaging containers. (evaluation tests for glass containers)
BP506P.7	Know the preparation & evaluation parameters for cosmetic preparations.

BP507P Pharmacology - II (BP507P) [Practical | Regular]

CO ID.	Course Outcome
BP507P.1	Demonstrate isolation of different organs/tissues from the laboratory animals by simulated experiments
BP507P.2	Demonstrate the various receptor actions using isolated tissue preparation
BP507P.3	Understand the mechanism of drug action and its relevance in the treatment of different diseases
BP507P.4	Elaborate correlation of pharmacology with related medical sciences
BP507P.5	Understand in-vitro pharmacology and different physiological salt solutions.

BP508P Pharmacognosy and Phytochemistry II (BP508P) [Practical | Regular]

CO ID.	Course Outcome
BP508P1	Explain correct use of various equipments in Pharmacognosy laboratory
BP508P2	Handle simple and compound microscope technically in a correct way
BP508P3	Demonstrate skill of plant material sectioning, staining, mounting & focusing.
BP508P4	Draw morphological & microscopical diagrams & able to label component.
BP508P5	Understand the different cellular structures in powder characteristics of plant organ.
BP508P6	Understand the isolation process, role of solvent and identification of different secondary metabolites.
BP508P7	Understand the use of chromatography in identification of plant material, extracts and isolated compounds.
BP508P8	Understand the organized and unorganized drug and develop skill to identify it by chemical tests.

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SEM 6

Quality Assurance (BP606T) [Theory | Regular]

CO ID.	Course Outcome
BP606T.1	Understand the importance of quality in pharmaceutical products
BP606T.2	Understands the regulatory aspects of pharmaceuticals
BP606T.3	Learn the process involved in manufacturing of pharmaceuticals in different section/department and their activities
BP606T.4	Describe various documentation process and concept of calibration and validation
BP606T.5	Know the responsibilities of QA & QC departments
BP606T.6	Understand the scope of quality certifications applicable to pharmaceutical industries

BP601T Medicinal Chemistry III (BP601T) [Theory | Regular]

CO ID.	Course Outcome
BP601T.1	Know the general aspects of design, history, nomenclature, MOA, therapeutic uses, and recent developments of drugs.
BP601T.2	Understand variety of drug classes and some pharmacological properties.
BP601T.3	Know the importance of SAR of drugs.
BP601T.4	Understand the chemistry of drugs with respect to their biological activity
BP601T.5	Understand the importance of drug design and different techniques of drug design.
BP601T.6	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs
BP601T.7	Understand synthesis of some important class of drugs.
BP601T.8	Acquire knowledge on thrust areas for further research.

BP602T Pharmacology III (BP602T) [Theory | Regular]

CO ID.	Course Outcome
BP602T1	Explain the mechanism of drug action and its relevance in the treatment of different infectious diseases
BP602T2	Illustrate the principles of toxicology
BP602T3	Discuss treatment of various poisonings
BP602T4	Analyse correlation of pharmacology with related medical sciences.
BP602T5	Explain the fundamental knowledge on various aspects (classification, mechanism of action, therapeutic effects, clinical uses, side effects and contraindications) of drugs acting on respiratory and gastrointestinal system, infectious diseases, immunopharmacology

BP603T Herbal Drug Technology (BP603T) [Theory | Regular]

CO ID.	Course Outcome
BP603T1	Understand the raw material as source of herbal drug from cultivation of herbal drug product.
BP603T2	Know the different Indian systems of medicines.
BP603T3	Understand the concept of nutraceutical and know the benefits of nutraceuticals in different ailments and study the herb drug interaction.
BP603T4	Understand the concept of herbal cosmetic with herbal excipients and herbal formulations.
BP603T5	Know the WHO and ICH Guidelines of evaluation of herbal drugs




