

Meerut Institute of Engineering and Technology, Meerut

Statements of Course Outcomes (COs) and Mapping with Program Outcomes (POs) and Program Specific Outcomes (PSOs)
Dept. of Pharmaceutical Technology: 2024-25 ((Session-wise # I year of 2024-25; II year of 2024-25; III year of 2024-25 and IV year of 2024-25)
BKL # K1 – Remember, K2 – Understand, K3 – Apply, K4 – Analyze, K5 – Evaluate, K6 – Create

S. No.	Sub Code	COx	Statement of Course Outcomes (COs)	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
			Statement of Course Outcomes (COs) Upon completion of topic concerned, students will be able to :	Blooms Knowledge Level	Pharmacy Knowledge	Planning Abilities	Problem analysis	Modern tool usage	Leadership skills	Professional Identity	Pharmaceutical Ethics	Communication	The Pharmacist and society	Environment and sustainability	Life-long learning			
1	BP 101T	CO1	summarize the cellular level of organization and the characteristics of different types of tissues and their location in various organs. (Understanding)	K2	3					2	1	1	2		2	3		
		CO2	describe the structure and functions of skin, bones and joints of human body. (Understanding)	K2	3					2	1	1	2		2	3		
		CO3	Understand the importance of blood, lymphatic system and immunity in human body. (Understanding)	K2	3					2	1	1	2		2	3		
		CO4	relate the physiology of sympathetic, parasympathetic, spinal/cranial nerves and organization of special senses. (Understanding)	K2	3					2	1	1	2		2	3		
		CO5	illustrate the anatomy, physiology and pathophysiology of heart and blood vessels. (Understanding)	K2	3					2	1	1	2		2	3		
		BP 101T		K2	3.00					2.00	1.00	1.00	2.00		2.00	3.00		
2	BP 102T	CO-1	Understand the basic fundamentals of analytical chemistry.	K2	3		3	2							1	3	3	1
		CO-2	Explain principles, methodology and applications of acid-base and non-aqueous volumetric titrations.	K2	3		3	3							1	3	3	1
		CO-3	Demonstrate the principle, methodology and applications of precipitation, Complexometric and Diazotization volumetric titrations.	K2	3		3	3							1	3	3	1
		CO-4	Demonstrate the principle, methodology and applications of Redox titration and Gravimetric analysis.	K2	3		3	3							1	3	3	1
		CO-5	Illustrate principle, methodology and applications of electrochemical methods of analysis.	K2	3		3	3							1	2	2	
		BP102T		K2	3.00		3.00	2.80							1.00	2.80	2.80	1.00

3	BP103T	CO-1	To recollect the history of pharmacy and know the scope of Pharmacy, Pharmacopoeias, excipients and basic terms with formulation	K2	3					2		3		2			
		CO-2	To interpret parts of prescription and identify errors of prescription.	K2	2	3	3			3	2	3		2			
		CO-3	To carry out simple pharmaceutical calculations applied in the preparation of formulations, dilution, strengths and posology	K2	3	3	3	2		3	2			2			3.00
		CO-4	To apply the basic concepts to compare and predict the formulation of conventional dosage forms viz. liquid, powder and semisolid	K2	3	3	2	2		2				2			3.00
		CO-5	To judge different pharmaceutical incompatibilities and	K2	3	3	2	1		3				2			3
		BP103T		K2	2.80	3.00	2.50	1.70		2.75	2.00	1.50	1.50		2.00		3.00
4	BP104T	CO-1	to explain the sources of impurities, history of pharmacopeias and limit tests.	K2	3					2	1		2		2	3	
		CO-2	to describe the theory & principles of buffers solutions, electrolytes and dental products.	K2	3					2	1		2		2	3	
		CO-3	to illustrate the method of preparation, assay, properties & uses of Gastro-intestinal agents.	K2	3					2	1		2		2	3	
		CO-4	to describe method of preparation, assay, properties & uses of expectorants, emetics, haematinics, antidotes & astringents.	K2	3					2	1		2		2	3	
		CO-5	to explain the inorganic chemistry of Radiopharmaceuticals.	K2	3					2	1		2		2	3	
		BP104T		K2	3.00					2.00	1.00		2.00		2.00	3.00	
5	BP105T	CO-1	Understanding of communication skills and its perspective.	K2					3	2		3		2			
		CO-2	Understanding of elements of communication and its styles.	K2					3	2		3		2			
		CO-3	Developing listening and writing ability.	K2					3	2		3		2			
		CO-4	Applying practical and oral presentation skills for developing inter-personal communication skills.	K3		2	2		3	2		3		2			
		CO-5	Applying planning and managerial decision making skills.	K3		2	2		3	2		3		2			
		BP105T				2	2		3	2		3		2			

6	BP106RMT	CO-1	Understand the theory used in application of Partial Fraction in Chemical Kinetics and Pharmacokinetics, logarithm to solving pharmaceutical problems	K2	2.00		2.00							1.00		1.00			
		CO-2	Understand the concepts of Matrices and determinant used in application to solving Pharmacokinetic equations	K2	1		1							1					
		CO-3	Apply the concepts of function,limit,continuity,differentiability and Integration used in application of mathematics in Pharmacy	K3	2		2								1				
		CO-4	Understand the concepts of Coordinate Geometry used in application of mathematics in Pharmacy	K2	3		3								2		2.00		
		CO-5	Apply the concept of Differential equations and Laplace transform used in application to solving chemical kinetics and Pharmacokinetics equations	K3	2		2									1			
		BP106RMT				2.00		2.00							1.20		1.50		
		7	BP106RBT	1	On completion of this course, Student will be able to understand the classification , silent features of five kingdoms of life and morphology and general anatomy of flowering plants.	K2													
2	On completion of this course, Student will be able to describe the basic components of anatomy & physiology of digestive, blood circulatory system and respiratory system in human body.			K2															
3	On completion of the course the student will be able to understand the classification , physiology and functions of human excretory system, nervous system, endocrine system and reproductive system.			K2															
4	On completion of the course the student will be able to describe the essential mineral nutrition and photosynthesis of plants.			K2															
5	On completion of the course, the Students will be able to describe the Cell functioning and types of tissues of Plants and Animals.			K2															
BP106RBT					3.00	2			2.00	2.50	2.00		2.00		1.60	1.50	1.00	3.00	
8	BP 107P			CO-1	Contrast the gross microscopy of epithelial, connective, muscular and nervous tissue.	K2	3		3	3	1	1			2	2		3	
		CO-2	Experiment with the blood sample to perform different kind of blood tests.	K2	3		3	3	1	1			2	2		3			
		CO-3	Distinguish the different bones of axial and appendicular skeletal system.	K3	3		3	3	1	1			2	2		3			
		CO-4	Determine the heart rate and pulse rate by using different methods.	K3	3		3	3	1	1			2	2		3			
		CO-5	Examine the blood pressure by using sphygmomanometer.	K2	3		3	3	1	1			2	2		3			
		BP107P			K3	3.00		3.00	3.00	1.00	1.00			2.00	2.00		3.00		

