



VELS



INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)

(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)

PALLAVARAM, THALAMBUR, PERIYAPALAYAM - CHENNAI

CRITERION 1 - CURRICULAR ASPECTS

1.1 CURRICULUM DESIGN AND DEVELOPMENT

1.1.1 CURRICULA DEVELOPED AND IMPLEMENTED HAVE RELEVANCE TO THE LOCAL, NATIONAL, REGIONAL AND GLOBAL HEALTH CARE NEEDS WHICH ARE VISIBLE IN PROGRAMME OUTCOMES (POS), AND COURSE OUTCOMES (COS) OFFERED BY THE UNIVERSITY, AS PER THE NORMS OF THE REGULATORY BODIES.

Criterion Number	1
Metric	1.1.1
Details	Outcome analysis of POs,COs
Pages	1-95

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Criteria 1.1.1: Curricula developed and implemented have relevance to the local, national, regional and global health care needs which are visible in Programme Outcomes (POs), and Course Outcomes (COs) offered by the University, as per the norms of the Regulatory Bodies.

SCHOOL OF PHARMACEUTICAL SCIENCES

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ACCREDITED BY NAAC WITH 'A++' GRADE

1.VISION

To make the Institute an epitome of excellence in higher education by effectively providing high quality education and rigorous training to students in multiple streams of choice with ample scope for all round development to make them excel in their profession for betterment of the society.



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MISSION

M1:Effectively imparting knowledge and inculcating innovative thinking.

M2:Facilitating skill enhancement through add on courses and hands on training.

M3:Doing original, socially relevant, high quality research.

M4:Facilitating appropriate co-curricular, extracurricular and extension activities.

M5:Instilling the spirit of integrity, equity, professional ethics and social harmony

2. PROGRAM EDUCATIONAL OBJECTIVES(PEO)

PEO 1: To provide graduates with profound knowledge in various fields of Pharmaceutical Sciences according to the needs of Pharmaceutical industry, community and Hospital Pharmacy with necessary skill set.

PEO 2: Graduates will be able to acquire theoretical and practical concepts in Pharmacodynamics, Pharmacokinetics, Drug properties, synthesis, molecular modeling, formulation & development, analytical aspects in research and extend this knowledge to create novel Herbal & Synthetic Pharmaceutical products for the benefit of life.

PEO 3: The philosophy of the institute is to prepare students to excel in postgraduate programmes and also to succeed in Pharmaceutical industry or in the profession wherever the student chose through innovative teaching methodologies that engage students in self learning.

PEO 4: Graduates will be prepared to become better communicators and leaders of Pharma and health sectors with ethical attitude, effective communication skills, teamwork skills, multidisciplinary approach, and an ability to relate issues in Pharmaceutical Sciences to a broader social context.

PEO 5: Graduates will be equipped with integrity and ethical values and update their knowledge by organizing/attending the workshops, seminars and conferences at National and International level.

PEO 6: Graduates of the program will be able to evaluate pros and cons, benefits and deficiencies of the matter they studied in pharmaceutical technology and ideology they observed in the field of Pharmaceutical Sciences.

3.PROGRAMME OUTCOMES

PO1. Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.

PO2: Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.

PO3: Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.

PO4: Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.

PO5: Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.

PO6: Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).

PO7: Pharmaceutical Ethics: Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behaviour that recognizes cultural and personal

variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.

PO8: Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.

PO9: The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.

PO10: Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO11: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.

4. PROGRAMME SPECIFIC OUTCOMES

PSO1: To develop the knowledge in technical or professional careers in various pharmaceutical industry and/ or institute and /or Health care system through excellent real time exposure to rigorous education.

PSO2: To apply the skills of manufacturing, formulation/preparation and quality control of various pharmaceutical preparations.

PSO3: To design the modern tools to integrate health care systems, design an effective product with commercial advantage and societal benefit, perform risk analysis and become entrepreneur.



Course Name: Pharmaceutics I – Theory

Course Code: 17BP103T

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the knowledge of historical background of pharmacy profession, various dosage forms, prescription and posology.
CO2	Focus on basics of solid & liquid dosage forms, interpret the pharmaceutical calculations.
CO3	Analyze the fundamental principles of homogenous and heterogenous liquid dosage forms.
CO4	Employ the fundamentals of semisolid dosage forms and predict the pharmaceutical incompatibilities

Course Name: Pharmaceutical Inorganic Chemistry – Theory

Course Code: 17BP104T

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Interpret the sources of impurities and methods to determine the impurities in inorganic pharmaceuticals.
CO2	Recognize the medicinal and pharmaceutical importance of Acids, Bases, Buffers, electrolytes and dental products.
CO3	Recognize the medicinal and pharmaceutical importance of gastrointestinal agents and miscellaneous agents
CO4	Discuss the handling and applications of radiopharmaceuticals.

Course Name: Communication skills – Theory

Course Code: 17BP105T

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Defend Communicate effectively (Verbal and Non Verbal).
CO2	Identify the importance of tone, body language and active listening as elements of effective communication.
CO3	Interpret the factors influencing communication perspectives.
CO4	Demonstrate effective interview skills and appropriate communication style in professional context.

Course Name: Remedial Biology

Course Code: 17BP106RBT

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the salient features of kingdoms of life and morphological characters of different parts of plant.
CO2	Discuss the basic structure and function of circulatory system, respiratory system and digestive system.
CO3	Explain the basic structure and function of excretory system, nervous system and reproductive system.
CO4	Elaborate the physiology, nutrient requirements for plants and to predict plant/animal tissues.

Course Name: Remedial Mathematics – Theory

Course Code: 17BP106RMT

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Examine the concept of partial fraction and its application, properties of logarithms and its application for pharmaceutical problems.
CO2	Compute different types of matrices, determinants and use their applications in solving pharmacokinetic equations.
CO3	Calculate the derivatives of functions in differential calculus
CO4	Interpret the basic concept of analytical geometry and principles, applications of differential equations, Laplace forms in solving chemical kinetics and Pharmaceutical equations.

Course Name: Human Anatomy and Physiology –Practical

Course Code: 17BP107P

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Examine the significance of compound microscope and microscopic study of various tissues of human body.
CO2	Analyze the organization of axial and appendicular bones using charts/models.
CO3	Estimate the various hematological parameters like blood cell counts, hemoglobin content, bleeding time, clotting time and Blood grouping
CO4	Interpret the Heart rate, Pulse rate and Blood Pressure of their own individual

Course Name: Pharmaceutical Analysis I – Practical

Course Code: 17BP108P

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Evaluate the purity of pharmaceuticals by Limit test.
CO2	Prepare and standardize the standard solutions.
CO3	Perform the assay and standardization of titrant of given pharmaceutical drugs by titrimetric analysis.
CO4	Determine the Normality of a solution by electro-analytical methods.

Course Name: Pharmaceutics I – Practical

Course Code: 17BP109P

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Prepare and dispense monophasic liquid dosage form for internal and external use with neat label.
CO2	Develop and dispense biphasic liquid dosage form with neat label.
CO3	Formulate and dispense oral solid dosage form with neat label.
CO4	Formulate and dispense solid, semisolid dosage forms for external use with neat label.

Course Name: Pharmaceutical Inorganic Chemistry –Practical

Course Code: 17BP110P

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Evaluate the specific impurities in the given inorganic compounds by performing different limit tests.
CO2	Perform identification tests as per Indian Pharmacopoeia.
CO3	Determine the impurities qualitatively by performing tests for purity.
CO4	Prepare the inorganic pharmaceuticals by different chemical methods.

Course Name: Communication skills – Practical

Course Code: 17BP111P

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the basic communication along with practical skills effectively in the areas of pharmaceutical operation.
CO2	Distinguish pronunciation of vowel and consonant sounds.
CO3	To take part in advanced learning on comprehension/direct and indirect speech.
CO4	Develop the interview handling skills by advanced learning.

Course Name: Remedial Biology – Practical

Course Code: 17BP112RBP

Year/Sem: I Year/ I Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Justify the use/handling of microscopes, section cutting, mounting and staining technique.
CO2	Summarize about cell inclusion and organization of plant parts & their modifications.
CO3	Assess the microscopic study and identification of tissues pertinent to plant parts.
CO4	Predict the organization of bones, physiology of frog by using computer models and determine blood group, blood pressure and tidal volume.

Course Name: Human Anatomy and Physiology II – Theory

Course Code: 17BP201T

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the gross anatomy and physiology of Nervous system and Digestive System.
CO2	Develop the knowledge of structure and functions of Respiratory system and about the energetics.
CO3	Analyze the gross anatomy and physiology of Urinary System, Endocrine System and Reproductive System along with their disorders.
CO4	Discuss the importance of genetics in Human life.

Course Name: Pharmaceutical Organic Chemistry I – Theory

Course Code: 17BP202T

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Focus on the classification, nomenclature and concepts of Isomerism of organic compounds.
CO2	Illustrate the chemistry and various reaction mechanisms of Alkanes, Alkenes and Conjugated dienes.
CO3	Appraise the chemistry and various reaction mechanisms of Alkyl halides and alcohols.
CO4	Analyze the chemistry and various reaction mechanisms of Carbonyl compounds, Carboxylic acids and Aliphatic amines.

Course Name: Biochemistry – Theory

Course Code: 17BP203T

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the role, classification, metabolism of various bio molecules and concepts of energetics.
CO2	Analyze the significance, metabolic reactions of carbohydrates and mechanism of biological oxidation.
CO3	Employ the synthesis, biological significance of lipid, amino acid and nucleic acid metabolism along with its disorders.
CO4	Apply the concept of catalytic activity and enzyme inhibition in design of new drugs, diagnostic and therapeutic applications of enzyme.

Course Name: Pathophysiology – Theory

Course Code: 17BP204T

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Elaborate the basic principles of cell injury and adaptation and the mechanism involved in the process of inflammation and repair
CO2	Discuss the pathophysiology of cardiovascular system, respiratory system and Renal system
CO3	Recognize the Pathogenesis of inflammatory bowel diseases, jaundice, hepatitis alcoholic liver and disease of bones and joints
CO4	Illustrate the basic mechanism and the pathogenesis of Infectious diseases

Course Name: Computer Applications in Pharmacy – Theory

Course Code: 17BP205T

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Recognize the different types of number systems and Concept of Information Systems and Software.
CO2	Discuss the importance of Web technologies
CO3	Elaborate the application and the role of computers in pharmacy
CO4	Discuss the concept and importance of Bioinformatics in pharmacy

Course Name: Environmental sciences – Theory

Course Code: 17BP206T

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the various types of multi disciplinary nature of environmental studies – natural resources and associated problems.
CO2	Elaborate concept of an ecosystem, structure and function of an ecosystem - Forest ecosystem; Grassland ecosystem.
CO3	Infer the knowledge on characteristic features, structure, function of Desert ecosystem and Aquatic ecosystems.
CO4	Develop an attitude of concern towards environmental pollution.

Course Name: Human Anatomy and Physiology II –Practical

Course Code: 17BP207P

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the structure and functions of different organ systems with the help of charts, models and specimens.
CO2	Evaluate the various activities such as olfaction, gustation, vision, reflex, neurological activity and body temperature.
CO3	Justify the importance of interlinked mechanisms in the maintenance of normal functioning of human body.
CO4	Focus on the histology of organs and gonads of human body using permanent slides.

Course Name: Pharmaceutical Organic Chemistry I– Practical

Course Code: 17BP208P

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Predict the Systematic qualitative analysis of unknown organic compounds.
CO2	Determine the unknown pharmaceutical organic compounds by determining their melting point/boiling point.
CO3	Identify organic compounds by systematic qualitative analysis.
CO4	Construct molecular models of compounds using atomic models sets.

Course Name: Biochemistry – Practical

Course Code: 17BP209P

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Determine the Qualitative analysis of carbohydrates, proteins and reducing sugars.
CO2	Examine the abnormal constituents present in urine and their clinical significance.
CO3	Estimate biochemical parameters in blood and buffer solution along with pH measurement.
CO4	Predict the various factors affecting enzyme activity

Course Name: Computer Applications in Pharmacy – Practical

Course Code: 17BP210P

Year/Sem: I Year/ II Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Design MS Word to create questionnaires and other documentation related to pharmacy.
CO2	Create HTML web page to show personal information.
CO3	Build MS Access to modify the data bases created.
CO4	Create web and XML pages to export table, forms and queries.

