

#### Kalyani Charitable Trust's RAVINDRA GAMBHIRRAO SAPKAL COLLEGE OF

PHARMACY

Kalyani Hills, Anjaneri, Nashik 422 212



## **COURSE OUTCOMES**

### Subject: Human Anatomy and Physiology I – Theory (BP101T)

CO NO.	Course Outcome (CO)
CO1	Students would have attained knowledge of structure and functions of cell,
	skeletal, muscular, cardiovascular system of the human body.
CO2	Explain various homeostatic mechanisms and their imbalances.
CO3	Describe the coordinated working pattern of various systems.
CO4	Able to identify the various tissues, bones and organs of different systems of
	human body.
CO5	Acquired knowledge of anatomy and physiological role of various systems in
	human body

## Subject: Pharmaceutical Analysis I – Theory (BP102T)

CO NO.	Course Outcome (CO)
CO1	To study fundamentals of pharmaceutical analysis and pharmacopoeia.
CO2	Understand basic concepts involved in errors and to know the sources of
	impurities and methods to determine the impurities.
CO3	Clarify need and basic principles of Acid Base titration, non aqueous titration,
	complexometric titration, precipitation titrations, gravimetric analysis etc
CO4	Illustrate principle, types of electrode, instrumentation and applications of
	Potentiometry, Conductometry and Polarography

### Subject: Pharmaceutics I – Theory (BP103T)

CO NO.	Course Outcome (CO)
CO1	Illustrate the history, scope & career opportunities in the profession of pharmacy. Also Illustrate the roles & responsibilities of a pharmacist.
CO2	Describe the classification and definitions of different kinds of dosage forms. (Solid, liquid, semi-solid, gaseous dosage forms)
СОЗ	Demonstrate understanding the professional way of handling the prescription. Explain the science of doses and factors affecting posology. Solve the



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	pediatric dose calculations based on age, body weight and body surface area.
CO4	Demonstrate the understanding of the basics of pharmaceutical calculations and pharmaceutical incompatibilities.
CO5	Discuss briefly about classification, preparation and some basics of different dosage forms (powders, liquid dosage forms, monophasic & biphasic liquids, suppositories & semisolid dosage forms).

# Subject: Pharmaceutical Inorganic Chemistry – Theory (BP104T)

CO NO.	Course Outcome (CO)
CO1	Students should be able to identify sources of impurity and methods to
	determine impurities in inorganic drug and pharmaceuticals
CO2	Students should be able to understand the procedure to perform specific test
	and limit test of inorganic medicinal compound as per official pharmacopoeia.
CO3	Students should be able to study the various extra and intra cellular fluids and
	electrolytes and their role.
CO4	Students should be able to Explain the method of preparation, assay,
	properties, medicinal uses of acidifiers, antacids and cathartics, dental
	products, expectorants, emetics and haematinics
CO5	Students should be able to study the various aspects of radiopharmaceuticals.

## Subject: BP107P Human Anatomy and Physiology-I – Practical

CO NO.	Course Outcome (CO)
CO1	Upon completion of this course the student should be able to: Name the
	different parts of microscope and explain the function of each.
CO2	Upon completion of this course the student should be able to: Microscopically
	Identify various types of tissues structure and function.
CO3	Upon completion of this course the student should be able to: Microscopically
	Identify various types of tissues structure and function.
CO4	Upon completion of this course the student should be able to: Microscopically
	Identify various types of tissues structure and function.
CO5	Upon completion of this course the student should be able to: Microscopically
	Identify various types of tissues structure and function.



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CO6 Upon completion of this course the student should be able to: Microscopically Identify various types of tissues structure and function.

## Subject: Pharmaceutical Analysis I – Practical (BP108P)

CO NO.	Course Outcome (CO)
CO1	To understand the importance of calibration, calibration of weights, pipette and burette.
CO2	To experiment with volumetric analysis such as acidimetry and alkalimetry, oxidation and reduction reactions, iodometry, complexometry, precipitation and non-aqueous titration.
CO3	To analyze gravimetric analytical techniques.
CO4	To evaluate pharmaceuticals by cerimetry.
CO5	To analyze pharmaceuticals by electro-analytical methods.

