B.PHARMACY COURSE OUTCOMES

Course code	Name of the course	Course Outcomes
I SEMESTER		
BP101T	Human Anatomy and Physiology I – Theory	1. This course enables students to correlate Human Anatomy & Physiology with other biomedical sciences. 2. It provides foundational knowledge about the structure and functioning of the human body. 3. Students will gain insight into the mechanisms of drug action by studying the basic structure of the human body. 4. The course will help students understand the coordinated functioning of human organs. 5. Through this course, students will comprehend the homeostatic mechanisms that maintain the balance within the human body.
BP102T	Pharmaceutical Analysis I – Theory	1. This course provides an opportunity to acquire knowledge about current technological developments in relevant fields. 2. It covers areas such as new concepts, methods, techniques, theory, skill development, and the upgradation of educational technology to keep pace with the evolving landscape of Technical Education. 3. It enhances and updates knowledge related to general research capabilities. 4. The course aims to create a research-oriented environment within institutes by promoting research innovations in both established and emerging technologies. 5. It offers an overview of errors in laboratory settings and methods for minimizing them.

BP103T	Pharmaceutics I–Theory	1. To understand the concepts related to dosage forms, including monophasic and biphasic liquid dosage forms. 2. To prepare and dispense liquid dosage forms for external applications. 3. To discuss the concepts and principles involved in the compounding and dispensing of liquid dosage forms for installation. 4. To apply the principles and procedures necessary for preparing emulsions and suspensions. 5. To elucidate the process of compounding suppositories.
BP104T	Pharmaceutial Inorganic Chemistry – Theory	1. To understand the sources of impurities in inorganic drugs and pharmaceuticals, and the methods used to identify these impurities. 2. To grasp the medicinal and pharmaceutical significance of inorganic compounds. 3. To explore the role of radiopharmaceuticals in the field of pharmacy. 4. To examine the importance of various extracellular and intracellular ions in maintaining the physiological functions of the body. 5. To recognize the significance of standard references, such as pharmacopoeias, in the practice of pharmacy.
BP105T	Communication skills–Theory*	1. This course is highly valuable for undergraduate students. 2. It provides students with theoretical knowledge in key areas such as Presentation Skills, Listening Skills, Interview Techniques, and Group Discussions. 3. Students will undoubtedly achieve important milestones during the course. 4. The course helps students develop essential skills in both Verbal and Non-Verbal Communication.

BP106 RBT BP106 RMT	Remedial Biology/ Remedial Mathematics– Theory*	1. To understand the classification and key characteristics of the five kingdoms of life. 2. To comprehend the basic components of plant anatomy and physiology. 3. To study and grasp the fundamental aspects of plant mineral nutrition and photosynthesis. 4. To learn about the various functional systems in the human body. 5. To explore the general anatomical features of plants.
BP107P	Human Anatomy and Physiology – Practical	1. This course equips students with an understanding of the functions of the human body's sensory organs. 2. The course provides specimens that aid in the comprehension of various parts of the human body. 3. Students are encouraged to create chart models, which help enhance their organizational and time management skills. 4. The course allows students to study the structure and functions of body organs in depth.
BP108P	Pharmaceutical Analysis I– Practical	1. This subject imparts knowledge about limit tests. 2. It offers comprehensive information on the preparation and standardization of various compounds. 3. It deepens understanding of compound assays. 4. It provides detailed insights into the preparation and normality of solutions. 5. It briefly explains the determination of normality through electrochemical methods.
BP109P	Pharmaceutics I– Practical	1. To understand the concepts related to dosage forms, such as monophasic and biphasic liquid dosage forms. 2. To apply principles and procedures for preparing emulsions and suspensions. 3. To prepare and dispense liquid dosage forms for external use. 4. To explain the process of compounding suppositories. 5. To discuss the concepts and principles involved in the compounding and dispensing of liquid dosage forms for instillation.

