



COURSE OUTCOMES

B.Pharm First Year (I sem) (2019 Pattern)

BP101T. HUMAN ANATOMY AND PHYSIOLOGY-I (Theory)

Upon the completion of the course student shall be able to

CO1	Describe various parts of human body and their roles.
CO2	Explain the structure of cells, tissues and organs along with its significance, various parts of CNS and PNS.
CO3	Explain different bones in the human skeleton system, their location and significance, Endocrine system and its importance with the help of charts and models.

BP107P. HUMAN ANATOMY AND PHYSIOLOGY-I (Practical)

Upon the completion of the course student shall be able to

CO1	Identify, compare and contrast between the microscopy of epithelial, connective, muscular, nervous tissue of human body.
CO2	Explain the significance of bleeding time, clotting time, blood group detection, hemoglobin detection and measurement of blood pressure.
CO3	Demonstrate procedure of white blood cell count and red blood cell count and red blood cell count of blood sample.

BP102T. PHARMACEUTICAL ANALYSIS-I (Theory)

CO1	Outline the method of expressing the concentration with preparation and standardization of various molar and normal solutions.
CO2	Recall the sources, type and method of minimizing the errors.
CO3	Explain the principle involved in volumetric and electrochemical analysis of inorganic compounds

BP108P. PHARMACEUTICAL ANALYSIS (Practical)

CO1	Prepare and standardize primary and secondary standard solutions of various normality and molarity
CO2	Perform various volumetric and electrochemical titrations



BP103T. PHARMACEUTICS- I (Theory)

Upon the completion of the course student shall be able to

CO1	Outline the history of profession of pharmacy.
CO2	Enumerate the basics of different dosage forms.
CO3	Identify pharmaceutical incompatibilities in prescription ,their manifestation and suggest solution to correct same
CO4	Describe the professional way of handling prescription.
CO5	Perform the pharmaceutical calculations required during formulation of dosage form.

BP109P. PHARMACEUTICS I (Practical)

Upon the completion of the course student shall be able to

CO1	Formulate various conventional dosage forms in professional way.
CO2	Emphasize on the concepts of prescription like translation, calculation and suitability

BP104T. PHARMACEUTICAL INORGANIC CHEMISTRY (Theory)

CO1	Explain the sources of impurities and method to determine the impurities in an inorganic drugs and pharmaceuticals.
CO2	Describe the importance of radiopharmaceuticals.
CO3	Explain the method of preparation, assay, storage conditions and uses of Inorganic compounds such as acidifiers, antacids, cathartics, electrolyte replenisher, antimicrobials, dental products, medicinal gases and miscellaneous compounds like expectorant, sedative, antidotes and radiopharmaceuticals.

BP110P. PHARMACEUTICAL INORGANIC CHEMISTRY (Practical)

CO1	Identify the Inorganic compounds through various chemical tests.
CO2	Perform the limit test for certain impurities like chloride, sulphate, iron, arsenic, lead and heavy metals as per the Indian Pharmacopoeia

BP105T.COMMUNICATION SKILLS (Theory)

Upon the completion of the course student shall be able to

CO1	Explain need of communication skills, barriers to communicate effectively and perspectives of communication required to function effectively in areas of pharmaceutical operation
CO2	Apply various elements, styles of communications, Basic listening skills, writing skills to communicate effectively and manage team as team



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CO3	Apply Interview skills presentation skills and group discussion for development of leadership qualities and essentials

BP111P COMMUNICATION SKILLS (Practical)

CO1	Demonstrate and Apply basic communication skills and advance learning skills
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BP 106RBT.REMEDIAL BIOLOGY (Theory)

Upon completion of the course student shall be able to

CO1	Describe the classification and salient features of five kingdoms of life.
CO2	Explain the basic component of anatomy and physiology of plant
CO3	Discuss the basic components of anatomy and physiology of animal with special reference to human, identify the different tissues and organs of the body
CO4	Explain the gross morphology, structure and functions of various organs and systems of human body.
CO5	Describe the various homeostatic mechanism, body fluids, hormones and their imbalances in body.
CO6	Explain various parts of CNS, PNS and their Role