# Subject: BP109P Pharmaceutics I – Practical

CO NO.	Course Outcome (CO)
CO1	Explain formulation, evaluation & labeling of different pharmaceutical dosage form (e.g. solids, liquids, semi-solids).
CO2	Describe the use of ingredients in formulation & category of formulation.
CO3	Compare various monophasic preparations depending upon their formulation.
CO4	Perform pharmaceutical calculations to determine evaluation parameters like factor, specific gravity, bulk density, tapped density, angle of repose, Hausner's ratio, Carr's index etc. of preparations.
C05	Explain fundamental knowledge of preparing of various types of powders and discuss on selection of suitable packaging container-closure for the preparation.

## Subject: Pharmaceutical Inorganic Chemistry – Practical (BP110P)



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CO NO.	Course Outcome (CO)
CO1	Students should be able to recall the sources of limit tests, preparation and
	identification of compounds.
CO2	Students should be able to analyze various inorganic pharmaceutical
	compounds.
CO3	Students should be able to assess quality of inorganic pharmaceuticals.
CO4	Students should be able to select suitable method for the preparation of
	inorganic pharmaceuticals.

## **SEMESTER: II**

## Subject: BP201T Human Anatomy and Physiology II – Theory

CO NO.	Course Outcome (CO)
CO1	To relate the basic knowledge about central nervous system including nervous tissue, brain and spinal cord.
CO2	To illustrate the structure and functions of gastrointestinal tract and to learn about ATP/CTP/BMR.
CO3	To learn about structure and functions of respiratory system and various mechanisms involved in regulation of respiration.
CO4	To categorize the anatomy of urinary system and physiology of urine formation/micturition
CO5	To appraise the essentiality of endocrine glands and their hormones.

## Subject: BP202T Pharmaceutical Organic Chemistry I – Theory

CO NO.	Course Outcome (CO)
CO1	Knowledge of the classification, nomenclature, structure and the type of
	isomerism of the organic compound
CO2	Understanding of important physical properties, reactions (and underlying
	mechanisms) and methods of preparation of various functional groups.
CO3	Account for reactivity/stability of compounds and intermediates forming in
	reactions
CO4	Identify / confirm the identification of organic compound.

Subject: BP203T Biochemistry – Theory



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CO NO.	Course Outcome (CO)
CO1	To understand the importance of metabolism of substrates.
CO2	Will acquire chemistry and biological importance of biological
	macromolecules.
CO3	To acquire knowledge in qualitative and quantitative estimation of the
	biological macromolecules.
CO4	To know the interpretation of data emanating from a Clinical Test Lab.
CO5	To know how physiological conditions influence the structures and re -
	activities of biomolecules.
CO6	To understand the basic principles of protein and polysaccharide structure.

## Subject: BP207P Human Anatomy and Physiology II –Practical

CO NO.	Course Outcome (CO)
CO1	To recall the physiology of special senses with the help of models, charts and
	specimens.
CO2	To develop the knowledge on coordinating working of organs of various
	systems with the help of models, charts and specimens.
CO3	To analyze the functions of cranial nerves by various sensory and motor
	functions.
CO4	To evaluate body temperature and body mass index.
CO5	To determine tidal volume and vital capacity.
CO6	To assess the knowledge on family planning devices, pregnancy diagnostic
	tests, tissues of vital organs and gonads.

## Subject: BP208P Pharmaceutical Organic Chemistry I – Practical

CO NO.	Course Outcome (CO)
CO1	Knowledge of safety measures in organic chemistry laboratory and various
	laboratory techniques
CO2	Understanding of steps involved in identification of unknown organic compound.
CO3	Ability to prepare suitable solid derivatives from organic compounds.
CO4	Develop skills to prepare stereo models containing various functional groups.



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## Subject: BP209P Biochemistry – Practical

CO NO.	Course Outcome (CO)
CO1	To remember the qualitative analysis of carbohydrates and proteins
CO2	To understand the principle and clinical significance of blood glucose
CO3	To identify the amount of reducing sugars by DNSA method
CO4	To examine the constituents present in Urine and their clinical significance
CO5	To determine the effect of temperature and substrate concentration on salivary amylase activity
	To elaborate the clinical significance of creatinine, proteins and cholesterol in
	blood

### **SEMESTER: III**

## Subject: Pharmaceutical Organic Chemistry II – Theory (BP301T)

CO NO.	Course Outcome (CO)
CO1	
CO2	Write the structure, name and the type of isomerism of the organic compound.
CO3	Write the reaction, name the reaction and orientations of reactions.
CO4	Prepare organic compounds.
CO5	Apply the knowledge to synthesize various organic compounds.