9	BP108P	CO-1	Understand method of preparation of various Normal and Molar solutions.	K2	3		3	1						1	1	1	
		CO-2	Demonstrate methods of standardization of a solution by using volumetric analysis.	K2	3		3	1						1	1	1	
		CO-3	Understand methods of standardization of a solution by using electroanalytical methods.	K2	3		3	3						1	3	2	
		CO-4	Make use of volumetric analysis for the quantitative estimation of a sample.	K3	3		3	3						1	3	2	
		CO-5	Examine the impurity level by using limit test.	K4	3		3	3						1	1	1	
		BP108P				3.00		3.00	2.20						1.00	1.80	1.40
10	BP109P	CO-1	To understand simple dosage forms and its usage, and understand the role of each added ingredients.	K2	3		3	3	1	1			2	2		3	
		CO-2	To calculate quantity of each excipient and devise plan as per the requirement of dosage form.	K2	3		3	3	1	1			2	2		3	
		CO-3	To make simple dosage form with rationale of each excipient and its method of preparation.	K2	3		3	3	1	1			2	2		3	
		CO-4	To select a proper container system and follow labeling instruction during dispensing of drug	K2	3		3	3	1	1			2	2		3	
		CO-5	To understand design label with general and specific instructions relevant to product stability, indications and contraindications.	K2	3		3	3	1	1			2	2		3	
		BP109P		K3	3.00		3.00	3.00	1.00	1.00			2.00	2.00		3.00	
11	BP110P	CO-1	Make use of limit test for various colored and insoluble inorganic compounds.	K1	3		1	2				1	1	1	2	3.00	
		CO-2	Demonstrate the method of preparation of inorganic compounds.	K2	3		2	1				1	1	1	2	3.00	
		CO-3	Identify qualitatively the various inorganic ions.	K2	3		2	2				2	1	1	2	3.00	
		CO-4	Examine the impurity level by using limit test.	K2	3		3	1				1	1	1	2	3.00	
		CO-5	Analyze test for purity with respect to various parameters of inorganic compounds.	K2	3		3	2				2	1	1	2	3	
		BP110P		K3	3.00		2.20	1.60				1.40	1.00	1.00	2.00	3.00	
12	BP111P	CO-1	Enhance the general conversational skills in different scenarios.	K2		2			3	3		3					
		CO-2	Enable them to learn better pronunciation etiquettes through stress on word accent, intonation and rhythm.	K2					2								
		CO-3	Develop proficiency to generate effective reading, listening and writing skills.	K2		3				3		3					
		CO-4	To demonstrate the verbal and non verbal communication ability through presentation.	K2	2							3		1			2.00
		CO-5	To instill in them the ability to use language effectively to face interviews, group discussions and public speaking.	K2				2	2			3				2	
		BP111P			2.00	2.50		2.00	2.33	3.00		3.00		1.00		2.00	2.00
		CO-1	To know the handling of microscope and permanent slide preparation techniques.	K2	3	3									3		1.00
		CO-2	To understand the structure of cell and its inclusions.	K2	3	3				3					3		

13	BP112RBP	CO-3	To identify various plant parts, to organize their modifications and to categorize the physiology of frog by using computer models	K2	3	3									3		
		CO-4	To assess the microscopical study and identification of tissues.	K2	3										3		1.00
		CO-5	To compile the bones identification, blood group, blood pressure and tidal volume determination.	K3	3					3					3		
			BP112RBP		3.00	3.00				3.00					3		1.00

14	BP201T	CO-1	Explain the organization, structure and functions of the Central nervous system.	K2	3					2	1	1	3		2	3		
		CO-2	Describe the structure, functions and pathophysiology of the digestive system and the concept of energy required for digestion.	K2	3					2	1	1	3		2	3		
		CO-3	Describe the anatomy & physiology of respiratory and Urinary system.	K2	3					2	1	1	3		2	3		
		CO-4	Explain the structure and functions of various endocrine glands.	K2	3					2	1	1	3		2	3		
		CO-5	Identify the anatomy & physiology of male and female reproductive system along with concepts of genetics.	K3	3					2	1	1	3		2	3		
		BP201T				3.00				2.00	1.00	1.00	3.00		2.00	3.00		
15	BP202T	CO-1	Explain the classification, nomenclature and structural isomerism of the organic compounds.	K2	3		2	2					1	1		1	3	
		CO-2	Illustrate the method of preparation, chemical properties, hybridization and uses of alkanes, alkenes and conjugated dienes.	K3	3		2	2					1	1		1	3	
		CO-3	Demonstrate the method of preparation, chemical properties, qualitative tests, structure and uses of Alkyl halides and Alcohols.	K3	3		3	2					1	1			3	
		CO-4	Demonstrate the method of preparation, chemical properties, qualitative tests, structure and uses of Carbonyl compounds.	K3	3		3	2					1	1		1	3	
		CO-5	Illustrate the method of preparation, chemical properties, qualitative tests, structure and uses of Carboxylic acids and Aliphatic amines.	K3	3		3	2					2	2		2	2	
		BP202T				3.00		2.60	2.00				1.20	1.20		1.25	2.80	
16	BP203T	CO-1	Students will be able to demonstrate an understanding of fundamental biochemical principles, such as the structure/function of biomolecules, metabolic pathways, and the regulation of biological/biochemical processes.	K2	2			1	2		2	1	1			3		
		CO-2	Students will be able to illustrate the pathways involved in carbohydrate, lipid metabolism and their energy production by understanding the mechanisms of ETC and oxidative phosphorylation	K2	2			1	1		1	1	1			2		
		CO-3	Students will be able to predict the causes of various disorders related to defect in the metabolic pathways.	K2				1	2	1	2	2	1			1		
		CO-4	Students will be able have good understanding of Biomolecules (DNA/RNA/PROTEIN). They would also have been exposed to synthesis of these biomolecules.	K2					1	1	1	1				2		