BP110P	Pharmaceutical Inorganic Chemistry – Practical	1. To perform limit tests that help identify impurities, ensuring the quality of compounds is maintained. 2. To carry out purity tests to assess the quality of compounds. 3. To prepare inorganic compounds, understanding the procedures and purification techniques, including recrystallization. 4. To conduct identification tests for inorganic compounds.
BP111P	Communication skills – Practical*	1. This course fully supports students in developing their language and communication skills for a better future. 2. The course provides practical support to students in various areas that are highly useful. 3. Throughout the course, students are encouraged to participate in presenting topics in class and in inter-college competitions. 4. The course also helps students practice for interviews and participates in group discussions relevant to their field of study. 5. Ultimately, the course helps students improve their listening skills in authentic accents and enables them to read and speak like native English speakers.
BP112 RBP	Remedial Biology– Practical*	1. To learn the proper use of a microscope, section cutting techniques, as well as mounting and staining processes. 2. To gain an understanding of plant parts and their modifications. 3. To identify and study the histology of different organs and tissues through permanent slides. 4. To study and understand the detailed anatomy of a frog using computer models.
II SEMESTER		
BP201T	Human Anatomy and Physiology II – Theory	1. By studying this course, students will be able to correlate Human Anatomy and Physiology with other biomedical sciences. 2. It provides foundational knowledge about the structure and physiology of the human body.

		3. Students will gain an understanding of the mechanisms of drug action as they study the basic structure of the human body. 4. By studying this course, students will be able to comprehend the coordinated functioning of the organs in the human body. 5. Through this course, students will understand the homeostatic mechanisms that regulate the human body.
BP202T	Pharmaceutical Organic ChemistryI– Theory	1. The subject covers the classification and nomenclature of organic compounds. 2. It also addresses structural isomerism, intermediate formation in reactions, important physical properties, reactions, and methods of preparation for these compounds. 3. It includes a study of SN1, SN2, E1, and E2 reactions, as well as free radical addition reactions of conjugated dienes. 4. The subject explores the chemistry of carbonyl compounds, including named reactions and their mechanisms. 5. It examines carboxylic acids, the effects of substituents on acidity, and the structures of organic compounds.
BP203T	Biochemistry– Theory	1. This course covers the chemistry of biomolecules and the principles of bioenergetics. 2. It explores the metabolism of carbohydrates under both physiological and pathological conditions. 3. The subject also examines the metabolic pathways of lipids and amino acids in normal and diseased states. 4. It discusses the genetic organization of the mammalian genome. 5. The course emphasizes the importance of enzymes and their inhibitors in diagnostic and therapeutic applications.

BP204T	Patho physiology – Theory	1. Understand the various etiologies and basic pathophysiological mechanisms of different diseases. 2. Identify the signs and symptoms associated with different types of diseases. 3. Comprehend the complications arising from different diseases. 4. Apply knowledge of relevant pathology in various conditions with reference to its pharmacological applications. 5. Gain detailed information about infectious diseases.
BP205T	Computer Applications in Pharmacy– Theory*	1. Understand the various types of computer applications in pharmacy. 2. Familiarize with different types of databases. 3. Learn about the various applications of databases in pharmacy. 4. Comprehend the concept of the system development life cycle.
BP206T	Environmental sciences– Theory*	1. Gain basic knowledge about the environment. 2. Learn and understand how to use natural resources judiciously. 3. Learn how to control pollution. 4. Acquire the skills to solve environmental problems. 5. Develop an attitude of concern toward the ecosystem.
BP207P	Human Anatomy and Physiology II– Practical	1. This course equips students with an understanding of the functions of the human body's sense organs. 2. The course provides specimens that facilitate the study of various parts of the human body. 3. Students are trained in using tools for evaluating key parameters in the human body. 4. This course enables students to design chart models, enhancing their organizational and time management skills.
BP208P	Pharmaceutical Organic Chemistry I– Practical	1. Perform a systematic analysis of unknown organic compounds, including a minimum of five compounds. 2. Conduct tests for functional group detection, solubility, and determine melting and boiling points. 3. Prepare suitable solid derivatives from organic compounds. 4. Construct molecular models.