## Subject: Physical Pharmaceutics I – Theory (BP302T)

CO NO.	Course Outcome (CO)
CO1	Describe the principles of solubility and partition coefficient.
CO2	Explain physical principles of states of matter, phase rule and the application of various physicochemical properties to design dosage form.
CO3	Discuss the principle of interfacial tension and application of surface-active agents.
CO4	Apply the concept of complexation and protein binding in pharmacy.
CO5	Explain the importance of pH and buffers in manufacturing of pharmaceutical dosage forms and maintaining stability.

### Subject: BP303T Pharmaceutical Microbiology – Theory

CO NO.	Course Outcome (CO)



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CO1	Students will be able to acquire, articulate, retain and apply specialized
	language and knowledge relevant to microbiology as well as historical
	development, scope and branches of microbiology, method of classification of
	various microbes.
CO2	Describe the importance and implementation of staining techniques and
	sterilization methods and explain morphology, classification, replication and
	cultivation of microorganisms, sterility testing as per I.P., disinfectants and its
	importance.
CO3	Identify aseptic area, different sources of contamination, method of
	preventions and its importance.
CO4	Describe the microbiological standardization of Pharmaceuticals, types,
	factors affecting microbial spoilage, contaminants and preservation of
	pharmaceutical products.
CO5	Explain the growth of animal cell culture and application.

## Subject: BP305P Pharmaceutical Organic Chemistry II – Practical

CO NO.	Course Outcome (CO)
CO1	To gain the knowledge on different recrystalization and steam distillation
	techniques.
CO2	To remember and recall the different laboratory techniques used in
	pharmaceutical chemistry.
CO3	To identify the purity of fats and oils by acid value, saponification value and
	iodine value.
CO4	To perform various reaction like diazotization, oxidation reactions.
CO5	To analyze named reactions like perkin and claisen schmidt reactions by
	using carbonyl compounds.
CO6	To test the knowledge on different electrophilic aromatic substitutions
	reactions like bromination, nitration in monosubstituted aromatic compounds.

## Subject: BP306P Physical Pharmaceutics I – Practical

CO NO.	Course Outcome (CO)
CO1	Interpret solubility of different drugs.
CO2	Discover pKa values.
CO3	Estimate HLB values.
CO4	Predict partition coefficient of drugs.



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CO5	Calculate percent composition and refractive index of drugs.
CO6	Calculate surface tension of liquids and critical micellar concentration of surfactants
CO7	Discover Freundlich and Langmuir constants using activated char coal
CO8	Discover stability constants by different methods.

## **Subject: BP307P Pharmaceutical Microbiology – Practical**

CO NO.	Course Outcome (CO)
CO1	To understand methods of identification, cultivation, and preservation of
	various microorganisms.
CO2	To understand the importance and implementation of sterilization in
	pharmaceutical processing and industry.
CO3	To learn sterility testing of pharmaceutical products.
CO4	To carried out microbiological standardization of pharmaceuticals.

#### **SEMESTER: IV**

## Subject: BP401T Pharmaceutical Organic Chemistry III– Theory

CO NO.	Course Outcome (CO)
CO1	
CO2	Understand the basic terminologies in stereochemistry and organic reactions
CO3	Explain the stereo chemical aspects of organic compounds and stereo chemical reaction.
CO4	Understand the methods of preparation and properties of organic compounds
CO5	Know the medicinal uses and other applications of organic compound

## Subject: BP402T Medicinal Chemistry I – Theory

CO NO.	Course Outcome (CO)
CO1	Identify the effect of physicochemical properties on biological action and
	drug metabolic pathways
CO2	Describe the structural activity relationship of different class of drugs
CO3	Classify medicinal compounds according to their chemical structure



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<b>CO4</b>	Discuss the pharmacological actions and adverse effects and uses of medicinal compounds
CO5	Apply the principles of synthetic chemistry to predict the synthesis of drug molecules

## Subject: BP404T Pharmacology I – Theory

CO NO.	Course Outcome (CO)
CO1	Upon completion of the course, the student shall be able to: Explain the
	concept of pharmacology and its History, the source of the drug, the routes of
	drug administration, the effect of drugs, and their actions.
CO2	Upon completion of the course, the student shall be able to: Explain the
	pharmacokinetic, and pharmacodynamic action of the drug.
CO3	Upon completion of the course, the student shall be able to: Explain drug
	discovery, Preclinical evaluation, Clinical trials, and Pharmacovigilance
CO4	Upon completion of the course, students will able to: Understand the
	pharmacological actions of different categories of drugs
CO5	Upon the completion of the Course, students will be able to: Apply the basic
	pharmacological knowledge in the prevention and treatment of various
	diseases.