		CO-5	Students will be able to understand how enzymes are classified, substrate affects enzyme activity and role of enzyme inhibition, therapeutic and diagnostic applications of enzymes and isoenzymes.	K2					2	2	1	1	1	1			2		
		BP203T		k2	2.00				1.25	1.60	1.00	1.40	1.20	1.00			2.00		
17	BP204T	CO-1	Students will be able to describe the basic concepts of physiology / pathophysiology, relate and its gross & sub-cellular or macroscopic structural changes to clinical manifestations.	K2	3	-		1	-	-	-		3	-	-	-	3	-	-
		CO-2	Students will be able to define, enlist & recall pathogenesis of the selected diseases / disorders of human respective organ system (s).		2	3	-		-	-	3	-	-	-	-	1	-	3.00	-
		CO-3	Students will be able to identify causes of human disorders or diseases in respective organ system (s) in Human being.	K3	-	-	1		-	-	2	-	-	-	-	-	3	-	-
		CO-4	Students will be able to explain, relate & interpret signs and symptoms of the diseases/ disorders in human beings.	K4	-	-	-		3	-	-	1	-	-	-	-	-	-	-
		CO-5	Students will be able to choose, verify the complications like inflammation & its mechanism associated with the respective disease (s) /disorder (s) and assess basic mechanism involved in the process of repair in human beings.	K5															-
		BP204T			2.50	3.00	1.00		3.00	2.00	2.67	2.00	3.00	1.00	3.00	1.50	2.67	3.00	-
18	BP205T	CO-1	Students will be able to understand different number systems and basic information system processes used in pharmaceutical computing.	K2	3	2	-		-	2	-	-	-	-	-	-	3	-	-
		CO-2	Students will be able to apply basic web technologies and database tools for managing pharmacy-related information.	K2	-	2	-		-	2	-	-	1	-	-	-	2	2	-
		CO-3	Students will be able to explain the application of computers in drug design, hospital systems, and pharmaceutical care.	K2	3	2	-		2	2	-	-	-	-	-	-	2	-	2
		CO-4	Students will be able to understand the fundamentals of bioinformatics and its role in drug discovery and vaccine development.	K2	2	-	2		-	2	-	-	-	-	-	-	-	3	-
		CO-5	Students will be able to analyze pharmaceutical data using computerized tools like CDS, LIMS, and TIMS in preclinical research.	K2	-	3	-		2	2	-	-	-	-	-	-	-	2	3
		BP205T		K2	3.00	3.00	2.00		2.00	2.00			1.00				3.00	3.00	3.00
19	BP206T	CO-1	Students will be able to understand the basics of the environment like ecology, ecosystem, food chain, food web and ecological pyramids.	K2											3	2			
		CO-2	Students will be able to classify the different natural sources and their conservation to save the environment.	K2		1				1					3	2	1		
		CO-3	Students will be able to know the current problems of the environment and how to solve them, the role of individual in the conservation of the environment and natural resources.	K2		1									2	1			
		CO-4	Students will be able to understand the different factors of environmental pollution and measures to minimize it.	K2											1	1			

		CO-5	Students will be able to aware of the hazards of disposal wastes from hospitals and pharmaceutical industries.	K2		1	1							1	1			
		BP206T				1	1.00		1					2.00	1.40	1		

20	BP207P	CO-1	Explain the gross morphology, structure and functions of various organs of different systems in the human body.	K2	3	2	2	1	1	1					3	2.00	2.00		
		CO-2	Demonstrate the general neurological examination and functions of olfactory nerve and Taste buds.	K2	3	3	2	2	2	1	1			1		3	3.00	2.00	
		CO-3	Demonstrate the visual acuity, reflex activity, Basal mass index, Body temperature, Tidal volume, Vital capacity , Total blood cell count and feedback mechanism.	K2	3	3	3	3		3	1				1		3	3.00	3.00
		CO-4	Appraise the society about family planning devices and Pregnancy diagnosis test.	K2	2	2	2	1	2	3	3	3	3	3	3	3	2	2.00	3.00
		CO-5	Identify the permanent slides of vital organs and gonads.	K2	3	2	2	2	2	1							3	2	2
		BP207P				2.80	2.40	2.20	1.80	2.00	1.40	2.00	3.00	3.00	1.67	3.00	2.80	2.40	2.40
21	BP208P	CO-1	Determine functional groups in an organic compounds.	K3	3		3	2					2	1		2	3.00		
		CO-2	Illustrate method of preparation of organic compounds.	K2	3		3	2					2	1		2	3.00		
		CO-3	Identify the organic compound by Lassaigne's test and melting point/boiling point.	K3	3		3	2					2	1		2	3.00		
		CO-4	Analyze systematically an unknown aliphatic organic compound by various qualitative test and examine the molecular model of the organic compound.	K4	3		3	2					2	1		2	3.00		
		CO-5	Analyze systematically an unknown aromatic organic compound by various qualitative test and examine the molecular model of the organic compound.	K4	3		3	2					2	1		2	3.00		
		BP208P				3.00		3.00	2.00					2.00	1.00		2.00	3.00	
22	BP209P	CO-1	Apply the methods for the preparation of buffers and measurement of pH.	K3	3		1	2		2		1	1	1	2		3.00		
		CO-2	Analyzing carbohydrate and proteins qualitatively and quantitatively.	K5	3		2	1		2		1	1	1	2		3.00		
		CO-3	Examine the abnormal constituents of urine qualitatively.	K3	3		2	2		2		2	1	1	2		3.00		
		CO-4	Determine various constituents of blood quantitatively.	K2	3		3	1		2		1	1	1	2		3.00		
		CO-5	Determine salivary amylase activity and factors affecting it.	K2	3		3	2		2		2	1	1	2		3.00		
		BP209P			K3	3.00		2.20	1.60		2.00		1.40	1.00	1.00	2.00		3.00	
23	BP210P	CO-1	Use MS Word to create questionnaires and other documentation related to pharmacy.	K2	3		3							3					
		CO-2	Use MS Access to modify the data bases created.	K2	3	2	3												
		CO-3	queries.	K2		2	3			2									
		CO-4	Generate report; work with queries on MS Access.	K2	3	2	3			2	2								
		CO-5	Create HTML web page	K2			3				2				3				
		BP210P				3.00	2.00	3.00			2.00	2.00				3.00			

24	BP301T	CO-1	Know and recall the fundamental principles of organic chemistry that include structure, character of organic compounds.	K2	2		1.00					1.00	1.00		1.00			1.00		
		CO-2	Understand the stability and methods of preparation of organic compounds.	K2	2		1.00	2.00				1.00	1.00							
		CO-3	Interpret and distinguish chemical behaviour of organic compounds.	K2	1		1.00					1.00	1.00	1.00	1.00		1			
		CO-4	Illustrate the structure and uses of specific organic compounds.	K3			2.00								3.00					
		CO-5	Outline the significance and principle involved in the determination of analytical constants	K2				3												
		BP301T				1.67		1.25	2.50					1.00	1.00	1.00	1.67		1.00	1.00
		25	BP302T	CO-1	Students will be able to elaborate factors affecting solubility of drugs.	K2	3	2	1.00	2.00	1	2.00	1.00		2.00		2.00	3		
CO-2	students will be able to understand solid state and distinguish between amorphous and crystalline solids and elucidate physical properties of drugs.			K2	3	2	1.00	2.00	1.00	2.00	1.00		2.00		2.00	3.00				
CO-3	Students will be able to explain the significance of surface and interfacial phenomena.			K2	3	2	1.00	2.00	1	2.00	1.00		2.00		2.00	3.00				
CO-4	Students will be able to describe complexes and their pharmaceutical applications.			K2	3	2	1.00	2.00	1	2.00	1		2.00		2.00	3.00				
CO-5	Students will be able to explain about pH and role of buffers in formulations and of biological buffers.			K2	3	2	1	2	1.00	2.00	1		2.00		2.00	3.00				
BP302T					3.00	2.00	1.00	2.00	1.00	2.00	1.00		2.00		2.00	3.00				
26	BP303T			CO-1	Acquire, retain, recall and apply specialized language and knowledge relevant to microbiology.	K2	2			1	1				1	1	1	1		
		CO-2	Utilize the techniques for biochemical tests and staining of microorganism for bacterial identification and also explain general information on sterilization to analyze its efficiency	K2	2				1				1	1	1	1				
		CO-3	Evaluate antimicrobial agents and disinfectants and sterility testing of pharmaceutical products	K3	2				1				1	1	1	1				
		CO-4	Illustrate Aseptic area in all aspects and explain microbial assays, pharmacopoeial standards of sterilization process and standardization of pharmaceuticals	K3	2				1				1	1	1	1				
		CO-5	Summarize microbial spoilage, preservation of pharmaceutical products and animal cell culture and to evaluate microbial stability of pharmaceuticals	K2	2			1					1	1	1	1				
		BP303T				2			1	1.00				1.00	1.00	1.00	1.00			
				CO1	Students will be able to define various unit operations used in pharmaceutical industries and material handling techniques.	K2	2	2	1	2		2				2		3.00	3.00	
CO2	Students will be able to illustrate the objective, principle, construction, working, uses, merits and demerits of equipments used in Pharmaceutical industries.			K2	3	2	1	2		2					2		3	3		