BP112RBP.REMEDIAL BIOLOGY (Practical)

Upon completion of the course student shall be able to

CO1	Detailed study of frog by using computer model.
CO2	Study of microscope, section cutting, mounting, staining, cell and cellular inclusions and preparation of slides.
CO3	Perform blood group detection, measurement of blood pressure and tidal volume.
CO4	Able to identify microscopy of tissues pertinent to stem, root, leaf, seed, fruit and flower.

BP 106 RMT.REMEDIAL MATHEMATICS (Theory)

Upon the completion of the course student shall be able to

CO1	Know the theory and their application of Partial fraction, Logarithms , Function, in Pharmacy Limits and continuity, Matrices and Determinant, Calculus in Pharmacy
CO2	Solve the different types of problems by applying theory of Partial fraction, Logarithms , Function, in Pharmacy Limits and continuity, Matrices and Determinant, Calculus

B.Pharm First Year (II sem)

BP 201T. HUMAN ANATOMY AND PHYSIOLOGY-II (Theory)



Upon the completion of the course student shall be able to

CO1	Explain the gross morphology, structure and functions of various organs of the human body.
CO2	Describe various homeostatic mechanisms and their imbalances.
CO3	Discuss the anatomy of lungs and other parts of respiratory system, tidal volume, artificial respiration and resuscitation methods.

BP 207 P. HUMAN ANATOMY AND PHYSIOLOGY-II (Practical)

Upon the completion of the course student shall be able to

CO1	Identify various tissues and organs of different systems of human body.
CO2	Explain construction and working of spirometer for the measurement of lung volume and capacities.

BP202T. PHARMACEUTICAL ORGANIC CHEMISTRY - I (Theory)

Upon completion of the course student shall be able to

CO1	Outline the structure, name and the type of isomerism of the organic compound.
CO2	Describe the reaction name of the reaction and orientation of reactions
CO3	Explain the mechanism, kinetics and reactivity of the certain reactions

BP208P. PHARMACEUTICAL ORGANIC CHEMISTRY - I (Practical)

Upon completion of the course student shall be able to

CO1	Perform the systematic qualitative analysis of organic compounds
CO2	Prepare the suitable solid derivatives from organic compounds

BP203 T. BIOCHEMISTRY (Theory)

Upon completion of the course student shall be able to

CO1	Describe the chemistry, biological importance and metabolism pattern of Biomolecules.
CO2	Summaries the concept of biological oxidation emphasizing on ETC and oxidative phosphorylation and identifying related inhibitors.
CO3	Explain catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzyme
CO4	Explain the genetic organization of mammalian genome and functions of DNA in synthesis of RNAs and proteins.

BP 209 P. BIOCHEMISTRY (Practical)

Upon completion of the course student shall be able to

CO1	Identify and characterize carbohydrates, proteins by various qualitative chemical tests in a given sample.
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CO2	Determine blood creatinine, sugar, total cholesterol and action of salivary amylase.
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BP 204T. PATHOPHYSIOLOGY (Theory)

Upon the completion of the course student shall be able to

CO1	Explain the etiology and pathogenesis and complications of severe diseases and disorders.
CO2	Discuss the signs and symptoms of different diseases and their diagnostic procedures.
CO3	Differentiate between acute and chronic diseases based on etiology, signs and symptoms and complications.