Course Name: Pharmaceutical Organic Chemistry II – Theory

Course Code: 17BP301T

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Focus on the various terminologies used in Organic chemistry along with their reactions and reactivity in Aromatic compounds.
CO2	Illustrate the different mechanisms and special emphasis on orientation of chemical reactions of Aromatic compounds.
CO3	Analyze the properties and significance of organic and biochemical compounds
CO4	Discuss the reactivity, orientation, stability and applications of organic reactions.

Course Name: Physical Pharmaceutics I – Theory

Course Code: 17BP302T

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the knowledge on the principles of solubility and partition coefficient.
CO2	Focus on the physical principles of states of matter and properties of drug molecules.
CO3	Predict the importance of interfacial tension and the applications of surface active agents in drug solubilization.
CO4	Apply the basic concepts of pH, buffers and their use in the stabilization of pharmaceutical formulations.

Course Name: Pharmaceutical Microbiology – Theory

Course Code: 17BP303T

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Recognize the concepts of microbiology, classification, methods of identification, cultivation, quantification and preservation of various micro organisms.
CO2	Discuss the various staining techniques, importance and implementation of sterilization techniques in pharmaceutical processing and industry.
CO3	Develop the knowledge of microbial control techniques such as mode of action, sterility tests, disinfection and preservation of pharmaceutical products.
CO4	Focus on the appropriate methods for microbiological standardization and cell culture technology.

Course Name: Pharmaceutical Engineering – Theory

Course Code: 17BP304T

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Express the theoretical principles involved in unit operations, concepts of flow of fluids, size reduction and size separation.
CO2	Summarize different mechanisms and principles involved in heat transfer, evaporation and distillation process.
CO3	Discuss the objectives, applications, factors influencing drying, mixing, filtration and centrifugation.
CO4	Elaborate the various preventive methods used for corrosion control in pharmaceutical industries.

Course Name: Pharmaceutical Organic Chemistry II – Practical

Course Code: 17BP305P

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Interpret the purification of synthesized organic compounds by Crystallization and Steam Distillation methods.
CO2	Determine the purity of fats and oils by acid value, saponification value and iodine value.
CO3	Formulate the various organic compounds by different chemical reactions.
CO4	Estimate the percentage yield of the products synthesized by chemical reactions.

Course Name: Physical Pharmaceutics I – Practical

Course Code: 17BP306P

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Determine the solubility, surface tension, partition coefficient, percentage composition and pKa in the design of dosage forms.
CO2	Evaluate the Freundlich-Langmuir constant of pharmaceutical products.
CO3	Deduce the HLB value and critical micellar concentration of a surfactant.
CO4	Estimate the stability constant and donor acceptor ratio of complexes by various methods.

Course Name: Pharmaceutical Microbiology – Practical

Course Code: 17BP307P

Year/Sem: II Year/ III Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Determine the radiation constant, heat transfer coefficient, humidity of air and efficiency of steam distillation.
CO2	Estimate moisture content, loss on drying and construct drying curves.
CO3	Justify about the construction, working and applications of pharmaceutical equipments in the manufacture of pharmaceutical products.
CO4	Evaluate the size distribution, size reduction and energy requirements for optimizing the pharmaceutical unit processes.

Course Name: Pharmaceutical Organic Chemistry III– Theory

Course Code: 17BP401T

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Apply the basics and general principles of heterocyclic chemistry and Stereochemistry.
CO2	Develop the knowledge of Stereo-chemical features including conformation and stereo electronic effects and its stability.
CO3	Analyze the structure, synthesis and pharmaceutical Application of heterocyclic compounds.
CO4	Relate the various naming reactions with Pharmaceutical Applications.

Course Name: Medicinal Chemistry I – Theory

Course Code: 17BP402T

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the physicochemical properties, steric aspects of drugs and their metabolic pathways.
CO2	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Adrenergic Nervous system.
CO3	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Cholinergic Nervous system.
CO4	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Central Nervous system.

Course Name: Physical Pharmaceutics II – Theory

Course Code: 17BP403T

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Discuss the properties and applications of colloidal dispersions of drug molecules in the designing the dosage forms.
CO2	Apply the principles of rheological behavior and course dispersion in the formulation development and evaluation of dosage forms.
CO3	Apply the principles of micromeritics in the formulation development and evaluation of dosage forms.
CO4	Outline the principles of chemical kinetics in stability testing.

Course Name: Pharmacology I – Theory

Course Code: 17BP404T

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Apply the basics and general principles of Pharmacology along with Pharmacokinetic studies
CO2	Develop the knowledge of Pharmacodynamic studies and Clinical evaluation of new drugs.
CO3	Analyze the Pharmacology of drugs acting on Peripheral Nervous System.
CO4	Analyze the Pharmacology of drugs acting on Central Nervous System.

Course Name: Pharmacognosy and Phytochemistry I– Theory

Course Code: 17BP405T

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Discuss the history & scope of pharmacognosy, classification and sources of crude drugs.
CO2	Elaborate the Cultivation, Collection, Processing and storage of drugs of natural origin.
CO3	Employ the knowledge of Plant tissue culture and facts about traditional system of medicine.
CO4	Identify the microscopic and morphological evaluation of crude drugs.

Course Name: Medicinal Chemistry I – Practical

Course Code: 17BP406P

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Prepare the medicinal compounds and intermediates by Chemical synthesis.
CO2	Report the percentage yield of medicinal compounds synthesized.
CO3	Determine the purity of drugs and the impurity profile of official listed drugs by performing Monograph Analysis.
CO4	Estimate the partition coefficient of drugs using different solvent system.

Course Name: Physical Pharmaceutics II – Practical

Course Code: 17BP407P

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Determine the particle size, particle size distribution using sieving method
CO2	Estimate the angle of repose and influence of lubricant on angle of repose
CO3	Evaluate the viscosity of liquid using Ostwald's viscometer.
CO4	Determination sedimentation volume with effect of different suspending agent

Course Name: Pharmacology I – Practical

Course Code: 17BP408P

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Focus on the common laboratory animals and instruments used in experimental pharmacology along with CPCSEA guidelines.
CO2	Appraise the knowledge on common laboratory techniques, routes of drug administration used in animal studies.
CO3	Evaluate the effect of drug actions using simulated experiments.
CO4	Determine the anxiolytic and local anesthetic activity by different methods.

Course Name: Pharmacognosy and Phytochemistry I – Practical

Course Code: 17BP409P

Year/Sem: II Year/ IV Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Determine the length and width of phloem fibers, size of starch grains and calcium oxalate crystals.
CO2	Determine the leaf constants, Stomatal number & index, Vein islet number & termination number and palisade ratio
CO3	Evaluate the ash value, extractive value, moisture content and swelling index of crude drugs.
CO4	Analyze the crude drugs by chemical methods of evaluation.

Course Name: Medicinal Chemistry II – Theory

Course Code: 17BP501T

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Antihistaminic agent and Anti-neoplastic agents
CO2	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Cardio Vascular Agents
CO3	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Drugs acting on the Endocrine system
CO4	Illustrate the Synthesis, Pharmacological profile and Structural Activity Relationship (SAR) of drugs acting on the Antidiabetic and Local Anesthetics agents

Course Name: Industrial Pharmacy I– Theory

Course Code: 17BP502T

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Outline the objectives and applications of preformulation studies in the development and stability of dosage forms.
CO2	Illustrate the pharmaceutical aspects of tablets, capsules, liquid orals and pellets.
CO3	Summarize formulation, manufacturing and evaluation of cosmetic preparations, pharmaceutical aerosols and appraise the science of packaging materials.
CO4	Discuss about the preparation and quality control of parenterals and ophthalmic preparations.

Course Name: Pharmacology II – Theory

Course Code: 17BP503T

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate and impart fundamental knowledge on drugs used for the treatment of Cardiovascular disorders
CO2	Focus on the basics of autacoids and its related drugs in treatment of various diseases.
CO3	Apply the basic concepts in endocrinology and list the drugs acting on endocrine system.
CO4	Develop the knowledge on principle, types and applications of bioassay.

Course Name: Pharmacognosy and Phytochemistry II– Theory

Course Code: 17BP504T

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Outline the metabolic pathway in higher plants and their biogenetic studies.
CO2	Elaborate about the pharmacognostic study of secondary metabolites.
CO3	Illustrate about the isolation, identification, analysis of phytoconstituents and plan the industrial production, estimation and utilization of Phytoconstituents.
CO4	Develop knowledge to analyze the crude drugs by applying the modern methods of latest technique extractions, spectroscopy, chromatography, isolation and purification.

Course Name: Pharmaceutical Jurisprudence – Theory

Course Code: 17BP505T

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Apply the knowledge of import, manufacture, sale and grant of license.
CO2	Appraise the importance of Drugs and Cosmetics Act and its rules, Pharmacy Act, Medicinal and Toilet Preparation Act, Narcotic Drugs and Psychotropic substances Act.
CO3	Focus on Salient features of Drugs and Magic Remedies Act and its rules, Prevention of Cruelty to Animals Act.
CO4	Develop the knowledge of Pharmaceutical Legislations, Code of Pharmaceutical ethics, Medical Termination of Pregnancy Act, Right to Information Act, and Intellectual Property Rights (IPR)

Course Name: Industrial Pharmacy I – Practical

Course Code: 17BP506P

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Discuss about Preformulation studies on paracetamol/asparin/or any other drug.
CO2	Formulate and evaluate Paracetamol & aspirin tablets
CO3	Validate the Quality control test of (as per IP) marketed tablets and capsules.
CO4	Formulate Eye drops/ and Eye ointments and Creams

Course Name: Pharmacology II – Practical

Course Code: 17BP507P

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Focus on the <i>In Vitro</i> Pharmacology and physiological salt solutions.
CO2	Evaluate the effect of agonist & antagonistic activity using Simulated experiments
CO3	Estimate the amount of drugs by various bioassay methods.
CO4	Determine the anti- inflammatory and analgesic activity using induced models

Course Name: Pharmacognosy and Phytochemistry II –Practical

Course Code: 17BP508P

Year/Sem: III Year/ V Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the crude drugs by microscopical characters, powder microscopical characters, morphological characters and chemical test.
CO2	Evaluate the phytoconstituents/aromatic oils isolated from the crude drugs using various techniques and interpretation using TLC.
CO3	Determine and interpret the phytoconstituents present in the crude extract applying chromatographic technique
CO4	Analyze the crude drugs by different chemical tests.

Course Name: Medicinal Chemistry III – Theory

Course Code: 17BP601T

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Discuss the relationship between structure and biological activity of selective Antibiotics and antimalarial agents.
CO2	Discuss the relationship between structure and biological activity of selective Anti-tubercular Agent, Urinary tract anti-infective agents, and antiviral agents.
CO3	Discuss the relationship between structure and biological activity of selective antifungal, antiprotozoal, Anthelmintics, and sulphonamides
CO4	Recognize the modern techniques and approaches in drug design, Concept and applications chemistry

Course Name: Pharmacology III – Theory

Course Code: 17BP602T

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the pharmacology of drugs acting on Respiratory system and Gastrointestinal tract.
CO2	Focus on the principles of chemotherapy and pharmacology of antibiotics.
CO3	Express the knowledge on the pharmacology of various chemotherapeutic agents and Immunopharmacological agents.
CO4	Develop the knowledge on the principles of toxicology along with its treatment and significance of Chronopharmacology

Course Name: Herbal Drug Technology – Theory

Course Code: 17BP603T

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the fundamental concepts of herbal raw materials, biodynamic agriculture technique and principles of Indian Systems of Medicine.
CO2	Develop the concept of nutraceuticals and herbal food interactions, evaluation and preparation of conventional herbal dosage forms.
CO3	Apply the regulatory guidelines for the assessment of herbal drugs and patenting.
CO4	Illustrate the scope and future prospects of the herbal drug industry and Good Manufacturing Practice of Indian systems of medicine.

Course Name: Biopharmaceutics and Pharmacokinetics –Theory

Course Code: 17BP604T

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the knowledge of fundamental concepts and factors influencing pharmacokinetic parameters of a drug along with its significance.
CO2	Analyze the concepts of bioavailability and bioequivalence of drug products and their significance.
CO3	Apply the basics of pharmacokinetic models for the determination of pharmacokinetic parameters.
CO4	Focus on the principles of Nonlinear Pharmacokinetics.

Course Name: Pharmaceutical Biotechnology – Theory

Course Code: 17BP605T

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Recognize the basic concepts of biotechnology in Pharmaceutical Industries.
CO2	Illustrate the applications of Recombinant DNA technology.
CO3	Discuss the significance of immunology and monoclonal antibodies in Pharmaceutical Sciences
CO4	Focus on the concept of immunoblotting techniques, mutations, microbial genetics, biotransformation, fermentative production and biotechnological production of pharmaceuticals.