BP209P	Biochemistry – Practical	1. Analyze carbohydrates 2. Identify proteins and amino acids 3. Perform urine analysis & Estimate the blood glucose and serum creatinine levels helpful to diagnose the diseases 4. Assess the activity of enzymes at different temperatures and different substrate concentrations
BP210P	Computer Applications in Pharmacy – Practical*	1. Students will learn to prepare the documents by using MS Word. 2. They will be able to prepare power point presentations and create excel sheets. 3. They manage databases for storing, organizing, and retrieving information effectively.
III Semester		
BP301T	Pharmaceutical Organic Chemistry II – Theory	1. Learn how to write chemical reactions, identify the names of reactions, and understand the orientation of reactions along with the reactivity and stability of compounds. 2. Gain a comprehensive understanding of how to write chemical reactions, name reactions, and analyze the orientation, reactivity, and stability of compounds. 3. Acquire knowledge about the properties of fats and oils, including their structure, behavior, and applications. 4. Understand the sources, properties, reactions, and medicinal uses of polycyclic hydrocarbons. 5. Develop an understanding of the stereochemical properties of cycloalkanes and the methods used to prepare them.
BP302T	Physical Pharmaceutics I – Theory	1. Gain an understanding of the various physicochemical properties of drug molecules and how they influence the design of dosage forms. 2. Demonstrate the application of various physicochemical properties in the development and evaluation of dosage forms. 3. Understand the principles of complexation and the factors that affect the stability of complexes. 4. Recognize the importance of pH and tonicity in the

		formulation of dosage forms.
BP303T	Pharmaceutical Microbiology – Theory	1. Understand the methods for identification, cultivation, and preservation of various microorganisms. 2. Learn the importance and implementation of sterilization in pharmaceutical processing and industry. 3. Acquire knowledge about sterility testing of pharmaceutical products. 4. Perform microbiological standardization of pharmaceuticals. 5. Understand cell culture technology and its applications in pharmaceutical industries.
BP304T	Pharmaceutical Engineering– Theory	1. Understand the various unit operations and processes performed in the industry. 2. Explore different types of equipment used in unit operations, including their principles, construction, functioning, benefits, and limitations. 3. Utilize this knowledge in managing operations within the pharmaceutical industry. 4. Evaluate the factors influencing the packaging industry. 5. Grasp the fundamental principles of filtration.
BP305P	Pharmaceutical Organic Chemistry II – Practical	1. Learn about various purification techniques. 2. Examine and analyze fats and oils using different methods. 3. Develop pharmaceutical intermediates through electrophilic aromatic substitution reactions. 4. Synthesize organic intermediates using oxidation, hydrolysis, condensation, and diazotization reactions.
BP306P	Physical Pharmaceutics I – Practical	Students will be able to 1. Study and evaluate the physicochemical properties of drug molecules. 2. Understand the role of surfactants in formulation development and learn how to determine the HLB value. 3. Explore the importance of complexation and its stability considerations.

BP307P	Pharmaceutical Microbiology – Practical	1. Learn about equipment, aseptic culture transfer techniques, preparation of sterile culture media, sterilization of glassware, and isolation of pure cultures through streaking. 2. Evaluate microbial enzymatic activity. 3. Assess the potency of antibiotics and perform sterility testing of pharmaceuticals. 4. Observe microbial cultures microscopically using various staining techniques and determine motility through the hanging drop method. 5. Study and identify different types of contaminated cultures during the course.
BP308P	Pharmaceutical Engineering – Practical	1. Understand the various unit operations and processes conducted in the industry. 2. Explore different types of equipment used in unit operations, including their principles, construction, operation, advantages, and disadvantages. 3. Apply this knowledge to effectively manage pharmaceutical industry operations. 4. Evaluate the factors influencing the packaging industry. 5. Comprehend the fundamental principles of filtration.
IV SEMESTER		
BP401T	Pharmaceutical Organic Chemistry III– Theory	1. This subject imparts knowledge on the stereochemical aspects of organic compounds, including optical isomerism, racemic mixtures, and the resolution of racemic mixtures. 2. It also explains the naming and nomenclature, properties, and therapeutic uses of heterocyclic compounds. 3. The basic concepts of geometrical isomerism, stereoselective reactions, and stereospecific reactions are covered. 4. It deals with named reactions and their mechanisms. 5. Additionally, it explores the structure, properties, and therapeutic uses of various organic compounds.