BP205 T. COMPUTER APPLICATIONS IN PHARMACY (Theory)

Upon the completion of the course student shall be able to

CO1	know the various types of application of computers in pharmacy
CO2	Understand Concept of Information Systems and Software, various types of databases like MYSQL, MS ACCESS, Pharmacy Drug database, Number systems, Web technologies and Bioinformatics
CO3	Apply computer knowledge for Chromatographic data analysis(CDS), Laboratory Information management System (LIMS) and Text Information Management System(TIMMS)

BP210P. COMPUTER APPLICATIONS IN PHARMACY (Practical)

Upon the completion of the course student shall be able to

CO1	Use MS Word, MS Access for designing questionnaire, form to record patient information, creating patient database, mailing labels, invoice table, and generate reports
CO2	Create HTML web page, Export Tables, Queries, Forms and Reports to web pages and XML Pages

BP 206 T. ENVIRONMENTAL SCIENCES (Theory)

Upon the completion of the course student shall be able to

CO1	Understand Multidisciplinary nature of environmental studies Natural Resources Renewable and non-renewable resources, associated problems
CO2	Understand, explain and Draw Structure and function of various ecosystem.
CO3	Understand Environmental Pollution and its remedial methods to reduce it



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DEMOCRACY, ELECTION AND GOVERNANCE

C01	Describe the Fundamental and dimensions of Indian Constitution.
C02	Explain Indian decentralization and challenges of democracy.
C03	Describe Panchayat raj system in the lost independence periods.
C04	Explain making of amendment 73rd and 74th in Indian constitution.
C05	Details about government and governance.



B.Pharm Second Year (III sem) (2019 Pattern)

BP 301T. PHARMACEUTICAL ORGANIC CHEMISTRY-II (Theory)

Upon completion of the course student shall be able to

CO1	Describe the reaction and mechanism of Benzene, phenols, aromatic amines and polynuclear hydrocarbons.
CO2	Explain the stabilities of cycloalkanes through different theories.
CO3	Summarize the chemistry of fats and oils.
CO4	Write the structure, name and type of isomerism of organic compound.

BP305P. PHARMACEUTICAL ORGANIC CHEMISTRY-II (Practical)

Upon completion of the course student shall be able to

CO1	Determine the physical constants like acid value, saponification value and Iodine value of organic compounds.
CO2	Synthesize certain organic compounds through acetylation, halogenation, nitration, oxidation, hydrolysis, Perkins and claisen condensation reactions
CO3	Separate organic compounds from binary mixture

BP302T. PHYSICAL PHARMACEUTICS-I (Theory)

Upon the completion of the course student shall be able to

CO1	Explain various physicochemical properties of drug molecules applicable in the designing of dosage forms.
CO2	Demonstrate use of physicochemical properties in the formulation



development and evaluation of dosage forms.

BP306P. PHYSICAL PHARMACEUTICS - I (Practical)

Upon the completion of the course student shall be able to

CO1	Determination of various physicochemical properties of drug molecules applicable in the designing of dosage forms.
CO2	Analyze and interpret the data generated from the experiments.
CO3	Compare and contrast between different method used in the determination of the same physicochemical parameters.

BP 303 T. PHARMACEUTICAL MICROBIOLOGY (Theory)

Upon the completion of the course student shall be able to

CO1	Explain methods of identification, cultivation and preservation of various microorganisms
CO2	Summarize the importance and implementation of sterilization in pharmaceutical processing and industry.
CO3	Discuss microbiological standardization of Pharmaceuticals.
CO4	Outline cell culture technology and its applications in pharmaceutical industries.

BP 307P.PHARMACEUTICAL MICROBIOLOGY (Practical)

Upon completion of the subject student shall be able to

CO1	Select and utilize different equipment and processing in experimental microbiology
CO2	Identify and isolate various microorganisms
CO3	Perform sterility testing of pharmaceutical products.
CO4	Perform microbiological standardization of Pharmaceuticals.