Course Name: Quality Assurance –Theory

Course Code: 17BP606T

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the knowledge on various quality assurance systems, processes and current regulatory guidelines related to manufacturing and distribution.
CO2	Identify the organization and personnel responsibilities.
CO3	Analyze the quality control parameters and good laboratory practices in pharmaceutical industry.
CO4	Evaluate the complaints and document maintenance, the responsibilities of QA & QC to achieve global quality standards in pharmaceutical industries.

Course Name: Medicinal chemistry III – Practical

Course Code: 17BP607P

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Prepare and estimate the purity of drugs and intermediates by conventional method and Microwave irradiation technique.
CO2	Assess the purity of selected drug by performing Assay of selected drugs.
CO3	Sketch the structures and reactions using chem draw and other available software.
CO4	Estimate the physicochemical properties of drugs using drug design software.

Course Name: Pharmacology III – Practical

Course Code: 17BP608P

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Interpret the dose calculation of drugs in pharmacological experiments.
CO2	Determine the effect of drugs using experimental animals and isolated preparations.
CO3	Estimate the Serum Biochemical Parameters and toxicity studies of a substance by following standard guidelines.
CO4	Evaluate the pharmacokinetic parameters of given data and perform biostatistics in experimental pharmacology.

Course Name: Herbal Drug Technology – Practical

Course Code: 17BP609P

Year/Sem: III Year/ VI Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the photochemical present in the crude drugs using preliminary test.
CO2	Prepare the herbal formulation and evaluate the excipients of natural origin & the herbal formulation as per Pharmacopoeial requirements.
CO3	Apply monographic analysis of herbal drugs as per pharmacopoeias
CO4	Determine the alcohol content, aldehyde content, phenol content and total alkaloids.

Course Name: Instrumental Methods of Analysis – Theory

Course Code: 17BP701T

Year/Sem: IV Year/ VII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Express the fundamental principles and applications of UV-Visible and Fluorimetry spectroscopic techniques.
CO2	Develop the knowledge on the basic principle, instrumentation and applications of Flame Photometry, Nepheloturbidometry, IR and Atomic absorption spectroscopy.
CO3	Discuss the Principle, methodology and Application of Chromatographic techniques.
CO4	Discuss the Principle, methodology and Application of Electrophoretic techniques.

Course Name: Industrial Pharmacy II – Theory

Course Code: 17BP702T

Year/Sem: IV Year/ VII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Focus on a broad knowledge about the process of pilot plant scale up techniques of various pharmaceutical dosage forms.
CO2	Express the process of technology transfer from lab scale to commercial batches.
CO3	Apply the concepts of Regulatory affairs and Regulatory requirements for drug approval.
CO4	Discuss the Quality management systems and regulatory requirements for new drugs by Indian Regulatory.

Course Name: Pharmacy Practice – Theory

Course Code: 17BP703T

Year/Sem: IV Year/ VII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the knowledge on the organization and professional practice management skills in community pharmacy.
CO2	Analyze the importance of dispensing, therapeutic drug monitoring, patient medication history and drug related problems in community pharmacy.
CO3	Focus on the role of hospital pharmacist in pharmacy and therapeutic committee, drug information services, patient counseling, education and training programmes in hospitals.
CO4	Apply the principles of drug store management, inventory control methods and clinical laboratory tests of specific disease states to provide better patient centered service.

Course Name: Novel Drug Delivery System – Theory

Course Code: 17BP704T

Year/Sem: IV Year/ VII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Recognize the concepts of Novel Drug Delivery Systems and polymers used in formulation of controlled release drug delivery system.
CO2	Focus on the principle concepts, formulation and evaluation of oral, mucosal and implantable drug delivery system.
CO3	Discuss about the basic concepts, formulation and evaluation of dermal, pulmonary and Nasal drug delivery system.
CO4	Develop the knowledge on the fundamental concepts of Targeted, Ocular and intrauterine drug delivery systems.

Course Name: Instrumental Methods of Analysis – Practical

Course Code: 17BP705P

Year/Sem: IV Year/ VII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Determination of absorption maxima and effect of solvents on absorption maxima of organic compounds.
CO2	Determine the Percentage purity of organic compounds by spectroscopic methods.
CO3	Estimate the amount of sodium and potassium ions by flame photometry.
CO4	Measure the amount and percentage purity of Drug and formulation by Chromatographic technique.

Course Name: Practice School

Course Code: 17BP706PS

Year/Sem: IV Year/ VII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Express the knowledge of practical application and skills of learning through conventional classroom teaching and laboratory experiments in Pharmaceutical Sciences
CO2	Develop the ability to adapt to rapidly changing requirements and challenges of Pharmaceutical professional skills.
CO3	Build the knowledge and hands-on experience on the latest technologies and research domains beyond the syllabus.
CO4	Elaborate the drug development process and its importance in Pharmacy careers.

Course Name: Biostatistics and Research Methodology – Theory

Course Code: 17BP801T

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Recognize the importance of biostatistics in pharmacy.
CO2	Interpret the various statistical techniques to solve statistical problems.
CO3	Elaborate the need and applications of Research along with its methodological designs.
CO4	Identify the need of regression modeling, Practical components of industrial & clinical trials problems in designing and analysis of experiments.

Course Name: Social and Preventive Pharmacy – Theory

Course Code: 17BP802T

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Recognize the concepts of health, disease, hygiene and socio cultural factors related to health.
CO2	Illustrate the general measures of prevention and control of infections and diseases.
CO3	Apply the knowledge of national health programmes, its objectives, functioning and outcomes.
CO4	Discuss the types of community services offered in urban and rural areas.

Course Name: Pharmaceutical Marketing – Theory

Course Code: 17BP803ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the knowledge on marketing concepts and various aspects of Pharmaceutical market.
CO2	Articulate the decision and promotion of pharmaceutical products in the market.
CO3	Discover the pharmaceutical marketing channels and duties of Professional sales representative.
CO4	Analyze the techniques of pricing strategies in Pharmaceutical industry and emerging concepts in marketing.

Course Name: Pharmaceutical Regulatory Science – Theory

Course Code: 17BP804ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the process of drug discovery and development.
CO2	Illustrate the importance of regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals.
CO3	Develop the knowledge regarding the Indian drug product in Indian and International markets, process of clinical trials & pharmacovigilance
CO4	Recognize the concepts of Regulatory science in pharmaceutical industry by implementing and upholding good regulatory practices.

Course Name: Pharmacovigilance – Theory

Course Code: 17BP805ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Appreciate the history of pharmacovigilance, adverse drug reactions and basic terminologies in Pharmacovigilance.
CO2	Make use of various drug disease classifications, drug dictionaries and drug information resources in pharmacovigilance.
CO3	Analyze the vaccine safety surveillance, methods of pharmacovigilance and communication process during ADR reporting
CO4	Appraise the methods to generate safety data and build the ability to report adverse drug reactions through various ADR reporting forms & guidelines.

Course Name: Quality Control and Standardization of Herbals – Theory

Course Code: 17BP806ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate and outline the WHO guidelines and quality assurance in traditional system of herbal medicine.
CO2	Develop the knowledge of various guidelines for quality control of herbal drugs/Herbal Medicines.
CO3	Apply the concepts of chromatographic techniques, various markers in standardization of herbal drugs and to perform the stability studies.
CO4	Appreciate the regulatory approval process and their registration, WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems.

Course Name: Computer-aided Drug Design - Theory

Course Code: 17BP807ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the lead compound by using various approaches of drug Design.
CO2	Correlate the Quantitative Structure-Activity Relationship (QSAR) in drug Design.
CO3	Apply the Molecular Modeling and virtual screening techniques in drug Design.
CO4	Illustrate the Informatics & Methods in drug design.

Course Name: Cell and Molecular Biology - Theory

Course Code: 17BP808ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Employ the knowledge about the cell biology.
CO2	Focus on the properties of Nucleic acids in cell biology.
CO3	Apply the basic concepts of proteins and genetics.
CO4	Relate the basic molecular genetics mechanism to cell cycle.

Course Name: Cosmetic Science - Theory

Course Code: 17BP809ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Employ the knowledge of cosmetic and cosmeceutical products.
CO2	Compute the basic principles of key components and formulation of various cosmeceutical products.
CO3	Examine the role of ingredients and advanced current technology used in manufacturing of cosmeceutical products.
CO4	Apply the concepts of high technical competence associated with usage of cosmeceutical products.

Course Name: Pharmacological Screening Methods - Theory

Course Code: 17BP810ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Develop the knowledge of guidelines, applications of commonly used laboratory animals and various techniques employed in experimental pharmacology.
CO2	Analyze the various screening methods used in preclinical research on Neuropharmacology.
CO3	Examine the various screening methods used in preclinical research on Cardiovascular system.
CO4	Select the research design along with the importance of biostatistics in research methodology.

Course Name: Advanced Instrumentation Techniques - Theory

Course Code: 17BP811ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Analyze the various advanced instruments used and its applications in drug analysis.
CO2	Focus on the Calibration and validation of various analytical instruments.
CO3	Illustrate the general principles, instrumentation and applications of radioimmunoassay.
CO4	Apply the basic concepts of extraction techniques and hyphenated techniques in drug analysis.

Course Name: Dietary Supplements and Nutraceuticals - Theory

Course Code: 17BP812ET

Year/Sem: IV Year/ VIII Sem

At the end of the course, the student will be able to

CO #	Course Outcomes
CO1	Illustrate the importance of nutraceuticals and dietary supplements to maintain healthy life and nutrition.
CO2	Employ the knowledge of various photochemical as nutraceuticals with reference to chemical nature and health benefits.
CO3	Explain the various chronic disease caused by free radicals and role of dietary supplements as antioxidant in prevention of diseases.
CO4	Analyze the regulatory and commercial aspects of dietary supplements including health claims.

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6. Mapping of Course outcomes with programme outcomes

Course Name: Human Anatomy and Physiology I-Theory

Course Code: 17BP101T

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	2	-	-	-	-	-	-	-	2	2	-	-
CO 2	2	-	2	-	-	-	-	-	-	-	2	2	-	-
CO 3	2	-	2	-	-	-	-	-	-	-	2	-	-	-
CO 4	2	-	2	-	-	-	-	-	-	-	2	2	-	-
Average	2	-	2	-	-	-	-	-	-	-	2	2	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Analysis I - Theory

Course Code: 17BP102T

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	2	1	-	-	2	-	-	-	-	-	2	-	-
CO 2	3	3	2	-	-	2	-	-	-	-	-	2	-	-
CO 3	1	1	2	-	-	1	-	-	-	-	-	1	-	-
CO 4	1	1	2	-	-	1	-	-	-	-	-	3	-	-
Average	1.75	1.75	1.75	-	-	1.5	-	-	-	-	-	2	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutics I -Theory

Course Code: 17BP103T

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	3	3	1	-	1	-	1	-	-	3	3	3	2
CO 2	3	2	3	2	-	1	-	1	-	-	3	3	2	2
CO 3	3	2	3	2	-	1	-	1	-	-	3	3	2	2
CO 4	3	2	3	1	-	1	-	1	-	-	3	3	2	2
Average	3	2.25	3	1.5	-	1	-	1	-	-	3	3	2.25	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Inorganic chemistry -Theory

Course Code: 17BP104T

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	3	3	3	3	-	-	-	2	-	-	3	2	2
CO 2	3	1	2	1	3	-	-	-	1	-	-	2	2	2
CO 3	2	2	2	2	1	-	-	-	3	-	-	2	1	3
CO 4	2	3	3	1	1	-	-	-	3	-	-	1	1	2
Average	2.5	2.25	2.5	1.75	2	-	-	-	2.25	-	-	2	1.5	2.25

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Communication skills – Theory

Course Code: 17BP105T

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	2	2	-	2	-	-	3	2	-	2	-	-	2
CO 2	3	2	2	-	2	-	-	3	2	-	2	-	-	2
CO 3	3	2	2	-	2	-	-	3	2	-	2	-	-	2
CO 4	3	2	2	-	2	-	-	3	2	-	2	-	-	2
Average	3	2	2	-	2	-	-	3	2	-	2	-	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Remedial Biology - Theory

Course Code: 17BP106RBT

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	-	-	-	-	-	-	-	-	1	3	-	-
CO 2	3	-	-	-	-	-	-	-	-	-	1	3	-	-
CO 3	3	-	-	-	-	-	-	-	-	-	1	3	-	-
CO 4	3	-	-	-	-	-	-	-	-	-	1	3	-	-
Average	3	-	-	-	-	-	-	-	-	-	1	3	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Remedial Mathematics - Theory