BP603T6	Know the patenting of herbal drug and GMP in herbal drug industry.
BP604T Biopharmaceutics and Pharmacokinetics (BP604T) [Theory Regular]	
CO ID.	Course Outcome
BP604T.1	Understand the basic concepts in biopharmaceutics and pharmacokinetics and their significance.
BP604T.2	Apply the knowledge plasma drug concentration-time data to calculate the pharmacokinetic parameters to describe the kinetics of drug absorption, distribution, metabolism, excretion, elimination
BP604T.3	Understand the concepts of bioavailability and bioequivalence of drug products and their significance. Able to evaluate factors influencing the drug availability that correspondingly influence drug treatment efficacy.
BP604T.4	Understand and explain various pharmacokinetic models and its applications.
BP604T.5	Estimate the Non-linear pharmacokinetics with special reference to its assessment
BP605T Pharmaceutical Biotechnology (BP605T) [Theory Regular]	
CO ID.	Course Outcome
BP605T.1	Understanding the concept related to enzymes ,importance of Immobilized enzymes in Pharmaceutical Industries, Biosensors and basic principal of protein and genetic engineering
BP605T.2	Understand the concept related to genetic engineering , recombinant DNA technology and applications in relation to production of pharmaceuticals
BP605T.3	Importance of Monoclonal antibodies, Immunoglobulins, blood products and Plasma Substitutes in Industries
BP605T.4	Understand importance and use of microorganisms in fermentation technology
BP605T.5	Understand the various concepts related to advanced biotechnological techniques like PCR.
BP605T.6	Understand the immunity system and various types and terminology related to immune system.
BP605T.7	Understand the advanced techniques used in biotechnology.
BP607P Medicinal chemistry III (BP607P) [Practical Regular]	
CO ID.	Course Outcome
BP607P.1	Understand use of various equipments and safety measures while working in medicinal chemistry laboratory.
BP607P.2	Perform synthesis of medicinally important compounds/ drug intermediates.
BP607P.3	Understand reaction scheme, mechanism and theory involved in synthesis of medicinally important organic compounds.
BP607P.4	Draw chemical structures and reactions by Chem draw software.
BP607P.5	Explain the physicochemical properties of drugs using drug design software.
BP608P Pharmacology III (BP608P) [Practical Regular]	
CO ID.	Course Outcome
BP608P1	Learn dose calculations in pharmacological practical
BP608P2	Determine the anti-ulcer and anti-allergic activity
BP608P3	Study the effects of the drug on gastrointestinal motility and saline purgative on frog intestine
BP608P4	Study the effect of agonist and antagonist
BP608P5	Write and learn applications of different biostatistical methods
BP609P Herbal Drug Technology (BP609P) [Practical Regular]	
CO ID.	Course Outcome
BP609P1	Understand the concept of preliminary phytochemical screening with ability of performing different identification test.
BP609P2	Determine the alcohol content and evaluate the excipients in different herbal preparations.
BP609P3	Preparation and standardization of extract and different herbal dosage forms..
BP609P4	Study the monograph of analysis of herbal drugs from recent pharmacopoeias.



BP609P5 Determine the different chemical constituents in crude drug.

BP609P6 Determine the excipients of natural origin by chemical tests


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SEM 7

BP701T Instrumental Methods of Analysis (BP701T) [Theory | Regular]

CO ID.	Course Outcome
BP701T.2	Understand and explain the instrumentation of analytical techniques.
BP701T.3	Understand and explain applications of analytical techniques.
BP701T.1	Understand and explain the principle involved in analytical techniques.
BP701T.4	To interpret the given IR spectrum.

BP702T Industrial Pharmacy-II (BP702T) [Theory | Regular]

CO ID.	Course Outcome
BP702T.1	Know the process of pilot plant and scale up of pharmaceutical dosage forms.
BP702T.2	Understand the process of technology transfer from lab scale to commercial batch.
BP702T.3	Know different Laws and Acts that regulate pharmaceutical industry.
BP702T.4	Understand the approval process and regulatory requirements for drug products.
BP702T.5	Know about pharmaceutical product development and product movement from laboratory to market.

