B.Pharmacy Course Outcome				
Semester	**Course name**	**Course Code**	**Course Credits**	**Course Outcomes (CO)**
	Human Anatomy and Physiology I	BP101T	4	**CO 1**: The students should be able to explain the gross morphology, structure and functions of various organs of the human body. **CO 2**: The students should be able to describe the various homeostatic mechanisms and their imbalances. **CO 3**: The students should be able to identify the various tissues and organs of different systems of human body. **CO4 :** The student shall be able to perform the various experiments related to special senses and nervous system. **CO5** : The students shall be able to appreciate coordinated working pattern of different organs of each system
	Pharmaceutical Analysis I – Theory	BP102T	4	**CO 1:** The students shall be able to understand the principles of volumetric and electro chemical analysis **CO 2:** The students shall be able to carry outvarious volumetric and electrochemical titrations. **CO 3:** The students shall be able to develop analytical skills.
	Pharmaceutics I – Theory	BP103T	4	**CO 1:** The students shall be able to know the history of profession of Pharmacy **CO 2:** The students shall be able to understand the basis of different dosage forms, pharmaceutical incompatibilities, and pharmaceutical calculations. **CO 3:** The students shall be able to understand the professional way of handling the prescription. **CO4:** The student shall be able to prepare various conventional dosage forms.
	Pharmaceutical Inorganic Chemistry	BP104T	4	**CO 1:** The students shall be able to understand the sources of impurities and methods to determine the impurities in inorganic drugs. **CO 2:** The students shall be able to understand the sources of impurities and methods to determine the impurities in pharmaceuticals **CO 3:** The students shall be able to understand the medicinal and pharmaceutical importance of inorganic compounds.

1st Sem.	Communication skills – Theory	BP105T	2	**CO 1:** The students shall be able to understand the behavioral needs for a Pharmacist to function effectively in the areas of pharmaceutical operation. **CO 2:** The students shall be able tocCommunicate effectively (Verbal and Non Verbal). **CO 3:** The students shall be able to effectively manage the team as a team player.
	Remedial Biology	BP106RBT	2	**CO 1:** The students shall be able to understand the classification and salient features of five kingdoms of life. **CO 2:** The students shall be able to understand the basic concepts of anatomy 7 physiology of plant. **CO 3:** The students shall be able to understand the basic components of anatomy & physiology of animal with special reference to human**.**
	Remedial Mathematics – Theory	BP106RMT	2	**CO 1:** The students shall be able to understand the theory and their application in Pharmacy. **CO 2:** The students shall be able to solve the different type of problems by applying theory. **CO 3:** The students shall be able to appreciate the important application of mathemartics in Pharmacy.
	Human Anatomy and Physiology – Practical	BP107P	2	**CO 1:** The students shall be able to understand the physiological processes discussed in theory classes through experiments on living tissue. **CO 2:** The students shall be able to understand the physiological processes discussed in theory classes through experiments on intact animals. **CO 3:** The students shall be able to understand the physiological processes discussed in theory classes through experiments on normal human beings.
	Pharmaceutical Analysis I – Practical	BP108P	2	**CO 1:** The students shall be able to perform limit tests. **CO 2:** The students shall be able to prepare and standardize various chemicals. **CO 3:** The students shall be able to determine normality by electro-analytical methods.
	Pharmaceutics I – Practical	BP109P	2	**CO 1:** The students shall be able prepare syrups, elixirs, linctus, solutions, etc. **CO 2:** The students shall be able to prepare suspensions, emulsions, powder, and granules. **CO 3:** The students shall be able to prepare Suppositories, semisolids, gargels, and mouthwashes.