Course Code: 17BP106RMT

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	-	-	2	-	-	-	-	3	1	-	-
CO 2	3	-	-	-	-	2	-	-	-	-	3	-	-	-
CO 3	3	2	3	-	-	2	2	3	-	-	2	2	-	2
CO 4	3	2	3	-	-	2	2	3	-	-	3	2	-	2
Average	3	2	3	-	-	2	2	3	-	-	2.75	1.67	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Human Anatomy and Physiology I- Practical

Course Code: 17BP107P

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	-	-	2	-	-	-	-	3	1	-	-
CO 2	3	-	-	-	-	2	-	-	-	-	3	-	-	-
CO 3	3	2	3	-	-	2	2	3	-	-	2	2	-	2
CO 4	3	2	3	-	-	2	2	3	-	-	3	2	-	2
Average	3	2	3	-	-	2	2	3	-	-	2.75	1.67	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Analysis I - Practical

Course Code:17BP108P

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	2	1	-	-	2	-	-	-	-	-	2	-	-
CO 2	3	3	2	-	-	3	-	-	-	-	-	3	-	-
CO 3	0	0	1	-	-	0	-	-	-	-	-	0	-	-
CO 4	3	3	2	-	-	3	-	-	-	-	-	3	-	-
Average	2	2	1.5	-	-	2	-	-	-	-	-	2	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutics I -Practical

Course Code: 17BP109P

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	2	3	-	1	-	-	1	-	-	2	3	2	1
CO 2	3	2	3	-	1	-	-	1	-	-	2	3	2	1
CO 3	3	2	3	-	1	-	-	1	-	-	2	3	2	1
CO 4	3	2	3	-	1	-	-	1	-	-	2	3	2	1
Average	3	2	3	-	1	-	-	1	-	-	2	3	2	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Inorganic Chemistry - Practical

Course Code: 17BP110P

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	3	3	3	3	-	-	-	-	-	3	-	-	-
CO 2	3	1	2	1	3	-	-	-	-	-	2	-	-	-
CO 3	2	2	2	2	1	-	-	-	-	-	2	-	-	-
CO 4	2	3	3	1	1	-	-	-	-	-	1	-	-	-
Average	2.5	2.25	2.5	1.75	2	-	-	-	-	-	2	-	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Communication skills – Practical

Course Code: 17BP111P

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	1	2	2	-	2	2	-	3	-	-	2	2	-	2
CO 2	1	2	2	-	2	-	-	3	-	-	-	-	-	-
CO 3	1	2	2	-	2	-	-	3	-	-	-	-	-	-
CO 4	1	2	2	-	2	2	-	3	-	-	2	-	-	-
Average	1	2	2	-	2	-	-	3	-	-	2	-	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Remedial Biology – Practical

Course Code: 17BP112P

Year/Sem: I Year/ I Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	-	-	-	-	-	-	-	2	3	-	-
CO 2	3	-	-	-	-	-	-	-	-	-	1	3	-	-
CO 3	3	-	-	-	-	-	-	-	-	-	1	3	-	-
CO 4	3	-	3	2	-	-	-	-	-	-	2	3	-	-
Average	3	-	3	2	-	-	-	-	-	-	1.5	3	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Human Anatomy and Physiology II – Theory

Course Code: 17BP201T

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	-	1	2	3	3	-	-	3	2	-	-
CO 2	3	-	-	-	-	-	2	3	-	-	3	-	-	-
CO 3	3	-	-	-	-	-	1	3	-	-	3	-	-	-
CO 4	3	-	-	-	-	-	-	1	-	-	3	-	-	3
Average	3	-	-	-	1	2	2	2.5	-	-	3	2	-	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Organic Chemistry I – Theory

Course Code: 17BP202T

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	1	-	-	-	-	-	-	-	-	2	1	-
CO 2	3	-	1	2	-	-	-	-	-	-	-	2	1	-
CO 3	3	-	1	-	-	-	-	-	-	-	-	2	1	-
CO 4	3	-	1	2	-	-	-	-	-	-	-	2	2	-
Average	3	-	1	2	-	-	-	-	-	-	-	2	1.2	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Biochemistry – Theory

Course Code: 17BP203T

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	2	1	-	-	1	-	1	-	2	3	-	-
CO 2	3	-	2	1	-	-	-	-	-	-	2	3	-	-
CO 3	3	-	2	2	-	2	2	-	2	-	2	3	-	2
CO 4	3	-	2	2	-	2	2	-	2	-	2	3	-	2
Average	3	-	2	1.5	-	2	1.6	-	1.6	-	2	3	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pathophysiology – Theory

Course Code: 17BP204T

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	-	-	1	2	3	3	-	-	2	3	-	-
CO 2	3	-	-	-	-	-	2	3	-	-	-	3	-	-
CO 3	3	-	-	-	-	-	1	3	-	-	-	3	-	-
CO 4	3	-	-	-	-	-	-	1	-	-	-	3	-	2
Average	3	-	-	-	1	2	2	2.5	-	-	2	3	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Computer Applications in Pharmacy – Theory

Course Code: 17BP205T

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	-	3	-	1	-	-	2	-	3	-	2	-
CO 2	3	-	2	3	-	1	-	-	2	-	3	-	2	-
CO 3	3	-	2	3	-	2	-	-	2	-	3	-	2	-
CO 4	3	-	2	1	-	2	-	-	2	-	3	-	1	-
Average	3	-	1.5	2.5	-	1.5	-	-	2	-	3	-	1.7	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Environmental sciences – Theory

Course Code: 17BP206T

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	2	-	-	-	2	-	2	2	1	3	-	-
CO 2	3	-	2	-	-	-	2	-	2	2	1	3	-	-
CO 3	3	-	2	-	-	-	2	-	2	2	1	3	-	-
CO 4	3	-	2	-	-	-	2	-	2	2	1	3	-	-
Average	3	-	2	-	-	-	2	-	2	2	1	3	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Human Anatomy and Physiology II –Practical

Course Code: 17BP207P

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	-	-	-	-	-	-	-	-	3	-	-	-
CO 2	2	-	2	2	-	-	2	3	-	-	3	-	-	1
CO 3	2	-	1	-	-	-	-	-	-	-	2	-	-	-
CO 4	3	-	3	2	-	-	2	3	3	-	3	-	-	2
Average	2.58	-	2	2	-	-	2	3	3	-	2.75	-	-	1.5

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Organic Chemistry I– Practical

Course Code: 17BP208P

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	1	2	-	-	-	-	-	-	-	2	1	-
CO 2	3	-	1	2	-	-	-	-	-	-	-	2	1	-
CO 3	3	-	1	2	-	-	-	-	-	-	-	2	1	-
CO 4	3	-	1	2	-	-	-	-	-	-	-	2	1.2	-
Average	3	-	1	2	-	-	-	-	-	-	-	2	1	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Biochemistry – Practical

Course Code: 17BP209P

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	2	1	2	2	-	-	-	-	-	3	-	-	2
CO 2	2	2	1	2	2	-	-	-	-	-	3	-	-	2
CO 3	2	2	1	2	2	-	-	-	-	-	3	-	-	-
CO 4	2	2	3	2	2	-	-	-	-	-	1	-	-	-
Average	2	2	1	2	2	-	-	-	-	-	2.5	-	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Computer Applications in Pharmacy – Practical

Course Code: 17BP210P

Year/Sem: I Year/ II Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	1	-	-	2	-	-	-	2	-	-	1	-	-	2
CO 2	1	-	-	2	-	-	-	2	-	-	1	-	-	2
CO 3	1	-	-	2	-	-	-	1	-	-	1	-	-	2
CO 4	1	-	-	2	-	-	-	2	-	-	1	-	-	2
Average	1	-	-	2	-	-	-	-	-	-	1	-	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Organic Chemistry II – Theory

Course Code: 17BP301T

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	3	3	-	1	-	-	-	1	3	2	1	-
CO 2	3	-	2	2	-	1	-	-	-	1	3	2	1	-
CO 3	3	-	1	-	-	1	-	-	-	1	3	2	1	-
CO 4	3	-	1	3	-	1	-	-	-	1	3	2	1	-
Average	3	-	1.7	2.5	-	1	-	-	-	1	3	2	1	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Physical Pharmaceutics I – Theory

Course Code: 17BP302T

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	1	-	-	-	-	-	-	-	-	3	2	2	-
CO 2	3	1	-	-	-	-	-	-	-	-	3	2	2	-
CO 3	3	1	-	-	-	-	-	-	-	-	3	2	2	-
CO 4	3	1	1	2	-	-	-	-	-	-	3	2	2	-
Average	3	1	1	2	-	-	-	-	-	-	3	2	2	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Microbiology – Theory

Course Code: 17BP303T

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	2	2	1	1	-	-	-	-	-	-	3	-	2
CO 2	3	3	2	3	1	-	-	-	-	-	-	-	-	3
CO 3	2	3	3	2	-	-	-	-	-	-	-	-	-	2
CO 4	3	3	3	1	-	-	-	-	-	-	-	-	3	3
Average	2.5	2.75	2.5	1.5	1	-	-	-	-	-	-	3	3	2.5

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Engineering – Theory

Course Code: 17BP304T

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	1	1	-	-	-	-	-	2	3	2	3	1
CO 2	3	-	1	1	-	-	-	-	-	2	3	2	3	1
CO 3	3	-	1	1	-	-	-	-	-	2	3	2	3	1
CO 4	3	-	1	1	-	-	-	-	-	2	3	2	3	1
Average	3	-	1	1	-	-	-	-	-	2	3	2	3	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Organic Chemistry II – Practical

Course Code: 17BP305P

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	1	3	-	1	-	-	-	-	1	2	1	-
CO 2	3	-	3	1	-	1	-	-	-	-	1	2	1	-
CO 3	3	-	3	1	-	1	-	-	-	-	1	2	1	-
CO 4	3	-	3	1	-	1	-	-	-	-	1	2	1	-
Average	3	-	2	2	-	1	-	-	-	-	1	2	1	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Physical Pharmaceutics I – Practical

Course Code: 17BP306P

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	1	1	-	-	-	-	2	-	-	2	2	2	-
CO 2	3	2	1	-	-	-	-	2	-	-	2	2	2	-
CO 3	3	2	1	-	-	-	-	2	-	-	2	2	2	-
CO 4	3	2	1	-	-	-	-	2	-	-	2	2	2	-
Average	3	1.75	1	-	-	-	-	2	-	-	2	2	2	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Microbiology – Practical

Course Code: 17BP307P

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	2	2	1	1	-	1	-	-	-	-	3	-	2
CO 2	3	3	2	3	1	-	-	-	-	-	-	-	-	3
CO 3	2	3	3	2	-	-	1	-	-	-	-	-	-	2
CO 4	3	3	3	1	-	-	-	-	-	-	-	-	3	3
Average	2.5	2.75	2.5	1.5	1	-	1	-	-	-	-	3	3	2.5

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Engineering –Practical

Course Code: 17BP308P

Year/Sem: II Year/ III Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	2	1	2	-	-	-	-	1	1	2	1	1	1
CO 2	3	2	1	2	-	-	-	-	1	1	2	1	1	1
CO 3	3	2	1	2	-	-	-	-	1	1	2	1	1	1
CO 4	3	2	1	2	-	-	-	-	1	1	2	1	1	1
Average	3	2	1	2	-	-	-	-	1	1	2	1	1	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Organic Chemistry III– Theory

Course Code: 17BP401T

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	-	-	1	-	-	2	-	1	3	1	1	-	1
CO 2	2	-	-	1	-	-	2	-	1	3	1	1	-	1
CO 3	2	-	-	1	-	-	2	-	1	3	1	1	-	1
CO 4	2	-	-	1	-	-	2	-	1	3	1	1	-	1
Average	2	-	-	1	-	-	2	-	1	3	1	1	-	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Medicinal Chemistry I – Theory

Course Code: 17BP402T

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	3	3	-	3	-	-	-	-	-	3	3	-
CO 2	3	-	3	1	-	2	-	-	-	-	-	2	2	-
CO 3	2	-	2	2	-	1	-	-	-	-	-	2	2	-
CO 4	2	-	3	2	-	2	-	-	-	-	-	1	1	-
Average	2.5	-	2.75	2	-	2	-	-	-	-	-	2	2	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Physical Pharmaceutics II – Theory