BP 304 T. PHARMACEUTICAL ENGINEERING (Theory)

Upon the completion of the course student shall be able to

CO1	Explain use of various unit operations used in Pharmaceutical industries.
CO2	Describe the material handling techniques.
CO3	Discuss various methods of hazards and safety management used in



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	Pharmaceutical industry
CO4	Outline the significance of plant layout design for optimum use of resources.
CO5	Enumerate the various preventive methods used for corrosion control in Pharmaceutical industry

BP308P - PHARMACEUTICAL ENGINEERING (Practical)

CO1	Perform various unit operation process involved in pharmaceutical manufacturing
CO2	Perform numerical involved in calculating process related determinants.
CO3	Create graphs and illustrate actions for data representation
CO4	Analyze and interpret the data generated from the experiments performed.

B.Pharm Second Year (IV sem)

BP 401 T PHARMACEUTICAL ORGANIC CHEMISTRY III (Theory)

On completion of course, student should be able to,

CO1	Understand the methods of preparation and properties of organic compounds.
CO2	Explain the stereo chemical aspects of organic compounds and stereo chemical reactions.
CO3	Know the medicinal uses and other applications of organic compounds.

BP 402T MEDICINAL CHEMISTRY-I (Theory)

Upon completion of the course student shall be able to

CO1	Explain physicochemical properties and pharmacokinetics affecting drug action.
CO2	Classify certain therapeutic agents and outline the synthetic route for the selective medicinal compounds of sympathetic, parasympathetic and Central nervous system.
CO3	Explain the structural activity relationship of certain therapeutic agents with their uses, adverse effects and recent developments.



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BP406P. MEDICINAL CHEMISTRY-I (Practical)

Upon completion of the course student shall be able to

CO1	Synthesize and explain reaction mechanism of medicinally important compounds by using conventional methods and purify them by using TLC and column chromatography.
CO2	Determine the Partition Coefficient and Ionization constant.

BP 403 T. PHYSICAL PHARMACEUTICS-II (Theory)

Upon completion of the subject student shall be able to

CO1	Compare and contrast between colloidal and coarse dispersion based on their general properties, principles of formulation and evaluation.
CO2	Explain and comprehend the principles of preformulations like rheology, deformation of solid and micromeretics.
CO3	Explain use of physicochemical properties in the formulation development and evaluation of dosage forms
CO4	Explain with illustration the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations

BP 407P. PHYSICAL PHARMACEUTICS- II (Practical)

Upon completion of the subject student shall be able to

CO1	Determine physicochemical properties in the formulation development and evaluation of dosage forms.
CO2	Make use of principles of chemical kinetics & to use them for stability testing.
CO3	Compare and contrast between different methods used in the determination of the same physicochemical parameters.
CO4	Demonstrate and explain the effect of different excipients and their differing concentration on physicochemical determinants of dosage forms.

BP404T. PHARMACOLOGY I - Theory

Upon completion of the course student shall be able to



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CO1	Understand the various pharmacological terms and actions of different categories of drugs.
CO2	Explain the mechanism of action at organ system/sub cellular/macromolecular levels.
CO3	Apply the basic pharmacological knowledge in the prevention and treatment of various diseases.

BP408P. PHARMACOLOGY I - Practical

Upon completion of the course student shall be able to

CO1	Observe the effects of drugs on animal by simulated experiments
CO2	Appreciate correlation of pharmacology with other bio medical science.

BP 405 T. PHARMACOGNOSY & PHYTOCHEMISTRY-I (Theory)

Upon completion of the course student shall be able to

CO1	cultivate and produce crude drugs by different techniques.
CO2	apply the knowledge of plant tissue culture.
CO3	classify the crude drugs and determine their quality.
CO4	evaluate the crude drugs for the presence of active metabolites and their uses.

BP 409 P. PHARMACOGNOSY & PHYTOCHEMISTRY-I (Practical)

Upon completion of the subject student shall be able to

CO1	Classify the crude drugs and determine their quality.
CO2	Evaluate the crude drugs for the presence of active metabolites and their uses.

B.Pharm Third Year (V sem) (2019 Pattern)

BP501T MEDICINAL CHEMISTRY II (THEORY):-

The students will be able to

CO1	Explain the chemistry of drugs with respect to their pharmacological activity and structural Activity Relationship of different class of drugs..
CO2	Describe the drug metabolic pathways, adverse effect and therapeutic value of drugs.