	Pharmaceutical Inorganic Chemistry	BP110P	2	**CO 1:** The students shall be able to perform limit tests of various ions. **CO 2:** The students shall be able to perform test of purity. **CO 3:** The students shall be able to prepare inorganic pharmaceuticals.
	Communication skills – Practical	BP111P	1	**CO 1:** The students shall be able to pronounce correctly. **CO 2:** The students shall be able to understand adance learning. **CO 3:** The students shall be able to understand basic communication.
	Remedial Biology – Practical	BP106RBP	1	**CO 1:** The students shall be able to explain microscope **CO 2:** The students shall be able to understand the study of cell **CO 3:** The students shall be able to identify bones, blood group, and blood pressure.
	Human Anatomy and Physiology II – Theory	BP201T	4	**CO 1:** The **s**tudent shall be able toeExplain the gross morphology, structure and functions of various organs of the human body. **CO 2:** The student shall be able to describe the various homeostatic mechanisms and their imbalances. **CO 3:** The student shall be able to perform the hematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume.
	Pharmaceutical Organic Chemistry I – Theory	BP202T	4	**CO 1:** The students shall be able to write the structure, name and the type of isomerism of the organic compound. **CO 2:** The students shall be able to write the reaction, name the reaction and orientation of reactions. **CO 3:** The students shall be able to account for reactivity/stability of compounds.
	Biochemistry – Theory	BP203T	4	**CO 1:**The students shall be able to understand the catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzymes. **CO 2**:The students shall be able to understand the metabolism of nutrient molecules in physiological and pathological conditions. **CO 3**: The students should be able to understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.
	Pathophysiology – Theory	BP204T	4	**CO 1:** The students shall be able to describe the etiology and pathogenesis of the selected disease states. **CO 2:** The students shall be able to understand the name the signs and symptoms of the diseases. **CO 3**: The students shall be able to understand the mention the complications of the diseases.

2nd Sem.	Computer Applications in Pharmacy – Theory	BP205T	**3**	**CO 1:** The students shall be able to understand the various types of application of computers in pharmacy. **CO 2:** The students shall be able to understand the various types of databases. **CO 3**: The students shall be able to understand the various applications of databases in pharmacy.
	Environmental sciences – Theory	BP206T	**3**	**CO 1:** The students shall be able to create the awareness about environmental problems among learners. **CO 2:** The students shall be able to Strive to attain harmony with Nature. **CO 3**: The students shall be able to understand the Acquire skills to help the concerned individuals in identifying and solving environmental problems.
	Human Anatomy and Physiology II –Practical	BP207P	2	**CO 1:** The students shall be able to perform general neurological examination. **CO 2:** The students shall be able to examine body temperature, different types of taste. **CO 3:** The students shall be able to understand nervous system using specimen.
	Pharmaceutical Organic Chemistry I– Practical	BP208P	2	**CO 1:** The students shall be able to understand the systematic qualitative analysis of various unknown organic compounds **CO 2:** The students shall be able to prepare suitable solid derivatives from organic compounds. **CO 3:** The students shall be able to construct molecular models.
	Biochemistry – Practical	BP209P	2	**CO 1:** The students shall be able to understand the qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Maltose, Sucrose and starch). **CO 2:** The students shall be able to understand the quantitative analysis of reducing sugars (DNSA method) and Proteins (Biuret method). **CO 3**: The students shall be able to dtermine the blood sugar, blood creatinine, and serum total cholesterol.
	Computer Applications in Pharmacy – Practical	BP210P	1	**CO 1:** The students shall be able to create a HTML web page to show personal information. **CO 2:** The students shall be able to retrieve the information of a drug and its adverse effects using online tools. **CO 3**: The students shall be able to design a form in MS Access to view, add, delete and modify the patient record in the database.

3rd Sem.	Pharmaceutical Organic Chemistry II – Theory	BP301T	4	**CO 1:** The students shall be able to write the structure, name and the type of isomerism of the organic compound. **CO 2:** The students shall be able to write the reaction, name the reaction and orientation of reactions. **CO 3**: The students shall be able to prepare organic compounds.
	Physical Pharmaceutics I – Theory	BP302T	4	**CO 1:** The students shall be able to understand various physicochemical properties of drug molecules in the designing the dosage forms. **CO 2:** The students shall be able to understand the principles of chemical kinetics & to use them for stability testing nad determination of expiry date of formulations **CO 3**: The students shall be able to understand the use of physicochemical properties in the formulation development and evaluation of dosage forms.
	Pharmaceutical Microbiology – Theory	BP303T	4	**CO 1:** The students shall be able to understand methods of identification, cultivation and preservation of various microorganisms. **CO 2:** The students shall be able to understand the importance and implementation of sterlization in pharmaceutical processing and industry. **CO 3**: The students shall be able to learn sterility testing of pharmaceutical products.
	Pharmaceutical Engineering – Theory	BP304T	4	**CO 1:** The students shall be able to understand various unit operations used in Pharmaceutical industries. **CO 2:** The students shall be able to understand, appreciate and comprehend significance of plant lay out design for optimum use of resources. **CO 3**: The students shall be able to carry out various test to prevent environmental pollution.
	Pharmaceutical Organic Chemistry II – Practical	BP305P	2	**CO 1:** The students shall be able to perform experiments involving laboratory techniques recrystallization / steam distillation. **CO 2:** The students shall be able to determine following oil values (including standardization of reagents): Acid value and Saponification value. **CO 3**: The students shall be able to prepare various compounds.
	Physical Pharmaceutics I – Practical	BP306P	2	**CO 1:** The students shall be able to determine the solubility of drug at room temperature. **CO 2:** The students shall be able to determine the pKa value by Half Neutralization/ Henderson Hasselbalch equation. **CO 3**: The students shall be able to determine the stability constant and donor acceptor ratio of Cupric-Glycine complex by pH titration method.