Course Code: 17BP403T

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	3	3	-	-	-	-	1	-	-	2	-	-
CO 2	2	-	3	1	-	-	2	-	1	-	-	2	-	-
CO 3	2	-	2	2	-	-	-	2	2	-	2	3	-	-
CO 4	2	-	3	2	-	-	-	2	2	-	2	3	-	-
Average	2	-	2.75	2	-	-	2	2	1.5	-	2	2.5	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacology I – Theory

Course Code: 17BP404T

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	-	-	-	-	-	-	-	1	-	-	2	-	-
CO 2	2	-	-	-	-	-	2	-	1	-	-	2	-	-
CO 3	2	-	1	-	-	-	-	2	2	-	2	3	-	-
CO 4	2	-	1	-	-	-	-	2	2	-	2	3	-	-
Average	2	-	1	-	-	-	2	2	1.5	-	2	2.5	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacognosy and Phytochemistry I– Theory

Course Code: 17BP405T

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	-	-	-	-	-	-	-	-	-	3	-	-
CO 2	3	-	3	3	-	3	3	3	3	3	3	3	3	-
CO 3	3	-	3	3	-	3	-	3	-	3	3	3	3	-
CO 4	3	-	-	-	-	-	-	2	-	2	-	3	2	-
Average	3	-	3	3	-	3	3	2.67	3	2.67	3	3	2.67	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Medicinal Chemistry I – Practical

Course Code: 17BP406P

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	3	3	-	3	-	-	-	-	-	3	3	-
CO 2	3	-	3	1	-	2	-	-	-	-	-	2	2	-
CO 3	2	-	2	2	-	1	-	-	-	-	-	2	2	-
CO 4	2	-	3	2	-	2	-	-	-	-	-	1	1	-
Average	2.5	-	2.75	2	-	2	-	-	-	-	-	2	2	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Physical Pharmaceutics II – Practical

Course Code: 17BP407P

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	3	3	-	3	-	-	-	-	-	3	3	-
CO 2	3	-	3	1	-	2	-	-	-	-	-	2	2	-
CO 3	2	-	2	2	-	1	-	-	-	-	-	2	2	-
CO 4	2	-	3	2	-	2	-	-	-	-	-	1	1	-
Average	2.5	-	2.75	2	-	2	-	-	-	-	-	2	2	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacology I – Practical

Course Code: 17BP408P

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	1	-	-	-	-	-	-	-	-	-	-	2	-	-
CO 2	1	-	-	-	-	-	-	-	-	-	-	2	-	-
CO 3	1	-	-	2	-	-	-	-	-	-	-	-	-	-
CO 4	1	-	-	1	-	-	-	-	-	-	-	1	-	-
Average	1	-	-	1.5	-	-	-	-	-	-	-	1.7	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacognosy and Phytochemistry I – Practical

Course Code: 17BP409P

Year/Sem: II Year/ IV Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	3	2	-	-	1	-	-	-	2	3	3	-
CO 2	3	-	3	2	-	-	1	-	-	-	2	3	3	-
CO 3	3	-	3	2	-	-	1	-	-	-	2	3	3	-
CO 4	3	-	2	1	-	-	1	-	-	-	1	3	1	-
Average	3	-	2.75	1.75	-	-	1	-	-	-	1.75	3	2.5	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Medicinal Chemistry II – Theory

Course Code: 17BP501T

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	2	1	-	2	3	2	-	-	3	3	1	2
CO 2	3	-	2	1	-	2	3	2	-	-	3	3	1	2
CO 3	3	-	2	2	-	2	3	2	-	-	3	3	1	2
CO 4	3	-	2	2	-	2	3	2	-	-	3	3	1	2
Average	3	-	2	2	-	2	3	2	-	-	3	3	1	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Industrial Pharmacy I– Theory

Course Code: 17BP502T

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	1	2	1	-	-	2	3	1	2	3	3	3	1
CO 2	3	1	2	1	-	-	2	3	1	2	3	3	3	1
CO 3	3	1	2	1	-	-	2	3	1	2	3	3	3	1
CO 4	3	1	2	1	-	-	2	3	1	2	3	3	3	1
Average	3	1	2	1	-	-	2	3	1	2.3	3	3	3	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacology II – Theory

Course Code: 17BP503T

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	1	-	-	-	-	-	-	-	-	2	-	-
CO 2	2	-	1	-	-	-	-	-	-	-	-	2	-	-
CO 3	2	-	1	-	-	-	-	-	-	-	-	2	-	-
CO 4	2	-	-	2	-	-	-	-	-	-	-	1	-	-
Average	2	-	1	2	-	-	-	-	-	-	-	1.75	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacognosy and Phytochemistry II– Theory

Course Code: 17BP504T

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	2	-	-	-	-	-	-	-	3	-	-
CO 2	3	-	-	-	-	-	-	-	2	-	2	3	3	2
CO 3	3	-	3	3	-	2	-	3	2	-	3	3	3	3
CO 4	3	-	3	3	-	2	3	3	2	-	3	3	3	3
Average	3	-	1.5	2	-	1	0.75	1.5	1.5	-	2	3	2.25	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Jurisprudence – Theory

Course Code: 17BP505T

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	1	-	-	-	3	3	3	3	3	3	2	1	2
CO 2	2	1	-	-	-	3	3	3	3	3	3	2	1	2
CO 3	2	1	-	-	-	3	3	3	3	3	3	2	1	2
CO 4	2	1	-	-	-	3	3	3	3	3	3	2	1	2
Average	2	1	-	-	-	3	3	3	3	3	3	2	1	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Industrial Pharmacy I – Practical

Course Code: 17BP506P

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	3	3	-	-	-	-	1	-	-	1	3	3	2
CO 2	3	3	3	1	1	-	2	-	-	1	1	3	3	2
CO 3	3	3	3	1	-	-	-	-	-	-	1	3	3	2
CO 4	3	3	3	1	-	-	1	-	-	-	1	3	3	2
Average	3	-	3	1	-	-	1	-	-	-	-	3	3	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacology II – Practical

Course Code: 17BP507P

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	1	-	-	-	-	-	-	-	-	-	-	2	-	-
CO 2	1	-	-	2	-	-	-	-	-	-	1	-	-	1
CO 3	1	-	-	2	-	-	-	-	-	-	1	-	-	1
CO 4	1	-	-	2	-	-	-	-	-	-	1	-	-	1
Average	1	-	-	2	-	-	-	-	-	-	1	2	-	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacognosy and Phytochemistry II –Practical

Course Code: 17BP508P

Year/Sem: III Year/ V Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	2	1	-	-	-	-	-	-	2	3	1	-
CO 2	3	-	3	3	-	2	-	2	-	-	3	3	3	3
CO 3	3	-	3	3	-	2	-	2	-	-	3	3	3	3
CO 4	3	-	1	1	-	-	-	-	-	-	-	3	1	-
Average	3	-	2.25	2	-	2	-	2	-	-	2.67	3	2	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Medicinal Chemistry III – Theory

Course Code: 17BP601T

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	1	-	-	-	-	-	1	-	2	3	-	-
CO 2	3	-	1	-	-	-	2	-	1	-	2	3	-	-
CO 3	3	-	2	-	-	-	-	-	2	-	2	3	-	2
CO 4	3	-	2	-	-	-	-	-	2	-	2	3	-	2
Average	3	-	1.5	-	-	-	2	-	1.5	-	2	3	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacology III – Theory

Course Code: 17BP602T

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	-	-	-	-	-	-	-	-	1	2	-	1
CO 2	2	-	1	-	-	-	-	-	-	-	1	2	-	1
CO 3	2	-	1	-	-	-	-	-	-	-	1	2	-	1
CO 4	2	-	2	-	-	-	-	-	-	-	1	2	-	1
Average	3	-	1.3	-	-	-	-	-	-	-	1	2	-	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Herbal Drug Technology – Theory

Course Code: 17BP603T

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	1	2	-	2	-	2	-	2	2	2	2	-
CO 2	3	-	1	2	-	2	-	2	-	2	2	2	2	2
CO 3	3	-	2	2	-	2	2	2	2	2	2	2	2	2
CO 4	3	-	2	2	-	3	2	2	3	2	2	2	2	2
Average	3	-	1.5	2	-	2.25	2	2	2.5	2	2	2	2	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Biopharmaceutics and Pharmacokinetics –Theory

Course Code: 17BP604T

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	1	-	2	1	-	1	-	2	2	2	3
CO 2	3	-	-	3	-	1	2	-	2	-	1	3	3	3
CO 3	3	-	-	2	-	3	1	-	1	-	-	2	1	3
CO 4	3	-	-	3	-	3	1	-	2	-	1	3	3	3
Average	3	-	-	2.3	-	2.3	1.3	-	1.5	-	1.3	2.5	2.3	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Biotechnology – Theory

Course Code: 17BP605T

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	-	-	1	2	-	-	1	0	1	2	1	1	-	-
CO 2	-	-	1	-	1	1	-	0	1	-	1	-	1	-
CO 3	-	1	1	-	1	-	-	1	-	-	-	2	1	-
CO 4	-	1	1	-	2	-	-	1	-	-	2	0	1	-
Average	-	1.0	1.0	2.0	1.3	1.0	1.0	0.5	1.0	2.0	1.3	1.0	1.0	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Quality Assurance –Theory

Course Code: 17BP606T

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	2	3	3	-	2	3	3	2	3	3	3	1
CO 2	3	2	2	3	-	-	2	3	3	2	3	3	3	1
CO 3	3	-	2	3	-	-	-	3	2	-	3	3	3	1
CO 4	3	2	2	3	3	-	-	3	3	2	3	3	3	1
Average	3	2	2	3	3	-	2	3	3	3	3	3	3	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Medicinal chemistry III – Practical

Course Code: 17BP607P

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	-	1	-	-	-	2	-	-	-	-	2	-	-
CO 2	2	-	1	-	-	-	2	-	-	-	-	2	-	-
CO 3	2	-	2	2	-	-	-	-	-	-	-	2	-	-
CO 4	2	-	2	2	-	-	-	-	-	-	-	2	-	-
Average	2	-	1.5	2	-	-	2	-	-	-	-	2	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacology III – Practical

Course Code: 17BP608P

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	1	-	-	-	-	-	-	-	-	-	1	-	-	-
CO 2	1	-	-	2	-	-	-	-	-	-	-	-	-	1
CO 3	1	-	1	1	-	-	-	-	-	-	-	-	-	-
CO 4	2	-	-	2	-	-	-	-	-	-	2	-	-	1
Average	1.25	-	-	1.67	-	-	-	-	-	-	1.5	-	-	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Herbal Drug Technology – Practical

Course Code: 17BP609P

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	-	1	-	1	-	-	-	-	-	3	1	-
CO 2	3	-	2	1	-	3	-	2	2	2	2	3	3	2
CO 3	3	-	2	1	-	3	3	2	3	2	2	3	3	2
CO 4	3	-	2	1	-	3	3	2	3	2	2	3	3	2
Average	3	-	2	1	-	2.5	3	2	2.67	2	2	3	2.5	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Instrumental Methods of Analysis – Theory

Course Code: 17BP701T

Year/Sem: IV Year/ VII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	1	1	-	-	1	-	2	-	-	-	3	-	-
CO 2	3	1	3	-	-	3	-	2	-	-	-	3	-	2
CO 3	3	1	3	-	-	2	-	-	-	-	-	3	-	2
CO 4	3	1	3	-	-	2	-	-	-	-	-	3	-	-
Average	3	1	2.5	-	-	2	-	2	-	-	-	3	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Industrial Pharmacy II – Theory

Course Code: 17BP702T

Year/Sem: IV Year/ VII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	-	2	3	3	1	2	3	-	3	3	3	3
CO 2	3	-	-	1	3	3	1	2	2	-	3	3	3	3
CO 3	3	-	-	2	3	3	3	2	2	-	3	3	3	3
CO 4	3	-	-	1	1	1	1	2	2	-	2	3	3	3
Average	3	-	-	1.5	2.5	2.5	1.5	2	2.25	-	2.75	3	3	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacy Practice – Theory

Course Code: 17BP703T

Year/Sem: IV Year/ VII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	3	2	-	3	3	-	-	3	3	3	3	2	3
CO 2	3	3	2	-	3	3	-	-	2	2	3	3	2	3
CO 3	3	3	2	-	3	3	-	-	2	2	3	3	2	3
CO 4	3	3	2	-	1	1	-	-	2	2	2	3	2	3
Average	3	3	2	-	2.5	2.5	-	-	2.25	2.25	2.75	3	2	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Novel Drug Delivery System – Theory