27	BP 304T	CO3	Students will be able to develop steps/processes involved in pharmaceutical manufacturing process and various preventive methods used for corrosion control in Pharmaceutical industries	K2	3		1	2		2				2		3	3.00
		CO4	Students will be able to classify evaporators, distillation units, dryers, mixers, filters, centrifuge	K2	2	1	1	2		2				2		3.00	3.00
		CO5	Students will be able to explain mechanisms of various unit operations and materials used in construction.	K2	2	1	1	2		2				2		3	3
		BP304T			2.40	1.50	1.00	2.00		2.00				2.00		3.00	3.00

28	KVE 301	1	On completion of this course, the students will be able to illustrate about the need, basic guidelines, content, process of value education; and to get the clarity of the provision of harmony in self, family, society and nature.	K2				2			3		3	3	1			
		2	On completion of this course, the students will be able to illustrate about the need, basic guidelines, content, process of value education; and to get the clarity of the provision of harmony in self, family, society and nature.	K2				2			2		2	3				
		3	On completion of this course, the students will be able to analyze about self, body, feelings in relationship, society and relevance of nature; distinguish between values & skills and between ethical and unethical practices.	K4				2			2		2		1			
		4	On completion of this course, the students will be able to evaluate their participation (Thought, Behaviour, Work, and Realization) at all the four levels of living and also their pre-conditionings and present beliefs.	K5							2		2	3	1			
		5	On completion of this course, the students will be able to get clarity of ethical and unethical practices in profession, develop their emotional, social and professional competence to actualize a harmonious environment in working place	K2				2			2		2	2				
		KVE301						2.00			2.20		2.20	2.75	1.00			
29	BP305P	CO-1	Make use of common laboratory techniques, including reflux, distillation, steam distillation, recrystallization, vacuum filtration, melting point determination etc.	K2	2			3					1	2.00				2.00
		CO-2	To perform a broad range of traditional organic reactions at the micro scale.	K3	2													3.00
		CO-3	To experiment with safe laboratory practices by handling laboratory glassware, equipment, and chemical reagents appropriately.	K2	1								3					2.00
		CO-4	To critically evaluate data collected to determine the identity, purity, and percent yield of products and to summarize findings in writing in a clear and concise manner.	K1	2			3					2					3.00
		CO-5	Estimation of oil and fats.	K2				2	1				2	3				2
		BP305P			1.75			2.50	2.00				2.00	2.50				2.40
30	BP306P	CO-1	Student will be able to determine the solubility and partition coefficient of the drug.	K2	2	2		1							1			1
		CO-2	Student will be able to determine physicochemical properties of drugs.	K2	2	2		2	2						1			1
		CO-3	Student will learn the determination the surface tension of liquids.	K2	2	2		1							1			2
		CO-4	Student will be able to determine the stability constant.	K2	2	2		2	2						1			2
		CO-5	Student will be able to determine pH by electrometric	K2	2	2		1							1			2
		BP306P			2.00	2.00		1.40	2.00						1.00		1.50	2.00
		CO-1	Perform methods of cultivation and preservation of various microorganisms.	K3	3.00			3.00	2.00		2.00			2.00	1.00		2.0	

31	BP307P	CO-2	Implement method of sterilization in pharmaceutical processing and industry.	K2	3		3	2		2			2	1		2			
		CO-3	Learn sterility testing of pharmaceutical products.	K2	3		3	2		2			2	1		2			
		CO-4	Carry out microbiological standardization of Pharmaceuticals.	K3	3		3	2		2			2	1		2			
		CO-5	Understand the biochemical tests and its applications in pharmaceutical industries.	K1	3		3	2		2			2	1		2			
		BP307P				3.00		3.00	2.00		2.00			2.00	1.00		2.00		
32	BP 308 P	CO-1	Understand and demonstrate the principles and performance of unit operations such as heat transfer, drying, evaporation, and crystallization.	K4	3	3		3	1	1			2	2		3			
		CO-2	Analyze and calculate process parameters for size reduction, size separation, filtration, and mixing using practical pharmaceutical equipment.	K4	3		3	3	1	1			2	2		3			
		CO-3	Evaluate factors affecting unit operation efficiencies like distillation, filtration, drying, and heat exchange.	K3	3		3	3	1	1			2	2		3			
		CO-4	Identify and explain the working principles, construction, and applications of industrial pharmaceutical machinery.	K2	3		3	3	1	1			2	2		3			
		CO-5	Apply experimental data and plots to interpret operational outcomes, equipment efficiency, and formulation uniformity.	K3	3		3	3	1	1			2	2		3			
		BP308P				3.00	3.00	3.00	3.00	1.00	1.00	–	–	2.00	2.00	–	3	–	–

[illegible]

[illegible]