	Pharmaceutical Microbiology – Practical	BP307P	2	**CO 1:** The students shall be able to sterilize glassware, preparation and sterilization of media. **CO 2:** The students shall be able to understand microbiological assay of antibiotics by cup plate method and other methods. **CO 3**: The students shall be able to understand isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.
	Pharmaceutical Engineering –Practical	BP 308P	2	**CO 1:** The students shall be able to determine the radiation constant of brass, iron, unpainted and painted glass. **CO 2:** The students shall be able to understand size analysis by sieving – To evaluate size distribution of tablet granulations – Construction of various size frequency curves including arithmetic and logarithmic probability plots. **CO 3**: The students shall be able to to calculate the uniformity Index for given sample by using Double Cone Blender.
	Pharmaceutical Organic Chemistry III– Theory	BP401T	4	**CO 1:** The students shall be able to understand the methods of preparation and properties of organic compounds. **CO 2:** The students shall be able to explain the stereo chemical aspects of organic compounds and stereo chemical reactions. **CO 3**: The students shall be able to understand the medicinal uses and other applications of organic compounds.
	Medicinal Chemistry I – Theory	BP402T	4	**CO 1:** The students shall be able to understand the chemistry of drugs with respect to their pharmacological activity. **CO 2:** The students shall be able to understand the Structural Activity Relationship (SAR) of different class of drugs. **CO 3:** The students shall be able to understand the drug metabolic pathways, adverse effect and therapeutic value of drugs.
	Physical Pharmaceutics II – Theory	BP403T	4	**CO 1:** The students shall be able to understand various physicochemical properties of drug molecules in the designing the dosage forms. **CO 2:** The students shall be able to explain the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations. **CO 3**: The students shall be able to understand the Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.

4th Sem.	Pharmacology I – Theory	BP404T	4	**CO 1:** The students shall be able to understand the pharmacological actions of different categories of drugs. **CO 2:** The students shall be able to explain the mechanism of drug action at organ system/sub cellular/ macromolecular levels. **CO 3**: The students shall be able to understand the correlation of pharmacology with other bio medical sciences.
	Pharmacognosy and Phytochemistry I– Theory	BP405T	4	**CO 1:** The students shall be able to understand the the techniques in the cultivation and production of crude drugs. **CO 2:** The students shall be able to explain the the crude drugs, their uses and chemical nature. **CO 3**: The students shall be able to carry out the microscopic and morphological evaluation of crude drugs.
	Medicinal Chemistry I – Practical	BP406P	2	**CO 1:** The students shall be able to understand the preparation of drugs / intermediates. **CO 2:** The students shall be able to explain the assay of drugs. **CO 3**: The students shall be able to understand the partition coefficient for any two drugs.
	Physical Pharmaceutics II – Practical	BP407P	2	**CO 1:** The students shall be able to determine particle size, particle size distribution using sieving method. **CO 2:** The students shall be able to determine viscosity of liquid using Ostwald's viscometer. **CO 3**: The students shall be able to understand the accelerated stability studies.
	Pharmacology I – Practical	BP408P	2	**CO 1:** The students shall be able to understand the experimental Pharmacology. **CO 2:** The students shall be able to explain the common laboratory techniques. Blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies. **CO 3**: The students shall be able to understand the laboratory techniques and animal experiments by simulated experiments by softwares and videos.
	Pharmacognosy and Phytochemistry I – Practical	BP409P	2	**CO 1:** The students shall be able to analyze crude drugs by chemical tests: (i)Tragaccanth (ii) Acacia (iii)Agar (iv) Gelatin (v) starch (vi) Honey (vii) Castor oil **CO 2:** The students shall be able to determine vein islet number, vein islet termination and paliside ratio. 4. Determination of size of starch grains, calcium oxalate crystals by eye piece micrometer **CO 3**: The students shall be able to determe Ash value.