Course Code: 17BP704T

Year/Sem: IV Year/ VII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	1	1	-	-	-	-	1	1	1	2	2	1
CO 2	2	-	2	2	-	-	-	-	1	2	2	1	3	2
CO 3	3	-	1	3	-	-	-	-	1	2	2	2	2	2
CO 4	2	-	1	2	-	-	-	-	2	2	3	2	2	2
Average	2.5	-	1.25	2	-	-	-	-	1.25	1.75	2	1.75	2.25	1.75

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Instrumental Methods of Analysis – Practical

Course Code: 17BP705P

Year/Sem: IV Year/ VII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	3	2	-	-	3	-	-	-	-	-	3	-	-
CO 2	3	2	2	-	-	2	-	-	-	-	-	3	-	2
CO 3	3	3	2	-	-	3	-	-	-	-	-	3	-	2
CO 4	3	2	2	-	-	3	-	-	-	-	-	3	-	-
Average	3	2.5	2	-	-	2.75					-	3	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Practice School

Course Code: 17BP706PS

Year/Sem: IV Year/ VII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	-	-	-	-	-	-	-	-	1	2	3	3	2
CO 2	2	1	-	-	-	2	1	-	-	2	2	3	3	2
CO 3	2	-	-	2	-	-	-	-	-	2	2	3	3	2
CO 4	2	-	2		-	2	2	-	-	2	2	3	3	2
Average	2	1	2	2	-	2	1.5	-	-	1.75	2	3	3	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Biostatistics and Research Methodology – Theory

Course Code: 17BP801T

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
CO 2	-	-	2	2	-	-	1	-	-	-	2	-	-	2
CO 3	1	-	-	2	-	-	1	-	-	-	2	-	-	2
CO 4	2	-	-	2	-	-	-	-	-	-	-	-	-	1
Average	2.5	-	2	2	-	-	1	-	-	-	2	-	-	2.5

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Social and Preventive Pharmacy – Theory

Course Code: 17BP802T

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	3	-	2	1	1	2	2	-	1	3	2	-	-
CO 2	3	3	-	1	-	2	-	3	-	-	1	-	-	2
CO 3	2	2	-	3	-	1	-	1	-	2	1	2	-	2
CO 4	1	1	-	2	3	-	-	3	-	-	2	-	-	-
Average	2.75	2.75	-	2.75	3	2	2	2.25	-	0.75	2.25	2	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Marketing – Theory

Course Code: 17BP803ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	2	1	-	-	2	2	-	-	1	2	3	-	1
CO 2	3	2	2	2	2	1	2	-	-	1	2	3	3	2
CO 3	3	2	2	-	2	1	1	2	-	1	2	3	-	1
CO 4	3	2	2	2	-	-	2	2	-	1	2	3	-	2
Average	3	2	1.75	2	2	2	1.75	2	-	1	2	3	3	1.5

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmaceutical Regulatory Science – Theory

Course Code: 17BP804ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	2	2	-	1	2	3	-	-	2	2	-	-
CO 2	3	-	-	-	-	2	2	3	-	-	2	2	-	-
CO 3	2	-	2	-	-	2	2	3	-	-	2	2	-	2
CO 4	2	-	-	-	-	1	1	3	-	-	2	2	-	-
Average	2.5	-	2	2	-	1.5	1.75	3	-	-	2	2	-	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacovigilance – Theory

Course Code: 17BP805ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	2	-	-	-	1	-	-	-	2	2	-	-
CO 2	2	-	2	1	-	1	1	-	1	-	2	2	-	-
CO 3	2	-	2	-	-	2	1	2	2	-	2	2	-	-
CO 4	2	-	2	2	-	2	1	2	2	-	2	2	-	-
Average	2	-	2	1.5	-	1.66	1	2	1.66	-	2	2	-	-

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Quality Control and Standardization of Herbals – Theory

Course Code: 17BP806ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	3	-	3	-	-	-	2	-	2	3	3	3	3	3
CO 2	3	-	3	-	-	-	2	-	2	3	3	3	3	3
CO 3	3	-	2	-	-	-	2	-	2	3	3	3	3	3
CO 4	3	-	-	-	-	-	2	-	2	3	3	3	3	3
Average	3	-	2	-	-	-	2	-	2	3	3	3	3	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Computer Aided Drug Design - Theory

Course Code: 17BP807ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	-	-	-	-	-	-	-	-	2	1	-	3
CO 2	2	-	-	-	-	-	-	-	-	-	2	1	-	3
CO 3	2	-	-	-	-	-	-	-	-	-	2	1	-	3
CO 4	2	-	-	-	-	-	-	-	-	-	2	1	-	3
Average	2	-			-	-		-		-	2	1	-	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Cell and Molecular Biology - Theory

Course Code: 17BP808ET

Year/Sem: III Year/ VI Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	-	-	-	-	-	-	-	-	2	-	-	1
CO 2	2	-	-	-	-	-	-	-	-	-	2	-	-	1
CO 3	2	-	-	-	-	-	-	-	-	-	2	-	-	1
CO 4	2	-	-	-	-	-	-	-	-	-	2	-	-	1
Average	2	-	-	-	-	-	-	-	-	-	2	-	-	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Cosmetic Science - Theory

Course Code: 17BP809ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO														
CO 1	2	-	-	2	-	-	-	-	-	1	2	2	3	3
CO 2	2	-	-	2	-	-	-	-	-	1	2	2	3	3
CO 3	2	-	-	2	-	-	-	-	-	1	2	2	3	3
CO 4	2	-	-	2	-	-	-	-	-	1	2	2	3	3
Average	2	-	-	2	-	-	-	-	-	1	2	2	3	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Pharmacological Screening Methods - Theory

Course Code: 17BP810ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	-	-	-	-	-	-	-	-	-	2	-	-	-
CO 2	2	-	1	-	-	-	-	-	-	-	2	-	1	2
CO 3	2	-	1	-	-	-	-	-	-	-	2	-	1	2
CO 4	2	-	-	-	-	-	-	-	-	-	1	-	-	2
Average	2	-	1	-	-	-	-	-	-	-	1.75	-	1	2

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Advanced Instrumentation Techniques - Theory

Course Code: 17BP811ET

Year/Sem: IV Year/ VIII Sem

PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	1	-	-	-	-	-	-	-	2	2	2	1
CO 2	3	-	1	-	-	-	-	-	-	-	2	2	2	-
CO 3	3	-	1	-	-	-	-	-	-	-	1	2	-	1
CO 4	3	-	1	-	-	-	-	-	-	-	2	2	2	1
Average	3	-	1	-	-	-	-	-	-	-	1.75	2	2	1

1: Slight (low) 2: Moderate (medium) 3: High (High)

Course Name: Dietary Supplements and Nutraceuticals - Theory

Course Code: 17BP812ET

Year/Sem: IV Year/ VIII Sem

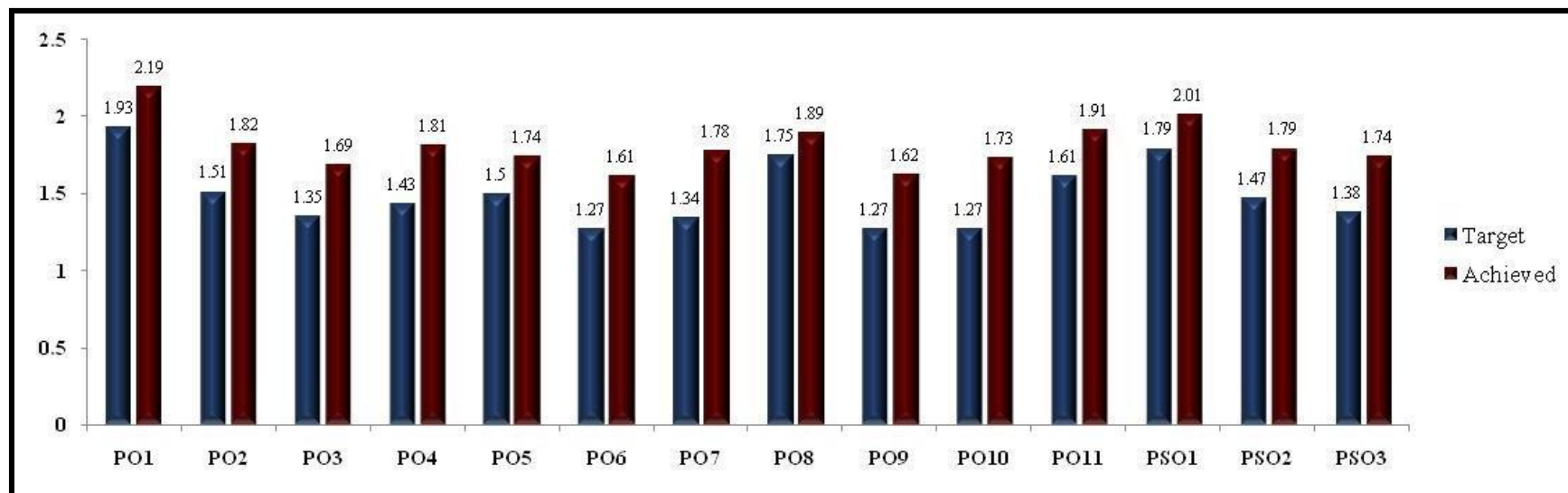
PO & PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	3	-	2	-	-	1	-	-	1	2	3	3	3	3
CO 2	3	-	2	-	-	1	-	-	1	2	3	3	3	3
CO 3	3	-	2	-	-	1	-	-	1	2	3	3	3	3
CO 4	3	-	2	-	-	1	-	-	1	2	3	3	3	3
Average	3	-	2	-	-	1	-	-	1	2	3	3	3	3

1: Slight (low) 2: Moderate (medium) 3: High (High)

VELS INSTITUTE OF SCIENCE TECHNOLOGY AND ADVANCED STUDIES
SCHOOL OF PHARMACEUTICAL SCIENCES
PO ATTAINMENT AND ANALYSIS (2019-2023)

7.ANALYSIS OF PO ATTAINMENT

PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
PO/PSO Target	1.93	1.51	1.35	1.43	1.50	1.27	1.34	1.75	1.27	1.27	1.61	1.79	1.47	1.38
PO/PSO Attainment	2.19	1.82	1.69	1.81	1.74	1.61	1.78	1.89	1.62	1.73	1.91	2.01	1.79	1.74



Observation: Target has been achieved in all PO's

8.PO Articulation Matrix

Sl. No	Course Code	Sem	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
1.	17BP101T	1	Human Anatomy and Physiology I-Theory	2.00	-	2.00	-	-	-	-	-	-	-	2.00	2.00	-	-
2.	17BP102T	1	Pharmaceutical Analysis I – Theory	1.75	1.75	1.75	-	-	1.50	-	-	-	-	-	2.00	-	-
3.	17BP103T	1	Pharmaceutics I – Theory	2.00	2.25	3.00	1.50	-	1.00	-	1.00	-	-	3.00	3.00	2.25	2.00
4.	17BP104T	1	Pharmaceutical Inorganic Chemistry – Theory	2.50	2.25	2.50	1.75	2.00	-	-	-	2.25	-	-	2.00	1.50	2.25
5.	17BP105T	1	Communication skills – Theory	3.00	2.00	2.00	-	2.00	-	-	3.00	2.00	-	2.00	-	-	2.00
6.	17BP106RBT	1	Remedial Biology - Theory	3.00	-	-	-	-	-	-	2.00	-	-	1.00	3.00	-	-
7.	17BP106RMT	1	Remedial Mathematics – Theory	3.00	2.00	3.00	-	-	2.00	2.00	3.00	-	-	3.00	2.00	-	2.00
8.	17BP107P	1	Human Anatomy and Physiology – Practical	3.00	2.00	3.00	-	-	2.00	2.00	3.00	-	-	2.75	1.67	-	2.00
9.	17BP108P	1	Pharmaceutical Analysis I – Practical	2.00	2.00	1.50	-	-	2.00	-	-	-	-	-	2.00	-	-
10.	17BP109P	1	Pharmaceutics I – Practical	3.00	2.00	3.00	-	1.00	-	-	1.00	-	-	2.00	3.00	2.00	1.00
11.	17BP110P	1	Pharmaceutical Inorganic Chemistry –Practical	2.50	2.25	2.50	1.75	2.00	-	-	-	-	-	2.00	-	-	-
12.	17BP111P	1	Communication skills – Practical	1.00	2.00	2.00	-	2.00	2.00	-	3.00	-	-	2.00	2.00	-	2.00
13.	17BP112RBP	1	Remedial Biology – Practical	3.00	-	3.00	2.00	-	-	-	-	-	-	1.50	3.00	-	-
14.	17BP201T	2	Human Anatomy and Physiology II – Theory	3.00	-	-	-	1.00	2.00	2.00	2.50	-	-	3.00	2.00	-	3.00
15.	17BP202T	2	Pharmaceutical Organic Chemistry I – Theory	3.00	-	2.00	1.50	-	2.00	1.60	-	1.60	-	2.00	3.00	-	2.00
16.	17BP203T	2	Biochemistry – Theory	3.00	-	2.00	1.50	-	2.00	1.60	-	1.60	-	2.00	3.00	-	2.00
17.	17BP204T	2	Pathophysiology – Theory	3.00	-	-	-	1.00	2.00	2.00	2.50	-	-	2.00	3.00	-	2.00
18.	17BP205T	2	Computer Applications in Pharmacy – Theory	3.00	-	1.50	2.50	-	1.5	-	-	2.00	-	3.00	-	1.8	-
19.	17BP206T	2	Environmental sciences – Theory	3.00	-	1.50	2.0	-	1.00	0.75	1.5	1.5	-	2.00	3.00	2.25	2.00
20.	17BP207P	2	Human Anatomy and Physiology II –Practical	2.58	-	2.00	2.00	-	-	2.00	3.00	3.00	-	2.75	-	-	1.50