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CO3	Outline the chemical synthesis of selected drugs.
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BP502T INDUSTRIAL PHARMACY I (THEORY):-

The students will be able to

CO1	To explain preformulation studies of dosage forms.
CO2	Interpret the concept, types, pharmacopoeial, specification, techniques and equipments used in liquid oral and tablet dosage form dosage form.
CO3	Describe the formulation, evaluation and pharmacopoeial, specification of capsule dosage form and explain the concept of palletization.
CO4	To know the production procedure , formulation , quality control test and packaging selection of paranteral and ophthalmic products.
CO5	To know in detail about Aerosols and packaging material science.

BP503T PHARMACOLOGY II (THEORY)

Upon completion of the course student shall be able to

CO1	Understand the mechanism of drug action and its relevance in the treatment of different disorders.
CO2	Explain the pharmacology and mechanisms of various drugs and Bioassays, their types and importance.

BP504T PHARMACOGNOSY AND PHYTOCHEMISTRY II (THEORY)

Upon completion of the course student shall be able to

CO1	Explain basic metabolic pathways for production of secondary metabolites in plants and utilization of radioactive isotopes in the investigation of biosynthetic pathways
CO2	Describe the composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications about various secondary metabolites
CO3	Industrial production, estimation and utilization of phytoconstituents
CO4	Understand and explain the modern extraction techniques, isolation, characterization and identification of the herbal drugs and phytoconstituents.

BP505T PHARMACEUTICAL JURISPRUDENCE (THEORY)

Upon completion of the course student shall be able to

CO1	Understand the pharmaceutical legislation and implications in the development and marketing of pharmaceuticals, know the codes of Pharmaceutical ethics during the pharmaceutical practice.
CO2	Know Different Pharmaceutical acts, laws and schedules



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CO3	Know the regulatory and administrative authorities and agencies governing manufacture and sale of pharmaceuticals
CO4	Know the regulations of DPCO-2013; Understand the CPSCEA guidelines for Prevention of cruelty to animals act
CO5	Understand the concept of Intellectual property rights and Right to information act

BP506P INDUSTRIAL PHARMACY I (PRACTICAL)

Upon completion of the course student shall be able to

CO1	Learn about correct use of various equipment's in pharmaceuticals laboratory relevant to tablets, capsules and tablet coating.
CO2	Inculcate the knowledge of formulation, evaluation, packaging and labeling of tablets, capsule, injections eye preparations and creams.
CO3	Select the suitable packaging material for the preparation.
CO4	Describe the use of ingredients in formulation and category of formulation.

BP507P PHARMACOLOGY II (PRACTICAL)

Upon completion of the course student shall be able to

CO1	Demonstrate isolation of different organs / tissues from the laboratory animals by simulated experiments.
CO2	Appreciate correlation of pharmacology with related medical sciences and to explain the pharmacological actions and mechanism of action of various drugs and Bioassays, their types and importance

BP508P PHARMACOGNOSY AND PHYTOCHEMISTRY II (PRACTICAL)

Upon completion of the subject student shall be able to

CO1	Perform and understand morphology, microscopy, & powdered characteristics of crude drug
CO2	Exercise extraction and isolation of phytoconstituents and detection by different chromatographic methods
CO3	Identify unorganized drugs

B.Pharm Third Year (VI sem.)

BP601T MEDICINAL CHEMISTRY III - THEORY

Upon the completion of the course student shall be able to

CO1	Explain the importance of drug design and different techniques of drug design.
CO2	Explain the chemistry of drugs with respect to their biological activity.
CO3	Describe the metabolism, adverse effects and therapeutic value of drugs.
CO4	Explain the SAR of drugs.