BP402T	Medicinal Chemistry I– Theory	1. Learn the history and properties of drugs. 2. Understand drug metabolic pathways, their adverse effects, and therapeutic value. 3. Apply knowledge of medicinal compounds and their mechanisms of action in the treatment of various diseases. 4. Gain insight into the structure-activity relationship (SAR) of different classes of drugs. 5. Acquire knowledge about diseases and learn to write the chemical synthesis of select drugs.
BP403T	Physical Pharmaceutics II – Theory	1. Gain an understanding of physicochemical properties of drug molecules and their role in the design of dosage forms. 2. Learn the principles of chemical kinetics and apply them to stability testing and determining the shelf life of formulations. 3. Apply physicochemical principles in the development and evaluation of dosage forms. 4. Acquire foundational knowledge of pharmaceutical suspensions and colloids. 5. Understand the pharmaceutical applications of various micromeritic properties in formulation science.
BP404T	Pharmacology I–Theory	1. Describe the different drugs used for the treatment of various diseases. 2. Apply pathophysiological knowledge of different diseases and disorders to their treatment. 3. Learn about drugs used in the treatment of cardiovascular system (CVS) disorders, central nervous system (CNS) disorders, and autonomic nervous system (ANS) disorders. 4. Understand the correlation of pharmacology with other biomedical sciences.

BP405T	Pharmacognosy and Phytochemistry I– Theory	1. Gain knowledge of quantitative microscopy techniques used for the quality control of herbal drugs. 2. Perform physical evaluation of crude drugs. 3. Acquire knowledge of the morphological and microscopic characteristics of crude drugs and apply it for their identification and standardization. 4. Extract and conduct qualitative chemical tests on unorganized drugs.
BP406P	Medicinal ChemistryI – Practical	1. Gain a basic understanding of the reactions and preparation of medicinal compounds. 2. Understand the principles of quantitative analysis and various titration methods. 3. Learn about the methods used to assess the purity of drugs. 4. Understand the separation of drugs based on their solubility properties.
BP407P	Physical Pharmaceutics II – Practical	1. Understand the importance of micromeritic properties and their determination. 2. Learn the principles of chemical kinetics and apply them to stability testing and determining the expiry date of formulations. 3. Gain knowledge of the preparation of suspensions and emulsions, along with their stability testing. 4. Explain the physicochemical properties of drug molecules, including pH and solubility.
BP408P	Pharmacology I – Practical	1. Learn about common laboratory techniques used in pharmacological studies. 2. Apply knowledge to study different routes of drug administration in mice or rats. 3. Understand the effects of drugs on the ciliary motility of frog esophagus and the rabbit eye. 4. Gain insights into the effects of skeletal muscle relaxants using the rotarod apparatus. 5. Comprehend the principles and applications of the actophotometer.