BP703T Pharmacy Practice (BP703T) [Theory | Regular]

CO ID.	Course Outcome
BP703T.1	Understand various drug distribution methods in a hospital and pharmaceutical care services.
BP703T.2	Understand the pharmacy stores management and inventory control.
BP703T.3	Examine drug therapy of patient through medication chart review and clinical review.
BP703T.4	Prepare medication history interview and counsel the patients.
BP703T.5	Determine drug related problems and adverse drug reactions.
BP703T.6	Interpret selected laboratory results of specific disease states. (as monitoring parameters in therapeutics)
BP703T.7	Know pharmaceutical care services
BP703T.8	Do patient counseling in community pharmacy AND Appreciate the concept of Rational drug therapy.

BP704T Novel Drug Delivery System (BP704T) [Theory | Regular]

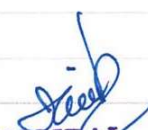
CO ID.	Course Outcome
BP704T.1	Understand the fundamental concepts of controlled drug release and prerequisites of drug candidates along with the polymers, their advantages and disadvantages.
BP704T.2	Knowledge of microencapsulation and gastroretentive like mucosal as well as implantable drug delivery systems
BP704T.3	Describe the concepts, approaches & formulation of transdermal, ocular, nasopulmonary and intrauterine drug delivery systems.
BP704T.1.4	Explain the concept & approaches of targeted drug delivery system

BP705P BP705P Instrumental Methods of Analysis [Practical | Regular]

CO ID.	Course Outcome
BP705P.1	To understand the different types of instrumental analytical techniques available for quality control of APIs & formulations.
BP705P.2	Quantification of API by using various instrumental methods of analysis.
BP705P.3	Determination of functional group in the compound by using IR spectroscopy.
BP705P.4	Qualitative analysis by analytical techniques






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BP706PS - Pharmaceutics

BP706PS BP706PS - Pharmaceutics [Practical | Regular]

CO ID.	Course Outcome
BP706PS.PH1	Describe the overview of subject, present status and future aspects of Pharmaceutics
BP706PS.PH2	Explain the concept of literature, how literature review perform and its importance of research and development of pharmaceuticals
BP706PS.PH3	Describe the importance and principals of pharmaceutical industry and their developments.
BP706PS.PH4	Understand the Regulatory aspects of pharmaceuticals, need, advantages, limitation and importance in pharmaceutical sector.
BP706PS.PH5	Describe the importance and basic principals of Pharmaceutical Quality Assurance department and Documents review
BP706PS.PH6	Explain the concept and principal of Drug discovery and development
BP706PS.PH7	Describe the Formulation research & development of various dosage forms like Tablet , capsules and parenteral formulation
BP706PS.PH8	Understand the importance , principals and working of various instruments used in pharmaceutics industries.






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BP706PS - Pharmaceutical Chemistry	
BP706PS.PC BP706PS - Pharmaceutical Chemistry [Practical Regular]	
CO ID.	Course Outcome
BP706PS.PC.1	Understand Research & Review paper writing methodically and tools.
BP706PS.PC.2	Know drug design and discovery techniques
BP706PS.PC.3	Understand various aspects of process chemistry
BP706PS.PC.4	Prepare drugs / Drug intermediates
BP706PS.PC.5	Develop TLC of synthesized compounds
BP706PS.PC.6	Demonstrate recrystallization of organic compounds
BP706PS.PC.7	Demonstrate various softwares used in Pharmaceutical Chemistry
BP706PS.PC.8	Evaluate case studies on infringement of a pharmaceutical patents


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BP706PS - Pharmacognosy	
BP706PS BP706PS - Pharmacognosy [Practical Regular]	
CO ID.	Course Outcome
BP706PS.PGY1	understand Referencing and literature review in Pharmacognosy
BP706PS.PGY2	understand extraction, isolation and analysis of Phytopharmaceuticals
BP706PS.PGY3	understand different Herbal Novel Drug Delivery System with their details
BP706PS.PGY4	study about industries based on herbal drug, GST and loan licensing process, IPR, FSSAI Herbal NDDS, Import and export of herbal drugs and organic farming.
BP706PS.PGY5	study various funding agencies and their schemes
BP706PS.PGY6	perform to extract and isolate, identify adulterants in food and isolate volatile oil from the crude drugs