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BP602T PHARMACOLOGY III (THEORY)

Upon the completion of the course student shall be able to

CO1	Understand the mechanism of drug action and its relevance in the treatment of different infectious diseases
CO2	Comprehend the principles of toxicology and treatment of various poisonings and appreciate correlation of pharmacology with related medical sciences and introduction to chronopharmacology.

BP603T HERBAL DRUG TECHNOLOGY (THEORY)

Upon completion of the course student shall be able to

CO1	Understand raw material as source of herbal drugs from cultivation to herbal drug product and explain method for identification and authentication and processing of herbal raw materials for herbal drug preparation
CO2	Explain methods of good agricultural practices for medicinal plants and the basic principles of Ayurveda, Siddha, Unani and Homeopathy and preparation and standardization of Ayurvedic formulations.
CO3	Describe nutraceuticals, the herbal cosmetics, Herbal excipients, herbal formulations and Herbal-Drug and Herb-Food Interactions.
CO4	Demonstrate the understanding of WHO and ICH guidelines for evaluation of herbal drugs, Appreciate patenting and regulatory requirements and regulatory issues of herbal drugs, Herbal drugs industry and GMP of Indian systems of medicine.

BP604T BIOPHARMACEUTICS AND PHARMACOKINETICS (THEORY)

Upon completion of the course student shall be able to

CO1	Understand concept of biopharmaceutics and its application in formulation and development, studying various concept of ADME and various factors affecting related to them.
CO2	studying compartment and non-compartment modelling evaluate the quantity/concentration of drug in body at any point of time.
CO3	Understanding the concept and mechanism of dissolution and in-vitro and in-vivo correlation and Learning concepts of bioavailability and bioequivalence.
CO4	Understand concept of Non-linear pharmacokinetics.

BP605T PHARMACEUTICAL BIOTECHNOLOGY (THEORY)



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Upon completion of the subject student shall be able to

CO1	Understanding the importance of immobilized enzymes in pharmaceutical, production of enzymes and protein engineering.
CO2	Describe genetic engineering technique and applications in relation to production of pharmaceuticals.
CO3	Details about immunity types and general method of preparation of vaccines.
CO4	Explain immune blotting techniques and importance of monoclonal antibody in industry.
CO5	Appreciate the use of microorganisms in fermentation technology.

BP606T QUALITY ASSURANCE (THEORY)

Upon completion of the course student shall be able to

CO1	Understand the Quality Assurance, Quality Management, cGMP, GLP aspects in a pharmaceutical industry
CO2	Understand the importance of Documentation while working in pharmaceutical industry.
CO3	Significance of calibration and validation in quality assurance.

BP607P MEDICINAL CHEMISTRY III (Practical)

After successful completion of this course students will be able to

CO1	Synthesize and explain principle, reaction mechanism of medicinally important compounds by using conventional as well as microwave assisted methods and purify them by using recrystallization techniques.
CO2	Demonstration and handling of ChemDraw software.
CO3	Determine physicochemical parameter and hydrogen donors and acceptors of drug by using Drug design software.

BP608P PHARMACOLOGY III (PRACTICAL)

After successful completion of this course students will be able to

CO1	understand mechanism and pharmacology of various drugs using animal models.
CO2	Observe the effects of drugs on animal by simulated experiments

BP609P HERBAL DRUG TECHNOLOGY (PRACTICAL)

After successful completion of this course students will be able to

CO1	Prepare and evaluate the crude drugs, herbal formulation and herbal cosmetics
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	for its quality and purity.
CO2	Analyse the Monographs of herbal drugs from recent Pharmacopoeias

B.Pharm final Year (VII sem) (2018 Pattern)

BP701T INSTRUMENTAL METHODS OF ANALYSIS - THEORY

Upon the completion of the course student shall be able to

CO1	Illustrate the interaction of matter with electromagnetic radiations and justify its applications in drug analysis
CO2	Classify the chromatographic separation methods and describe principle, instrumentation and applications of various chromatographic techniques.
CO3	Explain principles, Instrumentation and application of various analytical instruments.