5th Sem.	Medicinal Chemistry II – Theory	BARC1-533	4	**CO 1:** The students shall be able to understand the chemistry of drugs with respect to their pharmacological activity **CO 2:** The students shall be able to explain the drug metabolic pathways, adverse effect and therapeutic value of drugs **CO 3**: The students shall be able to understand the structural Activity Relationship of different class of drugs
	Industrial PharmacyI– Theory	BARC1-534	4	**CO 1:** The students shall be able to understand the various pharmaceutical dosage forms and their manufacturing techniques. **CO 2:** The students shall be able to explain the various considerations in development of pharmaceutical dosage forms **CO 3**: The students shall be able to formulate solid, liquid and semisolid dosage forms and evaluate them for their quality
	Pharmacology II – Theory	BARC1-535	4	**CO 1:** The students shall be able to understand the mechanism of drug action and its relevance in the treatment of different diseases **CO 2:** The students shall be able to explain the isolation of different organs/tissues from the laboratory animals by simulated experiments **CO 3**: The students shall be able to demonstrate the various receptor actions using isolated tissue preparation
	Pharmacognosy and Phytochemistry II– Theory	BARC1-536	4	**CO 1:** The students shall be able to to know the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents **CO 2:** The students shall be able to understand the preparation and development of herbal formulation. **CO 3**: The students shall be able to understand the herbal drug interactions
	Pharmaceutical Jurisprudence – Theory	BARC1-537	4	**CO 1:** The students shall be able to undertand the Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals. **CO 2:** The students shall be able to explain the various Indian pharmaceutical Acts and Laws **CO 3**: The students shall be able to understand the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals
	Industrial PharmacyI – Practical	BARC1-538	2	**CO 1:** The students shall be able to understand the preformulation studies on paracetamol/aspirin/or any other drug **CO 2:** The students shall be able to prepare and evaluate Paracetamol tablets **CO 3**: The students shall be able to understand the qulaity control test of (as per IP) marketed tablets and capsules

	Pharmacology II – Practical	BARC1-539	2	**CO 1:** The students shall be able to understand effect of drugs on isolated frog heart. **CO 2:** The students shall be able to perform DRC of acetylcholine on different animal tissues. **CO 3**: The students shall be able to understand the analgesic, anti-inflammatory activity of drugs
	Pharmacognosy and Phytochemistry II –Practical	BARC1-540	2	**CO 1:** The students shall be able to understand the morphology, histology and powder characteristics & extraction & detection of: Cinchona, Cinnamon, Senna, Clove, Ephedra, Fennel and Coriander **CO 2:** The students shall be able to isolate & detect active principles a. Caffeine - from tea dust. b. Diosgenin from Dioscorea c. Atropine from Belladonna d. Sennosides from Senna **CO 3**: The students shall be able to understand the TLC of herbal extract
	Medicinal Chemistry III – Theory	BP601T	4	**CO 1:** The students shall be able to understand the importance of drug design and different techniques of drug design. **CO 2:** The students shall be able to understand the chemistry of drugs with respect to their biological activity. **CO 3:** The students shall be able to understand the importance of SAR of drugs.
	Pharmacology III – Theory	BP602T	4	**CO 1:** The students shall be able to understand the mechanism of drug action and its relevance in the treatment of different infectious diseases **CO 2:** The students shall be able to comprehend the principles of toxicology and treatment of various poisonings **CO 3:** The students shall be able to understand the correlation of pharmacology with related medical sciences.
	Herbal Drug Technology – Theory	BP603T	4	**CO 1:** The students shall be able to understand raw material as source of herbal drugs from cultivation to herbal drug product **CO 2:** The students shall be able to understand the WHO and ICH guidelines for evaluation of herbal drugs **CO 3:** The students shall be able to understand the herbal cosmetics, natural sweeteners, nutraceuticals