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SEM 8	
(BP811ET) Advanced Instrumentation Techniques (BP811ET) [Theory Elective]	
CO ID.	Course Outcome
BP811ET2	Understand and explain the instrumentation of analytical techniques.
BP811ET3	Understand and explain applications of analytical techniques.
BP811ET1	Understand and explain the principle involved in analytical techniques.
BP801T Biostatistics and Research Methodology (BP801T) [Theory Regular]	
CO ID.	Course Outcome
BP801T.1	Understand the importance and concept of Statistics, Biostatistics, Measures of central tendency, Measures of dispersion and Correlation with pharmaceutical examples
BP801T.2	Describe the concept and principal about Regression ,Probability ,Parametric test with pharmaceutical examples.
BP801T.3	Understand the importance of Parametric ,Non Parametric tests ,Research Need for research, Need for design of Experiments, Graphs ,Designing the methodology with Pharmaceutical Examples.
BP801T.4	Understand the importance of factorial design ,Regression modeling, Introduction to Practical components of Industrial and Clinical Trials Problems with pharmaceutical examples
BP801T.5	Understand the concept and knowledge regarding Design and Analysis of experiments ,Factorial Design ,Response Surface methodology with pharmaceutical examples
BP802T Social and Preventive Pharmacy (BP802T) [Theory Regular]	
CO ID.	Course Outcome
BP802T.1	Understand the concept of health and disease
BP802T.2	Acquire high consciousness/realization of current issues related to health and pharmaceutical problems within the country and worldwide
BP802T.3	Know about Personal hygiene and health
BP802T.4	Implementing general principles of prevention and control of diseases
BP802T.5	Explain national health programs, its objectives, functioning and outcome
BP805ET Pharmacovigilance (BP805ET) [Theory Elective]	
CO ID.	Course Outcome
BP805ET1	Explain the role of national agencies and international bodies in medicines regulation
BP805ET2	Outline the classification of adverse events / adverse drug reactions.
BP805ET3	Discuss drug and disease classification, drug dictionaries and coding and Information resources in pharmacovigilance
BP805ET4	Explain the fundamental knowledge on vaccine safety surveillance, pharmacovigilance methods and communication in pharmacovigilance
BP805ET5	Discuss the place of the International Conference on Harmonisation (ICH) in medicines regulation
BP805ET6	Describe the genetics related ADR, drug safety evaluation in special population and schedule Y
BP807ET Computer Aided Drug Design (BP807ET) [Theory Elective]	
CO ID.	Course Outcome
BP807ET.1	Understand the design and discovery of lead molecules
BP807ET.2	Classify the role of drug design tools for drug discovery process



BP807ET.3	Understand and analyse concepts of QSAR and docking
BP807ET.4	Analyse and apply various strategies to develop new drug-like molecules.
BP807ET.5	Use various molecular modeling software to design new drug molecule
BP809ET Cosmetic Science (BP809ET) [Theory Elective]	
CO ID.	Course Outcome
BP809ET.1	Knowledge of various regulatory requirement for cosmetic and cosmeceutical products.
BP809ET.2	Understand the concepts of cosmetics; anatomy of skin v/s hair, general excipients used in cosmetics
BP809ET.3	Explain the principles and key building blocks of various skin care, hair care and oral care products etc
BP809ET.4	Discuss the cosmetic evaluation principles and cosmetic problems associate with skin, hair and oral cavity.
BP809ET.5	Explain the concept of cosmeceuticals, history, difference between cosmetics & cosmeceuticals& cosmeceuticals agents
BP812ET DIETARY SUPPLEMENTS AND NUTRACEUTICALS (BP 812 ET) [Theory Elective]	
CO ID.	Course Outcome
BP812ET1	Understand the need of supplements by the different group of people to mentain healthy life.
BP812ET2	Understand the outcome of deficiencies in detary supplements
BP812ET3	Recoqnize the occurrence and characteristic features of phytochemicals as nutraceuticals
BP812ET4	Understand the concept of free radicals and antioxidants
BP812ET5	Acquaint with the regulatory and commercial aspects of dietary supplements including health claim.

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