BP409P	Pharmacognosy and Phytochemistry I – Practical	1. Conduct quantitative microscopy to determine leaf constants for quality evaluation. 2. Measure extractive values and ash values as per pharmacopeial standards. 3. Analyze the morphological and microscopic characteristics of medicinal plants, with a focus on identifying diagnostic features such as calcium oxalate crystals and starch grains. 4. Perform chemical evaluation to accurately identify crude drugs.
V SEMESTER		
BP501T	Medicinal Chemistry II – Theory	1. Understand the chemistry of drugs in relation to their pharmacological activity. 2. Learn about drug metabolic pathways, their adverse effects, and therapeutic value. 3. Apply knowledge of medicinal compounds and their mechanisms of action in the treatment of various diseases. 4. Gain insight into the structure-activity relationship (SAR) of different classes of drugs. 5. Develop the ability to write the chemical synthesis of select drugs.
BP502T	Industrial Pharmacy I – Theory	1. Upon completing the course, students will understand the formulation, manufacturing methods, and quality control tests of various dosage forms. 2. Study the physicochemical properties of drugs as a tool for optimizing solid and liquid dosage forms. 3. Learn advanced methods for preparing dosage forms. 4. Evaluate pharmaceutical dosage forms for quality and stability, and compare them with pharmacopoeial standards. 5. Gain comprehensive knowledge about orally administered drugs, injectables, aerosols, and semisolid preparations, following standard protocols.

BP503T	Pharmacology II–Theory	1. Students will be able to calculate doses for pharmacological experiments and translate them to human doses using standard calculation methods. 2. Gain in-depth knowledge of the release and effects of various pathological mediators. 3. Acquire information about the treatment of cardiovascular complications. 4. Understand the roles of various endocrine hormones, their pathological significance, and the drugs used for treatment. 5. Learn about bioassays and their importance in analyzing the potency of compounds.
BP504T	Pharmacognosy and Phytochemistry II – Theory	1. Understand the history, scope, and development of herbal drugs along with their classification. 2. Learn both traditional and novel cultivation methodologies for herbal drug cultivation. 3. Explore quality control measures to ensure the standardization of herbal drugs. 4. Study the pharmacognostical information of key constituents such as carbohydrates, proteins, tannins, fibers, and resins. 5. Identify and understand the metabolic pathways in plants.
BP505T	Pharmaceutical Jurisprudence – Theory	1. Understand the various Pharmacy Acts. 2. Learn about the different schedules under the Pharmacy Acts. 3. Gain knowledge of pharmacy educational standards. 4. Understand the rules and ethics of the pharmacy profession. 5. Learn how to regulate and import drugs in compliance with legal frameworks.
BP506P	Industrial Pharmacy I – Practical	1. Gain knowledge of various pharmaceutical dosage forms and their manufacturing techniques. 2. Understand the importance of excipients, stability studies, and the standard evaluation procedures to ensure optimal storage conditions for dosage forms. 3. Understand the pre-formulation aspects of drugs and the formulation of various solid, liquid, semisolid, and sterile dosage forms. 4. Evaluate the quality of solid, liquid, semisolid, and sterile

		dosage forms, along with their container and closure systems.
BP507P	Pharmacology II – Practical	1. Acquire basic knowledge in performing bioassays for various compounds. 2. Gain an understanding of animal grouping techniques for preclinical studies. 3. Learn to perform preclinical screening of animals for analgesic and diuretic activities. 4. Develop skills in using specialized pharmaceutical software Ex Pharma.
BP508P	Pharmacognosy and Phytochemistry II – Practical	1. Conduct organoleptic and morphological studies of carbohydrates, tannins, and fibers. 2. Learn quantitative microscopic evaluation techniques for authenticating herbal drugs. 3. Identify adulteration in herbal drugs and understand the evaluation methods used to detect it. 4. Study physical evaluation techniques, including determining the extractive value.
VI SEMESTER		
BP601T	Medicinal Chemistry III– Theory	1. Understand the importance of drug design and explore different techniques used in drug design. 2. Gain knowledge of the chemistry of drugs in relation to their biological activity. 3. Learn about the metabolism, adverse effects, and therapeutic value of drugs. 4. Explore the structure-activity relationship (SAR) of various classes of drugs. 5. Develop the ability to write the chemical synthesis of selected drugs.
BP602T	Pharmacology III– Theory	1. Explain the pharmacology and rational use of drugs for treating various endocrine disorders, and evaluate the effects of drugs using animal models for gastrointestinal (GI) diseases. 2. Stay updated on new developments in chemotherapeutic agents, as well as ongoing preclinical and clinical research. 3. Analyze the challenges associated with drugs used in the