42	BP501T	CO-1	Understanding the basic principles and concepts associated with Medicinal Chemistry.	K3	3		2	2		2					3		2.00	
		CO-2	Classify various medicinal agents and explain their mode of action.	K2	3		2	2		3					2		3.00	
		CO-3	Explain the synthetic procedure and pharmaceutical applications of medicinal agents.	K2	2		3	2		2					3		3.00	
		CO-4	Outline the recent advances of various classes of drugs.	K3	2		2	1		2					3		2.00	
		CO-5	Develop structure activity relationship of various medicinal agents.	K1	2		2	1		2					2		2.00	
		BP501T				2.40		2.20	1.60		2.20					2.60		2.40
43	BP502T	CO1	Students will be able to to understand pre-formulation studies, physical properties, chemical properties, BCS classification of drugs and its significance	K2	3		3								3			3.00
		CO2	Students will be able to to discuss the formulation & manufacturing aspects of tablets and liquid orals	K2	3										3			
		CO3	Students will be able to illustrate the pharmaceutical aspects of capsules and pellets.	K2	3		1								3			
		CO4	Students will be able to describe the preparation and quality control of parenterals and ophthalmic preparations.	K2	3		2	2							3			3.00
		CO5	Students will be able to summarize formulation, manufacturing and evaluation of cosmetic preparations, pharmaceutical aerosols & the science of packaging material	K2	2		2								3			
		BP502T				2.80		2.00	2.00							3.00		3.00
44	BP503T	CO-1	On completion of this course, the student will be able to understand the pharmacology of the drugs acting on cardio vascular system.	K2	3					1						3		
		CO-2	On completion of this course, the student will be able to understand the pharmacology of the drugs acting on urinary system.	K2	3										1	3		
		CO-3	On completion of this course, the students will be able to understand the pharmacology of the Autacoids and related drugs.	K2	3										1	3		
		CO-4	On completion of this course, the students will be able to understand the pharmacology of the drugs acting on endocrine system.	K2	3										1	3		
		CO-5	On completion of this course, the students will be able to understand the definition, types and applications of bioassay	K2	3		3	3							1	3		3
		BP503T				3.00		3.00	3.00		1.00					1.00	3.00	3.00
45	BP504T	CO-1	Illustrate the composition ,chemistry and chemical classes, biosources, therapeutic uses and commercial applications of the secondary metabolites	K1	3					3							3.00	
		CO-2	Apply the methods of biogenesis and basic metabolic pathways of secondary metabolites.	K2	3												2.00	
		CO-3	Utilize the processes of Industrial production, estimation and utilization of the phytoconstituents.	K3	3					2	2						2.00	

	E	CO-4	Utilize the process of extraction , isolation , identification and purification of the herbal drugs and phytoconstituents.	K4	2					3							1.00		
		CO-5	Discover the latest techniques like Spectroscopy , Chromatography and Electrophoresis.	K5	2		1	2		2							2.00		
		BP504T				2.60		1.00	2.00		2.50	2.00					2.00		
46	BP505T	CO-1	Students will be able to understand the pharmaceutical legislations and their implications in the development and marketing of pharmaceutical products	K2															
		CO-2	Students will gain the basic Knowledge and understanding of Various Indian pharmaceutical Acts and Laws	K2	3	2	-	-	-	-	3	2	2	2	3	3	3.00	2.00	
		CO-3	Students will be able to understand various regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals	K3	3	2	2	2	-	2	3	2	-	3	3	3	2.00	3.00	
		CO-4	Students will be able to understand the approval process and regulatory requirements for drug products	K3	2	1	2	-	2	2	3	3	1	2	2	2	3.00	2.00	
		CO-5	Students will be able to understand the code of Pharmaceutical ethics during the pharmaceutical practice	K2	3	2	2	2	-	2	3	2	-	3	3	2	3.00	3.00	
		BP505T				2.80	1.80	2.00	2.00	2.00	1.75	3.00	2.20	1.50	2.40	2.80	2.60	2.80	2.60

47	BP506P	CO1	Students will be able to Interpret the preformulation studies on drugs	K2	3		3	2		1			2	2			3
		CO2	Students will be able to Explain the preparation, evaluation, and coating of tablets	K2	3		3	2		1			2	2			3
		CO3	Students will be able to Illustrate the formulation and evaluation of capsules	K2	3		3	2		1			2	2			1
		CO4	Students will be able to Describe the preparation of parenterals, ophthalmic products, creams and other cosmetics.	K2	3		3	2		1			1	2			3
		CO5	Execute assessment of glass containers as per pharmacopeial specifications	K2	3		3	2		1			1	2			1
		BP506P			3.00		3.00	2.00		1.00			1.60	2.00			2.20
48	BP507P	CO-1	After successful completion of the course the students will be able to understand application of commonly used instrument(s), describe preparation of drug dilutions, different solutions and molar solution used for experiments on rodents.	K2	1	2				3						3	
		CO-2	After successful completion of the course the students will be able to report basic concept of bioassay of drug (s) using different isolated organ (s) / tissue(s) by software(s) and videos..	K2	2	1	2	3	2	3	2	3	2	3	3	1	
		CO-3	After successful completion of the course the students will be able to make use of software / computer simulated CDs or video cassettes for demonstrating effect or mechanism of drug (agonist/ antagonist) action / synergism acting on isolated different organs/tissues from the laboratory animals which can minimize the use of experimental animals for pharmacology practical.	K3	1	2			3	3	1	1	2	2	3	1	
		CO-4	After successful completion of the course the students will be able to examine dose response curve (DRC) of drug (s) or effect of agonist / antagonist on DRC of drug using isolated tissue preparation for demonstrating the receptor actions (efficacy, potency, precision and risk benefit ratio) by simulated experiments.	K4	3	3		3			2					3	
		CO-5	After successful completion of the course the students will be able to appraise experimental relevance of anti-inflammatory and analgesic drug (s) in the treatment of inflammation and pain respectively and correlation of pharmacology with related medical sciences.	K5	1	2		1		1	1	1	2		1		
		BP507P			1.60	2.00	2.00	2.33	2.50	2.00	1.80	1.67	2.00	2.50	2.33	2.00	
49	BP508P	CO-1	Identify the crude drugs by morphological and microscopical characters.	K3	3					3							3
		CO-2	Isolate and analyze the phytoconstituents from crude drugs.	K3	3												2
		CO-3	Apply the theoretical knowledge of Chromatography for separation of phytoconstituents.	K3	3					2							2
		CO-4	Isolation and analysis of Volatile Oils.	K3	3					3							1

		CO-5	Identify the crude drugs by various chemical tests by observation	K3	2		1		2						2	
		BP508P			2.8		1		2.5						2	
50	BP509P	CO-1	Explain prescriptions and dispensing of drugs in relation with modern hospitals.	K2	3		3	3	1	1			2	2	3.00	
		CO-2	Make use of concepts of different routes of injection in patient care and treatment.	K2	3		3	3	1	1			2	2	3.00	
		CO-3	Apply the principles of First aid in providing patient care in hospital and community.	K3	3		3	3	1	1			2	2	3.00	
		CO-4	Examine the patient observation charts for better personnel management.	K4	3		3	3	1	1			2	2	3.00	
		CO-5	Assess Simple diagnostic reports.	K4	3		3	3	1	1			2	2	3.00	
		BP509P			3.00		3.00	3.00	1.00	1.00			2.00	2.00	3.00	