6th Sem.	Biopharmaceutics and Pharmacokinetics –	BP604T	4	**CO 1:** The students shall be able to understand the basic concepts in biopharmaceutics and pharmacokinetics and their significance. **CO 2:** The students shall be able to understand the use of plasma drug concentration-time data to calculate the pharmacokinetic parameters to describe the kinetics of drug absorption, distribution, metabolism, excretion, elimination. **CO 3:** The students shall be able to understand various pharmacokinetic parameters, their significance & applications.
	Pharmaceutical Biotechnology – Theory	BP605T	4	**CO 1:** The students shall be able to understand the importance of Immobilized enzymes in Pharmaceutical Industries **CO 2:** The students shall be able to understand genetic engineering applications in relation to production of pharmaceuticals **CO 3:** The students shall be able to understand importance of Monoclonal antibodies in Industries
	Quality Assurance –Theory	BP606T	4	**CO 1:** The students shall be able to understand the cGMPaspects in pharmaceutical industry. **CO 2:** The students shall be able to understand the importance of documentation **CO 3:** The students shall be able to understand the scope of quality certifications applicable to pharmaceutical industries
	Medicinal chemistry III – Practical	BP607P	2	**CO 1:** The students shall be able to prepare various drugs and intermediates **CO 2:** The students shall be able to determine physicochemical properties such as logP, clogP, MR, Molecular weight, Hydrogen bond donors and acceptors for class of drugs course content using drug design software Drug likeliness screening (Lipinskies RO5) **CO 3:** The students shall be able to draw structures and reactions using chem draw®
	Pharmacology III – Practical	BP608P	2	**CO 1:** The students shall be able to understand the dose calculation in pharmacological experiments **CO 2:** The students shall be able to understand biostatistics methods in experimental pharmacology (student's t test, ANOVA) **CO 3:** The students shall be able to understand biostatistics methods in experimental pharmacology (Chi square test, Wilcoxon Signed Rank test)

	Herbal Drug Technology – Practical	BP609P	2	**CO 1:** The students shall be able to understand preliminary phytochemical screening of crude drugs. **CO 2:** The students shall be able to understand and standardized extract in cosmetic formulations like creams, lotions and shampoos and their evaluation. **CO 3:** The students shall be able to understand the monograph analysis of herbal drugs from recent pharmacopoeias
7th Sem.	Instrumental Methods of Analysis – Theory	BP701T	4	**CO 1:** The students shall be able to understand the interaction of matter with electromagnetic radiations and its applications in drug analysis **CO 2:** The students shall be able to understand the chromatographic separation and analysis of drugs. **CO 3:** The students shall be able to perform quantitative & qualitative analysis of drugs using various analytical instruments.
	Industrial PharmacyII – Theory	BP702T	4	**CO 1:** The students shall be able to understand the process of pilot plant and scale up of pharmaceutical dosage forms **CO 2:** The students shall be able to understand the process of technology transfer from lab scale to commercial batch **CO 3:** The students shall be able to understand different Laws and Acts that regulate pharmaceutical industry
	Pharmacy Practice – Theory	BP703T	4	**CO 1: K**now various drug distribution methods in a hospital **CO 2: A**ppreciate the pharmacy stores management and inventory control **CO3: M**onitor drug therapy of patient through medication chart review and clinical review **CO4**. Obtain medication history interview and counsel the patients **CO5**. Identify drug related problems **CO 6**. Detect and assess adverse drug reactions **CO 7. I**nterpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states **CO8.** know pharmaceutical care services **CO 9**. Do patient counseling in community pharmacy; **CO10**. Appreciate the concept of Rational drug therapy