		treatment of microbial infections and cancer. 4. Comprehend the principles of toxicology, understand the treatment of various poisonings, and appreciate the correlation of pharmacology with related medical sciences.
BP603T	Herbal Drug Technology– Theory	1. Understand the pharmacognostical information of the sources of raw materials used in herbal drugs. 2. Learn the importance of nutraceuticals, herb-drug interactions, and herb-food interactions. 3. Understand the significance of herbal formulations and the excipients used in herbal cosmetic formulations. 4. Gain awareness of WHO and ICH guidelines along with patent regulatory requirements. 5. Be aware of various herbal industries, GMP practices, the Indian system of medicine, and Schedule-T drugs.
BP604T	Bio pharmaceutics and Pharmaco kinetics – Theory	1. Understand the concepts and significance of biopharmaceutics and pharmacokinetics. 2. Analyze plasma drug concentration-time data to calculate pharmacokinetic parameters. 3. Learn the importance of bioavailability and bioequivalence. 4. Understand key pharmacokinetic parameters and their applications. 5. Identify nonlinearity in pharmacokinetics and estimate relevant parameters.
BP605T	Pharmaceutical Biotechnology – Theory	1. Learn enzyme immobilization, microbial transformations, and biosensors. 2. Study immunological products, vaccines, and monoclonal antibody preparation. 3. Understand genetic organization and techniques like ELISA, Southern blot, and Western blot. 4. Gain knowledge of recombinant DNA technology and recombinant product preparation. 5. Explore fermenter design, fermentable products, and blood product preparation.
BP606T	Quality Assurance –	1. Covers QC, QA, GMP, TQM, QbD, and ISO/NABL accreditation in pharma.

	Theory	2. Explains ICH harmonization and GLP principles. 3. Focuses on organization, training, premises, and equipment management. 4. Details quality control tests, complaints handling, and documentation. 5. Highlights validation, qualification, calibration, and warehousing.
BP607P	Medicinal chemistry III – Practical	1. Learn the basics of reactions and preparation of medicinal compounds. 2. Understand qualitative analysis and various titration methods. 3. Use ChemDraw software to draw structures and reactions. 4. Analyze the physicochemical properties of drugs using software tools.
BP608P	Pharmacology III– Practical	1. Screen drugs for gastrointestinal efficacy, hypoglycemic, and antiallergic effects, and correlate clinical and biochemical parameters with diseases. 2. Calculate drug doses for pharmacological experiments and translate them to human doses using standard methods. 3. Apply appropriate biostatistical methods for data interpretation and calculations. 4. Understand OECD guidelines and interpret acute toxicity studies for drug safety evaluation.
BP609P	Herbal Drug Technology – Practical	1. Understand morphological characteristics and perform preliminary chemical tests for flavonoids, tannins, gums, mucilages, fixed oils, volatile oils, alkaloids, and glycosides. 2. Learn the preparation methods for Ayurvedic formulations and herbal cosmetics. 3. Perform standardization and evaluation of herbal-based products like syrups and mixtures. 4. Determine aldehyde content, phenol content, and total alkaloid content.
VII SEMESTER		
BP701T	Instrumental Methods of Analysis –	1. Understand the principles and instrumentation of spectroscopy techniques. 2. Learn the principles and instrumentation of chromatography