21.	17BP208P	2	Pharmaceutical Organic Chemistry I- Practical	2.00	-	1.50	2.00	-	-	2.00	-	-	-	-	2.00	-	-
22.	17BP209P	2	Biochemistry – Practical	2.00	-	1.50	2.00	-	-	2.00	-	-	-	-	2.00	-	-

23.	17BP210P	2	Computer Applications in Pharmacy – Practical	1.00	-		2.00	-	-	-	1.75	-	-	1.00	-	-	2.00
24.	17BP301T	3	Pharmaceutical Organic Chemistry II – Theory	3.00	-	1.70	2.50	-	1.00	-	-	-	1.00	3.00	2.00	1.00	-
25.	17BP302T	3	Physical Pharmaceutics I – Theory	3.00	1.00	1.00	2.00	-	-	-	-	-	-	3.00	2.00	2.00	-
26.	17BP303T	3	Pharmaceutical Microbiology – Theory	3.00	-	1.70	2.50	-	1.00	-	-	-	1.00	3.00	2.00	1.00	-
27.	17BP304T	3	Pharmaceutical Engineering – Theory	3.00	-	1.00	1.00	-	-	-	-	-	2.0	3.00	2.00	3.0	1.0
28.	17BP305P	3	Pharmaceutical Organic Chemistry II – Practical	3.00	-	2.25	1.50	-	1.00	-	-	-	-	1.00	2.00	1.00	-
29.	17BP306P	3	Physical Pharmaceutics I – Practical	3.00	1.75	1.00	-	-	-	-	2.00	-	-	2.00	2.00	2.00	-
30.	17BP307P	3	Pharmaceutical Microbiology – Practical	3.00	2.00	1.00	2.00	-	-	-	-	1.00	1.00	2.00	1.00	1.00	1.00
31.	17BP308P	3	Pharmaceutical Engineering – Practical	3.00	2.00	1.00	2.00	-	-	-	-	1.00	1.00	2.00	1.00	1.00	1.00
32.	17BP401T	4	Pharmaceutical Organic Chemistry III– Theory	3.00	-	1.50	1.50	-	1.50	0.75	2.00	0.75	2.00	1.50	3.00	2.00	-
33.	17BP402T	4	Medicinal Chemistry I – Theory	3.00	-	2.80	2.00	-	2.00	-	-	-	-	-	2.00	2.00	-
34.	17BP403T	4	Physical Pharmaceutics II – Theory	3.00	-	1.50	-	-	-	2.00	-	1.50	-	2.00	3.00	-	2.00
35.	17BP404T	4	Pharmacology I – Theory	3.00	-	1.50	-	-	-	2.00	-	1.50	-	2.00	3.00	-	2.00
36.	17BP405T	4	Pharmacognosy and Phytochemistry I– Theory	3.00	-	1.50	1.50	-	1.50	0.75	2.00	0.75	2.00	1.50	3.00	2.00	-
37.	17BP406P	4	Medicinal Chemistry I – Practical	2.50	-	2.75	2.00	-	2.00	-	-	-	-	-	2.00	2.00	-
38.	17BP407P	4	Physical Pharmaceutics II – Practical	3.00	-	2.00	2.00	-	1.00	-	-	-	-	1.00	2.00	1.00	-
39.	17BP408P	4	Pharmacology I – Practical	1.00	-	-	1.50	-	-	-	-	-	-	-	1.70	-	-
40.	17BP409P	4	Pharmacognosy and Phytochemistry I – Practical	3.00	-	2.75	1.75	-	-	1.00	-	-	-	1.75	3.00	2.50	-
41.	17BP501T	5	Medicinal Chemistry II – Theory	3.00	-	2.00	2.00	-	2.00	3.00	2.00	-	-	3.00	3.00	1.00	2.00
42.	17BP502T	5	Industrial Pharmacy I– Theory	3.00	1.00	2.00	1.00	-	-	2.00	3.00	1.00	2.00	3.00	3.00	3.00	1.00
43.	17BP503T	5	Pharmacology II – Theory	2.00	-	1.00	2.00	-	-	-	-	-	-		1.75	-	-
44.	17BP504T	5	Pharmacognosy and Phytochemistry II– Theory	3.00	-	1.50	2.00	-	1.00	0.75	1.5	1.50	-	2.00	3.00	2.25	2.00
45.	17BP505T	5	Pharmaceutical Jurisprudence – Theory	2.00	1.00	-	-	-	3.00	3.00	3.00	3.00	3.00	3.00	2.00	1.00	2.00
46.	17BP506P	5	Industrial Pharmacy I – Practical	2.00	3.00	3.00	2.00	2.50	-	1.00	-	-	1.00	1.00	3.00	3.00	2.00

47.	17BP507P	5	Pharmacology II – Practical	1.00	-	-	2.00	-	-	-	-	-	-	1.00	2.00	-	1.00
48.	17BP508P	5	Pharmacognosy and Phytochemistry II –Practical	3.00	-	2.30	2.00	-	1.00	-	1.00	-	-	2.00	3.00	2.00	1.50
49.	17BP601T	6	Medicinal Chemistry III – Theory	3.00	-	1.50	-	-	-	2.00	-	1.50	-	2.00	3.00	-	2.00
50.	17BP602T	6	Pharmacology III – Theory	3	-	1.5	2	-	2.25	2.00	2.00	2.50	2.00	2.00	2	2	2
51.	17BP603T	6	Herbal Drug Technology – Theory	3	-	1.5	-	-	-	2.00	-	1.50	-	2.00	3	-	2
52.	17BP604T	6	Biopharmaceutics and Pharmacokinetics –Theory	3.00	-		2.30		2.30	1.30		1.50		1.30	2.50	2.30	3.00
53.	17BP605T	6	Pharmaceutical Biotechnology – Theory	3	-	1.3	-	-	-	2.00	-	1.50	-	2.00	3	-	2
54.	17BP606T	6	Quality Assurance –Theory	3	2	2	3	2.5	-	2.00	3.00	3.00	2.30	3.00	3	2.5	1
55.	17BP607P	6	Medicinal chemistry III – Practical	2.00	-	1.50	2.00	-	-	2.00	-	-	-	-	2.00	-	-
56.	17BP608P	6	Pharmacology III – Practical	1.25	-	-	1.67	-	-	-	-	-	-	1.50	-	-	1.00
57.	17BP609P	6	Herbal Drug Technology – Practical	2.00	-	1.50	2.00	-	-	2.00	-	-	-	-	2.00	-	-
58.	17BP701T	7	Instrumental Methods of Analysis – Theory	2.00	2.50	2.00	2.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.50	2.00
59.	17BP702T	7	Industrial Pharmacy II – Theory	3.00	-	1.50	2.00	-	1.00	0.75	1.5	1.50	-	2.00	3.00	2.25	2.00
60.	17BP703T	7	Pharmacy Practice – Theory	2.00	2.50	2.00	2.00	2.50	-	-	-	-	-	-	2.00	2.50	2.00
61.	17BP704T	7	Novel Drug Delivery System – Theory	1.30	-	0.80	0.80	-	-	-	-	0.70	1.00	1.00	1.00	0.80	0.50
62.	17BP705P	7	Instrumental Methods of Analysis – Practical	-	2.50	2.00	-	-	2.75	-	-	-	-	-	3.00	-	2.00
64.	17BP801T	8	Biostatistics and Research Methodology– Theory	1.75	2.75	1.75	2.00	-	-	2.00	2.50	2.00	1.00	3.00	3.00	-	2.00
65.	17BP802T	8	Social and Preventive Pharmacy– Theory	2.75	2.75	-	2.8	3	2.00	2	2.25	-	0.75	2.25	2.00	-	2.00
66.	17BP803ET	8	Pharmaceutical Regulatory Science– Theory	3.00	-	1.50	2.00	-	1.00	0.75	1.5	1.50	-	2.00	3.00	2.25	2.00
67.	17BP805ET	8	Pharmacovigilance– Theory	3.00	-	1.70	2.50	-	1.00	-	-	-	1.00	3.00	2.00	1.00	-
68.	17BP807ET	8	Computer Aided Drug Design– Theory	2.00	-	-	3	-	-	-	-	-	-	2.0	1.00	-	3.0
70.	17BP810ET	8	Pharmacological Screening Methods– Theory	2.00	-	1.00	-	-	-	-	-	-	-	1.75	-	1.00	2.00
73.	17BP12ET	8	Dietary Supplements and Nutraceuticals	3.00	-	-	-	3.00	3.00	-	3.00	2.00	2.00	3.00	3.00	-	-
Average				2.57	2.01	1.80	1.90	2.00	1.69	1.78	2.33	1.69	1.69	2.14	2.38	1.96	1.84

9.Direct PO Attainment (PO Attainment Matrix)

Sl. No	Course Code	Sem	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
1.	17BP101T	1	Human Anatomy and Physiology I-Theory	1.09	-	1.09	-	-	-	-	-	-	-	1.09	1.08	-	-
2.	17BP102T	1	Pharmaceutical Analysis I – Theory	0.73	0.73	0.78	-	-	0.61	-	-	-	-	-	0.84	-	-
3.	17BP103T	1	Pharmaceutics I – Theory	2.28	1.71	2.28	1.33	-	0.76	-	0.76	-	-	2.28	2.28	1.71	1.52
4.	17BP104T	1	Pharmaceutical Inorganic Chemistry – Theory	1.49	1.33	1.49	1.01	1.17	-	-	-	1.37	-	-	1.17	0.89	1.37
5.	17BP105T	1	Communication skills – Theory	2.32	1.55	1.55	-	1.55	-	-	2.32	1.55	-	1.55	-	-	1.55
6.	17BP106RBT	1	Remedial Biology -Theory	1.55	-	-	-	-	-	-	1.08	-	-	0.52	1.55	-	-
7.	17BP106RMT	1	Remedial Mathematics – Theory	2.40	1.60	2.42	-	-	1.57	1.66	2.42	-	-	1.99	1.34	-	1.61
8.	17BP107P	1	Human Anatomy and Physiology – Practical	2.34	1.58	2.37	-	-	1.56	1.63	2.37	-	-	2.15	1.28	-	1.58
9.	17BP108P	1	Pharmaceutical Analysis I – Practical	1.59	1.59	1.19	-	-	1.59	-	-	-	-	-	1.59	-	-
10.	17BP109P	1	Pharmaceutics I – Practical	2.66	1.78	2.66	-	0.89	-	-	0.89	-	-	1.78	2.66	1.78	0.89
11.	17BP110P	1	Pharmaceutical Inorganic Chemistry –Practical	2.00	1.84	2.03	1.42	1.59	-	-	-	-	-	1.61	-	-	-
12.	17BP111P	1	Communication skills – Practical	0.50	1.01	1.01	-	1.01	1.75	-	1.51	-	-	1.08	1.07	-	1.07
13.	17BP112RBP	1	Remedial Biology – Practical	2.53	-	2.97	1.98	-	-	-	-	-	-	1.26	2.53	-	-
14.	17BP201T	2	Human Anatomy and Physiology II – Theory	2.65	-	-	-	0.86	1.72	1.75	2.21	-	-	2.65	1.72	-	2.66
15.	17BP202T	2	Pharmaceutical Organic Chemistry I – Theory	2.55	-	1.70	1.29	-	1.75	1.46	-	1.42	-	1.70	2.55	-	1.75
16.	17BP203T	2	Biochemistry – Theory	1.02	-	0.83	0.52	-	0.67	0.56	-	0.56	-	0.68	1.02	-	0.67
17.	17BP204T	2	Pathophysiology – Theory	1.43	-	-	-	0.46	0.91	0.95	1.20	-	-	0.91	1.37	-	0.92
18.	17BP205T	2	Computer Applications in Pharmacy – Theory	2.76	-	1.87	2.11	-	-	-	-	0.44	-	2.76	-	1.6	-
19.	17BP206T	2	Environmental sciences – Theory	1.73	-	0.82	1.3	-	0.55	0.64	0.82	1.3	-	1.12	1.73	1.27	1.12
20.	17BP207P	2	Human Anatomy and Physiology II –Practical	2.06	-	1.65	1.65	-	-	1.65	2.47	2.47	-	2.27	-	-	1.24