51	BP601T	CO-1	To impart fundamental knowledge on the structure, chemistry and therapeutic value of drugs.	K2	3	3	3			3	2		3	3	2			3.00
		CO-2	To emphasize on modern techniques of rational drug design like quantitative structure activity relationship (QSAR), Prodrug concept, combinatorial chemistry and Computer aided drug design (CADD).	K3	3	3	2	2		3	2	3	3	2	3			3.00
		CO-3	To understand the mechanism of action of drugs related to chemistry and their biological activity.	K2	3	3				3	2	3	3	3	3			3.00
		CO-4	To understand the importance of drug design and different techniques of drug design.	K3	3	3	2	1		2		2	2		3			3.00
		CO-5	To execute on the chemistry, metabolism, adverse effects, Structure Activity Relationships (SAR), therapeutic uses and synthesis of important drugs.	K2	3	3		1		3	2	2	2	3	3			3
		BP601T				3.00	3.00	2.33	1.33		2.80	2.00	2.50	2.60	2.75	2.80		3.00
52	BP602T	CO1	After successful completion of the course, students will be able to understand the mechanism of drug action and its relevance in the treatment of Respiratory and Gastric	K2														-
		CO2	able to understand the basic introduction, history and	K2	1	1		2	-	1	1	-	1	1	2	1	-	-
		CO3	After successful completion of the course, students will be able to illustrate the mechanism of drug action and its relevance in the treatment of specific infectious diseases.	K3	2	2		1	-	2	2	2	2	3	1	2	-	-
		CO4	After successful completion of the course, students will be able to appreciate rationale use of immunopharmacology and chemotherapy in the treatment UTI, STD and malignancy and	K4	2	3	1	3	-	3	-	3	3	2	1	1	-	-
		CO5	able to evaluate types of toxicity, principles of toxicology	K5	2	3	3	3	3	3	3	3	1	3	3	3	-	3
		BP602T				1.80	2.20	2.00	2.20	3.00	2.00	2.00	2.67	1.60	2.00	1.80	1.60	3.00
53	BP603T	CO-1	To know about herbal drugs, Herbal Medicinal Products, fundamentals of Good Agriculture Practices, Biodynamic Agriculture and Indian System of Medicine.	K3	3	3						3	3	3			2	
		CO-2	To understand about nutraceuticals and interactions between herbs, drugs and food and health benefits of herbs.	K2	3	3						3	3			2		
		CO-3	To prepare herbal cosmetics, assess herbal excipients and herbal formulations.	K2	3	3						3	2			2		
		CO-4	To appraise WHO and ICH guidelines for herbal drugs, patenting and regulatory requirements.	K3	2					2		3					3	
		CO-5	To know about herbal drug industry and GMP requirements for manufacturing herbal drugs	K1	3	1							2				2	
		BP603T				2.80	2.50					2.00	3.00	2.60			2.00	2.33
54	BP604T	CO-1	Students will be able to understand the significance of pharmacokinetics modeling, its basics parameters applied to ADME process.	K2	3	3	3								2			3.00
		CO-2	Students will be able to identify the effect of ADME process and its variables on dosage regime.	K3	3	3	3								3			3.00
		CO-3	Students will be able to analyze the compendial requirements of dissolution testing.	K2	3	3	3	2							3			3.00

	E	CO-4	Students will be able to determine the elimination rate constant, AUCs and Clearance	K1	3	3	2							3			3.00
		CO-5	Students will be able to explain the mechanism of drug absorption and drug-drug interaction.	K2	3	3	2							3			3.00
		BP604T			3.00	3.00	2.60	2.00						2.80			3.00
55	BP 605T	CO-1	Students will be able to understand basic terms & principles of enzyme technology, genetic engineering, protein engineering and biosensors.	K2	2		3	3					2		3	2	3.00
		CO-2	Students will be able to apply principles of genetic engineering & enzymes in pharmaceutical industry.	K2	3		3	3					2		3	3	3.00
		CO-3	Students will be able to explain the concept of immunity and hybridoma technology for the production of vaccine and blood products.	K2	3		3	3					3		3	3	3.00
		CO-4	Students will be able to understand the microbial genetics, biotransformation and mutation.	K2	3		3	3					3		3	3	3.00
		CO-5	Students will be able to apply biotechnological techniques for the production of antibiotics & blood products.	K2	3		3	3					3		3	3	3
		BP605T			2.80		3.00	3.00					2.60		3.00	2.80	3.00
56	BP606T	CO-1	Explain significance of quality in pharmaceutical manufacturing	K2	3		1		1	3			1	3	1		2.00
		CO-2	Explain role of Regulatory Agencies in deciding Quality Standards	K2	1	2			1	3					3		1.00
		CO-3	To have brief knowledge of personnel, surrounding facilities, material management of quality, manufacturing operation & its control within the production area	K2	2	2			1						2		1.00
		CO-4	To learn documentation & its record, what is outsourcing, post operational activities.	K2	1	2			1			1			2		1.00
		CO-5	To understand significance of calibration & validation in quality assurance and concept of QbD	K2	2	2			2	3							2
		BP606T			1.60	2.00	1.00		1.20	3.00			1.00	1.00	3.00	2.00	1.40

57	BP607P	CO-1	Synthesize, recrystallize and understand reaction mechanisms involved in the synthesis of medicinally important compounds.	K3	3		1	2	2		1	1	1	2		3.00	
		CO-2	Able to perform assay of drugs.	K2	3		2	1	2		1	1	1	2		3.00	
		CO-3	To study the interpretation of UV spectra of unknown drugs.	K2	3		2	2	2		2	1	1	2		3.00	
		CO-4	Able to draw structures and reactions using Chem sketch.	K3	3		3	3	2		1	1	1	2		3.00	
		CO-5	Able to draw structures and reactions using Chem draw.	K1	3		3	3	2		2	1	1	2		3.00	
		BP607P				3.00		2.20	2.20		2.00		1.40	1.00	1.00	2.00	3.00
58	BP608P	CO-1	understand application of commonly used instrument(s), describe calculation of dose, pharmacokinetic parameters of drug used for experiments on rodents.	K2	1	-	-	-	1	2	3	1	1	1	1	-	-
		CO-2	record observations and make suitable inferences based on them by software(s) and videos.	K4	2	1	3	3	2	1	2	2	1	1	1	1	-
		CO-3	make use of software / computer simulated CDs or video cassettes for demonstrating effect or mechanism of drug action acting on isolated different tissues from the laboratory animals which can minimize the use of experimental animals for pharmacology practical.	K3	2	2	-	3	2	3	3	1	1	2	1	-	-
		CO-4	determination of acute skin, eye irritation / corrosion of a test substance, acute oral toxicity (LD50) of a drug and biostatistics methods in experimental pharmacology by simulated experiments.	K3	1	2	3	2	2	2	2	1	1	1	1	-	1.00
		CO-5	appraise experimental and biochemical relevance of drug (s) in the treatment of respective disorder and correlation of pharmacology with related medical sciences.	K5	2	-	2	-	1	2	-	2	3	-	2	-	-
		BP608P				1.60	1.67	2.67	2.67	1.60	2.00	2.50	1.40	1.40	1.25	1.20	1.00
59	BP609P	CO-1	Students will be able to understand raw material as a source of herbal drugs by phytochemical screening.	K2	3				2					2			
		CO-2	Students will be able to know herbal cosmetics and their evaluation.	K3	3	2			2		2	3		2			
		CO-3	Students will be able to know the residual content in traditional preparation.	K2	2		3		2		1	2		2			
		CO-4	Students will be able to develop and evaluate different herbal formulations.	K4	3		3		3		3	2		1		2	
		CO-5	Students will be able to report the procedure in the designing of monographs.	K4	2				3	2	3	3	2		1		
		BP609P				2.60	2.00	3.00		3.00	2.20	3.00	2.25	2.25		1.60	2.00
60	10P	CO-1	Students will be able to develop your interest in a specific career before permanent duties are offered.	K4	3				2					1			
		CO-2	Students will be able to apply skills in the application of theory to practical work situations.	K3	3	3			2		2			2			
		CO-3	Students will be able to develop skills and techniques directly applicable to your careers.	K4	2		3		2		2			2			