	Theory	techniques. 3. Explore the principles and instrumentation of electrochemical techniques. 4. Interpret compounds using spectroscopy methods.
BP702T	Industrial Pharmacy II– Theory	1. Learn the pilot plant process and scale-up of pharmaceutical dosage forms. 2. Understand technology transfer from lab scale to commercial batches. 3. Gain knowledge of laws and acts regulating the pharmaceutical industry. 4. Learn the approval process and regulatory requirements for drug products. 5. Understand scale-up procedures in pharmaceutical production.
BP703T	Pharmacy Practice– Theory	1. Understand drug distribution methods, pharmacy store management, and inventory control in hospitals. 2. Monitor patient drug therapy, including medication chart reviews, clinical reviews, and laboratory result interpretation for therapeutic monitoring. 3. Conduct medication history interviews, patient counseling, and identify and address drug-related problems and adverse drug reactions (ADRs). 4. Learn about pharmaceutical care services and their role in optimizing therapy.
BP704T	Novel Drug Delivery System – Theory	1. Understand controlled drug delivery systems, including diffusion, dissolution, polymers, and advanced formulations. 2. Learn microencapsulation techniques, methods of preparation, and the buccal drug delivery system. 3. Explore implantable drug delivery systems, such as osmotic implants, transdermal systems, and their formulation concepts. 4. Study gastroprotective, nasopulmonary, ocular, and intrauterine drug delivery systems.
BP705P	Instrumental Methods of Analysis–	1. Record, calculate, and interpret data from techniques like UV-VIS spectroscopy, fluorimetry, flame photometry, and nepheloturbidometry.

	Practical	2. Develop and optimize mobile phase compositions for qualitative analysis using TLC and PC. 3. Explain the working principles and applications of column chromatography, HPLC, and GC.
BP706PS	Practice School*	As per departmental allotment, students gain knowledge on basic research activities, including: 1. Pharmaceutical dossier preparation, RA reviews 2. Conducting drug-enzyme docking studies. 3. Collecting information on novel natural compounds. 4. Gaining expertise in ADR (Adverse Drug Reaction) study reports.
VIII SEMESTER		
BP801T	Biostatistics and Research Methodology	1. Understand and apply concepts of probability and statistical tests like T-tests and One-Way ANOVA. 2. Design research projects and analyze data using appropriate statistical methods. 3. Learn graphical representation of results for better interpretation.
BP802T	Social and Preventive Pharmacy	1. Understand public health concepts, social problems of the sick, and the importance of nutrition and balanced diet. 2. Learn about disease prevention and control, including drug abuse and addiction. 3. Gain knowledge of National Health Programs and their role in eradicating communicable diseases. 4. Understand the role of WHO in social health and Indian National Health Programs. 5. Study community services under rural and urban health missions.

BP805ET	Pharmacovigilance	1. Importance of drug safety monitoring and pharmacovigilance development. 2. National and international pharmacovigilance frameworks and terminologies. 3. Adverse drug reaction detection, classification, reporting systems, and communication. 4. Generating safety data across pre-clinical, clinical, and post-approval phases. 5. Drug safety evaluation in pediatrics, geriatrics, pregnancy, and lactation.
BP809ET	Cosmetic science	1. Understand regulations related to cosmetics and cosmetic excipients. 2. Learn to prepare various skincare products like creams, antiperspirants, deodorants, and hair care products. 3. Gain knowledge about the role of herbs in sunscreens.
BP811ET	Advanced Instrumentation Techniques	1. Understand the principles and instrumentation of hyphenated techniques in pharmaceutical analysis. 2. Learn advanced instruments like NMR and Mass Spectrometry and their applications. 3. Study thermal methods like TGA and DSC for drug stability analysis. 4. Understand calibration procedures for analytical instruments. 5. Gain knowledge of validation processes for analytical instruments to meet regulatory standards.

BP814PW	Project	1. Apply classroom knowledge to solve research problems. 2. Understand the integration of various subjects in hypothesizing and solving research challenges. 3. Develop critical thinking, analytical, and hands-on learning skills. 4. Acquire skills in problem-solving, data handling, presentation, and documentation. 5. Plan academic, career, and personal goals through research experience. 6. Work collaboratively with peers and researchers.