21.	17BP208P	2	Pharmaceutical Organic Chemistry I- Practical	1.76	-	1.32	1.76	-	-	1.77	-	-	-	-	1.76	-	-
22.	17BP209P	2	Biochemistry – Practical	1.58	-	1.20	1.63	-	-	1.53	-	-	-	-	1.58	-	-

23.	17BP210P	2	Computer Applications in Pharmacy – Practical	2.78	-	-	1.84	-	-	-	1.61	-	-	1.04	-	-	1.85
24.	17BP301T	3	Pharmaceutical Organic Chemistry II – Theory	2.25	-	1.31	2.00	-	0.75	-	-	-	0.80	2.25	1.50	0.80	-
25.	17BP302T	3	Physical Pharmaceutics I – Theory	2.63	0.79	0.88	1.75	-	-	-	-	-	-	2.63	1.75	1.75	-
26.	17BP303T	3	Pharmaceutical Microbiology – Theory	2.41	-	1.41	2.14	-	0.80	-	-	-	0.8	2.41	1.60	0.8	-
27.	17BP304T	3	Pharmaceutical Engineering – Theory	2.74	-	0.91	0.91	-	-	-	-	-	1.8	2.74	1.82	2.7	0.9
28.	17BP305P	3	Pharmaceutical Organic Chemistry II – Practical	2.68	-	2.20	1.38	-	0.89	-	-	-	-	0.89	1.79	0.89	-
29.	17BP306P	3	Physical Pharmaceutics I – Practical	2.63	1.80	0.88	-	-	-	-	1.78	-	-	1.78	1.78	1.78	-
30.	17BP307P	3	Pharmaceutical Microbiology – Practical	2.67	2.75	0.88	1.77	-	-	-	-	0.80	0.80	1.77	0.88	0.88	0.88
31.	17BP308P	3	Pharmaceutical Engineering – Practical	2.63	1.80	0.88	1.75	-	-	-	-	0.90	0.90	1.75	0.88	0.88	0.90
32.	17BP401T	4	Pharmaceutical Organic Chemistry III– Theory	2.42	-	2.41	2.43	-	1.63	1.66	1.64	0.60	1.64	2.41	2.42	1.64	-
33.	17BP402T	4	Medicinal Chemistry I – Theory	2.00	-	2.20	1.80	-	1.55	-	-	-	-	-	1.60	1.60	-
34.	17BP403T	4	Physical Pharmaceutics II – Theory	2.47	-	1.26	-	-	-	1.66	-	1.27	-	1.65	2.47	-	1.70
35.	17BP404T	4	Pharmacology I – Theory	2.81	-	1.42	-	-	-	1.66	-	1.27	-	1.87	2.81	-	1.70
36.	17BP405T	4	Pharmacognosy and Phytochemistry I– Theory	2.47	-	1.21	1.23	-	1.22	1.66	1.64	0.60	1.64	1.21	2.44	1.64	-
37.	17BP406P	4	Medicinal Chemistry I – Practical	1.86	-	1.86	1.45	-	1.67	-	-	-	-	-	1.62	1.45	-
38.	17BP407P	4	Physical Pharmaceutics II – Practical	1.24	-	0.64	1.30	-	-	-	-	-	-	-	1.10	-	-
39.	17BP408P	4	Pharmacology I – Practical	0.85	-	-	1.32	-	-	-	-	-	-	-	1.39	-	-
40.	17BP409P	4	Pharmacognosy and Phytochemistry I – Practical	2.89	-	2.65	1.47	-	-	0.95	-	-	-	1.47	2.89	2.41	-
41.	17BP501T	5	Medicinal Chemistry II – Theory	2.54	-	1.70	1.28	-	1.70	2.54	1.70	-	-	2.54	2.54	0.85	1.70
42.	17BP502T	5	Industrial Pharmacy I– Theory	2.38	0.79	1.58	0.79	-	-	1.66	2.42	1.27	1.60	2.38	2.38	2.40	1.70
43.	17BP503T	5	Pharmacology II – Theory	1.24	-	0.64	1.30	-	-	-	-	-	-	-	1.10	-	-
44.	17BP504T	5	Pharmacognosy and Phytochemistry II– Theory	1.73	-	0.82	1.30	-	0.55	0.64	0.82	1.30	-	1.12	1.73	1.27	1.12
45.	17BP505T	5	Pharmaceutical Jurisprudence – Theory	1.47	0.73	-	-	-	2.20	2.20	2.20	2.20	2.20	2.20	1.47	0.73	1.47
46.	17BP506P	5	Industrial Pharmacy I – Practical	2.91	2.91	2.91	0.98	-	-	-	-	-	-	0.97	2.91	2.91	1.94

47.	17BP507P	5	Pharmacology II – Practical	0.90	-	-	1.95	-	-	-	-	-	-	0.89	1.85	-	0.89
48.	17BP508P	5	Pharmacognosy and Phytochemistry II –Practical	2.93	-	2.20	1.95	-	0.98	-	0.98	-	-	1.95	2.93	2.41	1.47
49.	17BP601T	6	Medicinal Chemistry III – Theory	2.40	-	1.21	-	-	-	1.66	-	1.27	-	1.60	2.40	-	1.70
50.	17BP602T	6	Pharmacology III – Theory	2.39	-	1.2	1.59	-	1.79	1.64	1.59	2.04	1.59	1.59	1.59	1.59	1.59
51.	17BP603T	6	Herbal Drug Technology – Theory	2.47	-	1.26	-	-	-	1.66	-	1.27	-	1.65	2.47	-	1.7
52.	17BP604T	6	Biopharmaceutics and Pharmacokinetics –Theory	2.31	-	-	1.82	-	1.82	1.01	-	1.22	-	1.08	2.03	1.82	2.43
53.	17BP605T	6	Pharmaceutical Biotechnology – Theory	1.85	-	0.91	-	-	-	1.47	-	0.91	-	1.45	2	-	1.44
54.	17BP606T	6	Quality Assurance –Theory	2.62	1.74	1.75	2.62	2.17	-	1.75	2.62	2.40	2.03	2.62	2.62	2.18	0.87
55.	17BP607P	6	Medicinal chemistry III – Practical	1.56	-	1.17	1.58	-	-	1.54	-	-	-	-	1.56	-	-
56.	17BP608P	6	Pharmacology III – Practical	0.96	-	0.78	1.28	-	-	-	-	-	-	1.13	-	-	0.77
57.	17BP609P	6	Herbal Drug Technology – Practical	1.82	-	1.37	1.83	-	-	1.81	-	-	-	-	1.82	-	-
58.	17BP701T	7	Instrumental Methods of Analysis – Theory	1.68	2.10	1.69	1.67	2.10	-	-	-	-	-	-	1.75	2.10	1.75
59.	17BP702T	7	Industrial Pharmacy II – Theory	1.73	-	0.82	1.30	-	0.55	0.64	0.82	1.30	-	1.12	1.73	1.27	1.12
60.	17BP703T	7	Pharmacy Practice – Theory	1.34	1.33	2.00	2.28	1.50	-	-	-	-	-	-	2.00	2.50	2.00
61.	17BP704T	7	Novel Drug Delivery System – Theory	1.13	-	0.65	0.70	-	-	-	-	0.70	1.06	0.96	0.97	0.97	0.65
62.	17BP705P	7	Instrumental Methods of Analysis – Practical	2.74	2.28	1.82	-	-	2.51	-	-	-	-	-	2.74	-	1.82
64.	17BP801T	8	Biostatistics and Research Methodology– Theory	1.55	2.43	1.55	1.75	-	-	1.75	2.22	1.78	0.88	2.68	2.60	-	1.76
65.	17BP802T	8	Social and Preventive Pharmacy– Theory	2.25	2.25	-	2.25	2.27	2.27	2.33	2.25	-	2.28	2.25	2.28	-	2.28
66.	17BP803ET	8	Pharmaceutical Regulatory Science– Theory	1.73	-	0.82	1.3	-	0.55	0.64	0.82	1.3	-	1.12	1.73	1.27	1.12
67.	17BP805ET	8	Pharmacovigilance– Theory	2.73	-	0.91	0.47	-	-	-	-	-	0.95	2.73	1.82	1.43	0.47
68.	17BP807ET	8	Computer Aided Drug Design– Theory	1.64	-	-	2.46	-	-	-	-	-	-	1.64	0.76	-	2.46
70.	17BP810ET	8	Pharmacological Screening Methods– Theory	1.85	-	0.93	-	-	-	-	-	-	-	1.6	-	0.9	1.9
73.	17BP12ET	8	Dietary Supplements and Nutraceuticals	2.64	-	-	-	2.64	2.64	-	2.64	1.75	2.63	2.64	2.64	-	-
Average				2.04	1.67	1.46	1.56	1.52	1.36	1.55	1.70	1.30	1.47	1.73	1.84	1.56	1.45
80% Weightage				1.63	1.34	1.17	1.25	1.21	1.09	1.24	1.36	1.04	1.18	1.38	1.47	1.25	1.16

10. Indirect PO Attainment

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
Employer Survey	2.83	2.17	2.50	2.83	2.67	2.50	2.83	2.83	3.00	2.83	2.67	2.67	2.50	2.83
Graduate Exit Survey	2.82	2.66	2.76	2.80	2.66	2.60	2.62	2.44	2.80	2.66	2.61	2.68	2.90	2.98
Alumini survey	2.78	2.37	2.61	2.74	2.63	2.66	2.71	2.67	2.92	2.74	2.62	2.68	2.74	2.87
Average	2.81	2.40	2.62	2.79	2.65	2.59	2.72	2.65	2.91	2.74	2.63	2.68	2.71	2.89
20% Weightage	0.56	0.48	0.52	0.56	0.53	0.52	0.54	0.53	0.58	0.55	0.53	0.54	0.54	0.58

11.Computation of PO Attainment

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
Direct PO Attainment	1.63	1.34	1.17	1.25	1.21	1.09	1.24	1.36	1.04	1.18	1.38	1.47	1.25	1.16
Indirect PO Attainment	0.56	0.48	0.52	0.56	0.53	0.52	0.54	0.53	0.58	0.55	0.53	0.54	0.54	0.58
PO Attainment of the batch	2.19	1.82	1.69	1.81	1.74	1.61	1.78	1.89	1.62	1.73	1.91	2.01	1.79	1.74

12. Analysis and Continuous Improvement Strategies

Sl. No	PO/PSO	Target	Attainment	Achieved/ Not Achieved
1.	PO1: Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.	1.93	2.19	Achieved
2.	PO2: Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.	1.51	1.82	Achieved
3.	PO3: Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.	1.35	1.69	Achieved
4.	PO4: Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.	1.43	1.81	Achieved
5.	PO5: Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.	1.50	1.74	Achieved
6.	PO6: Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).	1.27	1.61	Achieved
7.	PO7: Pharmaceutical Ethics: Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behaviour that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.	1.34	1.78	Achieved

8.	PO8: Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.	1.75	1.89	Achieved
9.	PO9: The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.	1.27	1.62	Achieved
10.	PO10: Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	1.27	1.73	Achieved
11.	PO11: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.	1.61	1.91	Achieved
12.	PSO1: To develop the knowledge in technical or professional careers in various pharmaceutical industry and/ or institute and /or Health care system through excellent real time exposure to rigorous education.	1.79	2.01	Achieved
13.	PSO2: To apply the skills of manufacturing, formulation/preparation and quality control of various pharmaceutical preparations.	1.47	1.79	Achieved
14.	PSO3: To design the modern tools to integrate health care systems, design an effective product with commercial advantage and societal benefit, perform risk analysis and become entrepreneur.	1.38	1.74	Achieved



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