90	BP6	CO-4	Students will be able to build a good communication skill with coworkers and learn proper behavior of corporate life in industrial sector.	K4					3	2		3	2		1			
		CO-5	Students will be able to instill good moral values such as responsibility, commitment and trust during their training.	K4						2	3		2		1			
		BP610P				2.67	3.00	3.00		3.00	2.00	3.00	2.33	2.00		1.40		

61	BP 701T	CO-1	The student will be able to understand the principle and working of different analytical instrument and its application in drug analysis.	K3	3		2	3		2		2	2	2	3		3	3.00	3.00
		CO-2	The student will able to understand the interaction of matter with various electromagnetic radiation and its application in drug analysis.	K2	3		2	3		2		2	2	3	2		3	3.00	3.00
		CO-3	The student will able to understand the different chromatographic techniques and their application in drug analysis.	K2	2		2	3		2		1	2	2	3		2	3.00	3.00
		CO-4	The student will able to perform quantitative and qualitative analysis of drugs using various analytical instruments	K3	2		2	3		2		1	2	2	3		1	2.00	3.00
		CO-5	The student will able to identify the structure of unknown compounds using various analytical instruments.	K1	2		2	3		2		1	2	2	2		2	2.00	3.00
		BP701T				2.40		2.00	3.00		2.00		1.40	2.00	2.20	2.60	2.20	2.60	3.00
62	BP702T	CO-1	Students will be able to describe the techniques involved in pilot plant scale-up in pharmaceutical manufacturing.	K2	3						3		2		2				3.00
		CO-2	Students will be able to understand the process of technology transfer and its documentation.	K2	3	2					3		2		2				3.00
		CO-3	Students will be able to apply the filing process for drug approval.	K3	3						2		2		2				3.00
		CO-4	Students will be able to illustrate the concept of quality management systems and ISO standards applicable in the pharmaceutical industry.	K3	3				1		2		2		2				3.00
		CO-5	Students will be able to describe the functioning of drug regulatory agencies in India and the documentation required for new drug registration.	K4	3	2					2		2		2				3
		BP702T				3.00	2.00			1.00		2.40		2.00		2.00			3.00
63	BP703T	CO-1	understand the adverse drug reaction and functions of Hospital Pharmacy.	K2	3	3	3			3	3		3		3				3
		CO-2	understand therapeutic drug monitoring, hospital formularies and patient counseling	K2	3	3	3			3	3		3		3				3
		CO-3	To Apply; policies of pharmacy and therapeutic committee to maintain the drug safety, Drug information service and uses of computer to retrieve the drug information, Requirement of pharmacist in hospital to involve in patient counseling, Education and training programmed and requirement of communication skills to prescribed medication order.	K2	3	3	3			3	3		3		3				3
		CO-4	To Analyze; the drug monitoring therapy and medication history of patients, Clinical pharmacy, Implement the new budget in pharmacy and Rational use of OTC medications.	K2	3	3	3			3	3		3		3				3
		CO-5	To Evaluate; the purchase and inventory control in hospital and evaluate the clinical laboratory test in Blood, Hemoglobin and Urine.	K2	3	3	3			3	3		3		3				3
		BP703T		K2	3.00	3.00	3.00			3.00	3.00		3.00		3.00				3.00
		CO-1	Students will be able to formulate and evaluate different types	K5	3	3	3	3	2	3	2	2	2	2	2	2	3	3.00	2.00

64	BP704T	CO-2	Research ability in formulation of targeted drug delivery system	K3	3	3	3	3	3	3	3	2	2	3	3	3.00	3.00	
		CO-3	Selection of proper excipients and API for formulation of NDDS	K2	3	2	3	3	2	2	2	2	1	1	2	3	3.00	2.00
		CO-4	Exploration of alternative routes for delivery of drug in the body	K3	3	2	3	2	2	2	2	2	2	3	2	2	3.00	2.00
		CO-5	Thinking ability for research in the field of advanced drug delivery	K3	3	3	3	3	3	3	3	3	3	3	3	3	3.00	3.00
		BP704T				3.00	3.00	3.00	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	3	3.00

65	BP705P	CO-1	Student will able to perform extraction, isolation, identification and purification of the herbal drugs and phytoconstituents.	K3	3	2	3	3			2			2	2	1.00	3.00	2	
		CO-2	Utilization of different spectral techniques in analysis of drug, determination of the metal and identification of unknown compounds (natural and synthetic).	K3	2	2	3	3			2			2	2	1.00	3.00	2	
		CO-3	Student can evaluate different types of dosage form through chromatographic and spectral techniques.	K5	3	2	3	3			1			2	2	1.00	3.00	2	
		CO-4	The student will able to handle different instrument like HPLC, UV, and IR.	K3	2	2	3	3			2			2	2	1.00	3.00	3	
		CO-5	Student will able to perform different chromatographic techniques of herbal drugs/ formulation.	K2	3	2	3	3			1			2	2	1.00	3.00	2	
		BP705P				2.60	2.00	3.00	3.00			1.60			2.00	2.00	1.00	3.00	2.20
		66	BP706PS Practice School	CO-1	Apply theoretical knowledge to practical pharmaceutical settings through hands-on training and project-based learning.	K3													
CO-2	Evaluate pharmaceutical products and processes using scientific and regulatory principles.			K4	3	3	2	2	2	2	1	2	1	1	2	3	3		
CO-3	Implement quality, safety, and documentation standards based on GMP, GLP, and QA/QC practices.			K3	3	2	2	2	1	2	3	2	2	3	2	3	3		
CO-4	Utilize modern scientific tools, computational software, and AI techniques for formulation, analysis, and process optimization.			K3	2	2	3	3	2	2	2	2	1	2	3	3	3		
CO-5	Demonstrate professional ethics, teamwork, communication, and report writing skills relevant to industrial and research environments.			K2	1	2	2	2	3	3	3	3	2	2	3	3	3		
BP706PS Practice School					2.40	2.40	2.40	2.20	2.00	2.20	2.20	2.20	1.40	2.00	2.40	3.00	3.00		