BP702T INDUSTRIAL PHARMACYII - THEORY

Upon the completion of the course student shall be able to

CO1	Know the process of pilot plant and scale up of pharmaceutical dosage forms
CO2	Understand the process of technology transfer from lab scale to commercial batch
CO3	Understand the approval process and regulatory requirements for drug products
CO4	Know the quality management system in Pharmaceutical industry.

BP703TPHARMACY PRACTICE - THEORY

Upon completion of the course student shall be able to

CO1	Know various drug distribution methods in hospital.
CO2	Appreciate the pharmacy store management and inventory control and monitor drug therapy of patient through medication chart review and clinical review.
CO3	Identify drug related problem and detect and assess adverse drug reactions.
CO4	Know pharmaceutical care services, do patient counseling in community pharmacy, appreciate the concept of rational drug.

BP704TNOVEL DRUG DELIVERY SYSTEM - THEORY

Upon completion of the course student shall be able to



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CO1	Describe the concept of controlled drug release, Novel Drug Delivery Systems, Pre-requisites of drug candidates, polymers along with classification, application for the development of Novel Drug Delivery Systems
CO2	Explain various Novel Drug Delivery Systems with formulation approaches and evaluation.

BP705P INSTRUMENTAL METHODS OF ANALYSIS - PRACTICAL

Upon completion of the course student shall be able to

CO1	Operate UV-VIS Spectrometer, Flame Photometer, Fluorimeter and colorimeter.
CO2	Understand weights, measures and pharmacopoeia in analysis and demonstrate HPLC and FTIR instruments
CO3	Separate and analysis of chemical components by various chromatographic techniques.
CO4	Interpret the data obtained through analytical experiments.

B.Pharm final Year (VIII sem) (2018 Pattern)

BP801T BIOSTATISTICS AND RESEARCH METHODOLOGY

Upon completion of the course student shall be able to

CO1	Know the operation of M.S. Excel, SPSS, R and MINITAB®, DoE (Design of Experiment)
CO2	Know the various statistical techniques to solve statistical problems
CO3	Appreciate statistical techniques in solving the problems.

BP802T SOCIAL AND PREVENTIVE PHARMACY

Upon completion of the course student shall be able to

CO1	Students will exhibit professional ethics by learning concept of hygiene, sociology and health education
CO2	Students will demonstrate knowledge of and ability to demonstrate National health programs, social health programs.
CO3	Student will effectively apply principles of preventive medicine and community services and health promotion activities.



BP809ET COSMETIC SCIENCE

Upon completion of the course student shall be able to

CO1	Understand the principles and concepts of cosmetics and cosmetic evaluation; anatomy of skin, hair, general excipients used in cosmetics and formulation of cosmetics.
CO2	Explain the concept of formulation and building blocks of skin, hair, herbal and analytical cosmetics.
CO3	Enumerate the basics of cosmetic evolution and cosmetic problems

BP804ET PHARMACEUTICAL REGULATORY SCIENCE

Upon completion of the subject student shall be able to

CO1	Enumerate new drug discovery with regulatory guidelines, fees NDA, INDA, ANDA.
CO2	Outline the process of Indian drug product registration in overseas market and regulatory concept of federal register, orange, purple book, laws and Act.
CO3	Illustrate rational drug therapy for treatment of various diseases.
CO4	Describe the process of clinical trials.

BP811ET ADVANCED INSTRUMENTATION TECHNIQUES

Upon the completion of the course student shall be able to

CO1	Express the principle of the advanced instruments used and justify its applications in drug analysis
CO2	Understand the principles of analytical techniques and its application in analysis of drugs
CO3	Explain the importance and methods for the calibration of various analytical instruments
CO4	Formulate and justify techniques for the analysis of drugs using various analytical instruments.

BP813PW PROJECT WORK

Upon the completion of the course student shall be able to

CO1	
CO2	