	Novel Drug Delivery System – Theory	BP704T	4	**CO 1:** The students shall be able to understand various approaches for development of novel drug delivery systems. **CO 2:** The students shall be able to understand the criteria for selection of drugs and polymers for the development of Novel drug delivery systems **CO 3:** The students shall be able to understand the criteria for selection of drugs and polymers for the development, formulation and evaluation of Novel drug delivery systems
	Instrumental Methods of Analysis – Practical	BP705P	2	**CO 1:** The students shall be able to determine absorption maxima and effect of solvents on absorption maxima of organic compounds **CO 2:** The students shall be able to separate plant pigments by column chromatography **CO 3:** The students shall be able to understand experiment on HPLC
	Practice School	BP706PS	6	NA
	Biostatistics and Research Methodology	BP801T	4	**CO 1:** The students shall be able to understand the operation of M.S. Excel, SPSS, R and MINITAB®, DoE (Design of Experiment) **CO 2:** The students shall be able to understand the various statistical techniques to solve statistical problems **CO 3:** The students shall be able to understand statistical techniques in solving the problems.
	Social and Preventive Pharmacy	BP802T	4	**CO 1:** The students shall be able to acquire high consciousness/realization of current issuesrelated to health and pharmaceutical problems within the country and worldwide. **CO 2:** The students shall have a critical way of thinking based on current healthcare development. **CO 3:** The students shall be able to understand alternative ways of solving problems related tohealth and pharmaceutical issues
	Pharma Marketing Management	BP803ET		**CO 1:** The students shall be able to understand marketing concepts and techniques. **CO 2:** The students shall be able to understand applications of marketing in the pharmaceutical industry **CO 3:** The students shall be able to understand product decision, PSR, pricing, and various emerging concepts in marketing.

8th Sem.	Pharmaceutical Regulatory Science	BP804ET	4+4=8	**CO 1:** The students shall be able to understand about the process of drug discovery and development **CO 2:** The students shall be able to understand the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals **CO 3:** The students shall be able to understand the regulatory approval process and their registration in Indian and international markets
	Pharmacovigilance	BP805ET		**CO1:** Why drug safety monitoring is important? **CO2** History and development of pharmacovigilance **CO3**. National and international scenario of pharmacovigilance **CO4.** Dictionaries, coding and terminologies used in pharmacovigilance **CO 5**. Detection of new adverse drug reactions and their assessment **CO6.** International standards for classification of diseases and drugs **CO7.** Adverse drug reaction reporting systems and communication in pharmacovigilance **CO8.** Methods to generate safety data during pre clinical, clinical and post approval phases of drugs' life cycle **CO9.** Drug safety evaluation in paediatrics, geriatrics, pregnancy and lactation **CO10**. Pharmacovigilance Program of India (PvPI) requirement for ADR reporting in India **CO11**. ICH guidelines for ICSR, PSUR, expedited reporting, pharmacovigilance planning **CO12.** CIOMS requirements for ADR reporting **CO13.** Writing case narratives of adverse events and their quality.
	Quality Control and Standardization of Herbals	BP806ET		**CO 1:** The students shall be able to understand WHO guidelines for quality control of herbal drugs **CO 2:** The students shall be able to understand quality assurance in herbal drug industry **CO 3:** The students shall be able to understand the regulatory approval process and their registration in Indian and international markets

	Computer Aided Drug Design	BP807ET		**CO 1:** The students shall be able to understand design and discovery of lead molecules. **CO 2:** The students shall be able to understand the role of drug design in drug discovery process **CO 3:** The students shall be able to understand various strategies to develop new drug like molecules.
	Cell and Molecular Biology	BP808ET		**CO 1:** The students shall be able to summarize cell and molecular biology history **CO 2:** The students shall be able to summarize the cell cycle **CO 3:** The students shall be able to understand the DNA properties of cell biology
	Cosmetic Science	BP809ET		**CO 1:** The students shall be able to understand formulation and building blocks of skin care products **CO 2:** The students shall be able to understand formulation and building blocks of hair care products: **CO 3:** The students shall be able to understand role of herbs in cosmetics
	Experimental Pharmacology / PHARMACOLOGICAL SCREENING METHODS	BP810ET		**CO 1:** The students shall be able to understand the applications of various commonly used laboratory animals. **CO 2:** The students shall be able to understand the importance of biostatistics and research methodology **CO 3:** The students shall be able to understand design and execute a research hypothesis independently
	Advanced Instrumentation Techniques	BP811ET		**CO 1:** The students shall be able to understand the advanced instruments used and its applications in drug analysis **CO 2:** The students shall be able to understand the chromatohgraphic separation and analysis of drugs **CO 3:** The students shall be able to calibrate various analytical instruments
	Dietary Supplements and Nutraceuticals	BP812ET	4	**CO 1:** The students shall be able to understand the need of supplements by the different group of people to maintain healthy life. **CO 2:** The students shall be able to understand the components in dietary supplements and the application. **CO 3:** The students shall be able to understand the regulatory and commercial aspects of dietary supplements including health claims.
	Project Work	BP813PW	6	NA