67	BP707P	CO-1	Student will be able to describe key concepts, theories and techniques for analysing different organizational situations.	K2	3			3.00					1.00	2.00	2.00	3		
		CO-2	Student will be able to understand the importance of looking after health , welfare and safety of staff.	K2	3			3					1	2	2	3		
		CO-3	Student will be able to recognize how operational problems and situations are handled in practice by undertaking and reporting at a hospital attachment.	K3	3			3					1	2	2	3		
		CO-4	Student will be able to develop awareness of the responsibilities of senior hospital management, including understanding the role and functions of hospitals and their health care.	K3	3			3					1	2	2	3		
		CO-5	Examine the patient observation charts for better personnel management.	K4	3			3					1	2	2	3		
		BP707P			3.00			3.00					1.00	2.00	2.00	3		
68	BP801T	CO-1	Understand the applications of Statistics and Biostatistics in Pharmacy	K2	3	2	2	3	2	2	2	2	2	1	3	3	3.00	2.00
		CO-2	Understand various statistical techniques to solve statistical problems	K2	3	3	3	3	2	2	2	2	2	1	3	3	3.00	2.00
		CO-3	Solve statistical techniques in solving the problems.	K3	3	3	3	3	3	3	2	3	2	1	3	3	3.00	3.00
		CO-4	Analyze the statistical data using Excel.	K4	3	3	3	3	3	2	2	3	2	2	3	3	3.00	3.00
		CO-5	Evaluate optimized batches by using Factorial Design.	K5	3	3	3	3	3	3	2	3	2	2	3	3	3.00	3.00
		BP801T			3.00	2.80	2.80	3.00	2.60	2.40	2.00	2.60	2.00	1.40	3.00	3.00	3.00	2.60
69	BP802T	CO-1	Student will be able to understand the drug monitoring therapy and medication history of patients, Clinical pharmacy, rational use of OTC medications and Implement the new budget in pharmacy.	K2	3	3	3	2	2	3	2	3	2	1	2	3	3	3
		CO-2	Student will be able to evaluate the alternatives schemes or approaches implemented in the health care issues.	K2	3	2	2	2	2	2	3	2	3	3	3	2	3	2
		CO-3		K5	3	3	3	2	2	3	3	2	3	2	3	3	3	3
		CO-4	Student will be able to understand the community services at rural, urban and school health care system.	K2	2	2	2	1	3	3	2	3	3	3	2	2	3	3
		CO-5	Student will be to understand National health programs, its objectives, functioning and outcome of the diseases.	K2	3	2	2	1	2	3	3	2	3	3	3	2	3	3
		BP802T			2.80	2.40	2.40	1.60	2.20	2.80	2.60	2.40	2.80	2.40	2.60	2.40	3.00	2.80
70	BP803ET	CO-1	Student will be able to recall the fundamental principles of marketing, its concepts and techniques	K2		2.00	2.00		3.00	2.00	1.00	3.00			1.00			
		CO-2	Student will be able to understand Product management in pharmaceutical industry.	K2	2	1	1					2						
		CO-3	Student will be able to Interpret and distinguish significance of promotion activities involved in Pharmaceutical Marketing.	K2	1	3					2	2						
		CO-4	Student will be able to conceptualize the Professional sales representation (PSR)	K3		2			2			2						
		CO-5	Student will be able to outline the significance and principle involved in Emerging concepts in marketing.	K2		2	1		2			2						

		BP803ET			1.50	2.00	1.33		2.33	2.00	1.50	2.20			1.00			
71	BP804ET	CO1	Students will be able to explain concepts of innovator and gene	K2	3	3	3		3	3	2	2	3			3	2.00	
		CO2	Students will be able to explain regulatory requirements for ap	K2	3	3	3		3	3	2	2	3			3	2.00	
		CO3	Students will be able to develop dossiers and their submission t	K3	2	3	3		3	3	2	2	3			3	2.00	
		CO4	Students will be able to compare regulatory requirements of di	K2	3	3	3		3	3	2	2	3			3	2.00	
		CO5	Students will be able to conclude regulatory approval process a	K2	2	3	3		3	3	2	2	3			3	2	
		BP804ET			2.60	3.00	3.00	3.00	3.00	3.00	2.00	2.00	3.00			3.00	2.00	
72	BP809ET	CO-1	Student will be able to memorize and recall the cosmetics, cosmeceutical products and cosmetic excipient	K2	3										2			2.00
		CO-2	Students will be able to apply the various formulation principles and building blocks of skin and hair care products.	K3	3										3			2.00
		CO-3	Students will be able to evaluate the various cosmetic products based on various parameters like measurement of	K4	2		2	2							2			2.00
		CO-4	in cosmetics, various skin types, introduction & MOA of antiperspirants and deodorants, Introduction and	K2	3										2			2.00
		CO-5	Students will be able to effectively analyze the shampoo, skin creams and tooth paste.	K4	2										2			2.00
		BP809ET			2.60		2.00	2.00							2.20			2.00
73	BP812ET	CO-1	Understand the need of supplements by the different group of people to maintain healthy life.	K2	3		2		3			3		2	2	3		
		CO-2	Understand the outcome of deficiencies in dietary supplements.	K2	2		2							2	2	3	3	
		CO-3	application.	K2	2									2	2	3	3	
		CO-4	Understand the regulatory and commercial aspects of dietary supplements including health claims.	K2	2									2	2			
		CO-5	Understand the various regulatory bodies.	K2	2					3	3		3	2	3			3
		BP 812ET			2.2		2		3	3	3	3	3	2	2.2	3	3	3
74	BP814PW	CO-1	Apply theoretical knowledge learned in classroom to solve a research problem	K2	2	2					1	1						1.00
		CO-2	Understanding the importance and applications of various subjects and their correlation in hypothesizing and solving research problem.	K3	2	2					1	1						1.00
		CO-3	Development of critical thinking and analytical skills through hands-on learning.	K3	1	1						2						1.00
		CO-4	Acquire various skills like Problem solving, data handling, presentation, documentation etc.	K2	2	2						1						1.00
		CO-5	Plan academic, career and personal interests via research experience.	K3	2	2						1						1.00
		BP814PW			1.80	1.80					1.00	1.20						1.00
		CO-1	Explain the different processes involved in manufacturing and production.	K2	3	3			3	3	3		2	2		2		2

75	BP815P	CO-2	Describe use of advanced techniques and equipments encountered during industrial visit.	K2	3			3				2	2		2		2
		CO-3	Implement Good Manufacturing Practices and disciplines prescribed in industry.	K3	3	3						2					2
		CO-4	Develop awareness about general workplace behaviour and build interpersonal and team skills.	K3	3	3			3			2					2
		CO-5	Prepare professional work reports and presentations	K2	3				3			2					2
		BP815P			3.00	3.00		3.00	3.00	3.00		2.00	2.00		2.00		2.00