### Subject: BP405T Pharmacognosy and Phytochemistry I- Theory

CO NO.	Course Outcome (CO)
CO1	To learn about history and scope of Pharmacognosy.
CO2	To explain classification along with their merits & demerits.
CO3	To know the techniques in the cultivation and production of crude drugs.
CO4	To know the crude drugs, their uses and chemical nature.
CO5	To know the evaluation techniques for the herbal drugs.
CO6	To carry out the microscopic and morphological evaluation of crude drugs.

## Subject: BP406P Medicinal Chemistry I – Practical

CO NO.	Course Outcome (CO)
CO1	Synthesize medicinal compounds
CO2	Recognize apparatus required for synthesis



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CO3	Describe percentage yield of compound.
CO4	Estimate purity of drugs
CO5	Estimate partition coefficient of drugs
Subject: BP409P Pharmacognosy and Phytochemistry I – Practical	

CO NO.	Course Outcome (CO)
CO1	To demonstrate chemical tests to identify unorganized crude drugs.
CO2	To evaluate the quality and purity of crude drugs.
CO3	To perform linear measurements for crude drug identification.
CO4	To develop quality control methods for standardization of herbal drugs.
CO5	Develop skills for the quality control of crude drugs

### **SEMESTER: V**

## Subject: BP501T Medicinal Chemistry II – Theory

CO NO.	Course Outcome (CO)
CO1	Understand the chemistry of drugs with respect to their pharmacological
	activity
CO2	Understand the drug metabolic pathways, adverse effect and therapeutic value
	of drugs
CO3	Know the Structural Activity Relationship of different class of drugs
CO4	Study the chemical synthesis of selected drugs
C05	study the mode of action of drug

## Subject: BP503T Pharmacology II – Theory

CO NO.	Course Outcome (CO)
CO1	Student should able to classify the drug and its relevance in the treatment of
	different diseases.
CO2	Students should able to recognize the concepts, mechanism of action of drug
	acting on various system of body.
CO3	Students should able to recall the concepts, mechanism of action and
	pharmacology of Autocoids.



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CO4	Explain Pharmacology of drugs acting on various system of body.
CO5	Describe the principle, application & types of bioassay

## Subject: BP504T Pharmacognosy and Phytochemistry II- Theory

CO NO.	Course Outcome (CO)
CO1	To know the modern extraction techniques, characterization and identification
	of the herbal drugs and phytoconstituents.
CO2	To understand the preparation and development of herbal formulation.
CO3	To understand the herbal drug interactions.
CO4	To carryout isolation and identification of phytoconstituents.
CO5	Understand classification of phytoconstituents and their chemical screening
	methods.
CO6	Describe drug product development of natural products.

# Subject: BP507P Pharmacology II – Practical

CO NO.	Course Outcome (CO)
C01	Upon completion of the topic students should able to understand In Vitro pharmacology of various drug using isolated tissue preparation with the help
	of Ex pharma simulation software & video.
CO2	Upon completion of the topic students should able to understand the concept and principle of bioassay of various drug using different method with the help of Ex pharma simulation software & video.
CO3	Upon completion of the topic students should able to understand the dose calculation in pharmacological experiment.
CO4	Upon completion of the topic students should able to understand PA2 value & PD2 value of drug using isolated tissue prepration with the help of Ex pharma simulation software & video.
C05	Upon completion of the topic students should able to understand anti- inflammatory activity ,Antiallergic activity & Analgesic activity of drug using different methods with the help of Ex pharma simulation software & video.



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## Subject: BP508P Pharmacognosy and Phytochemistry II – Practical

CO NO.	Course Outcome (CO)
CO1	To identify crude drugs by morphological and microscopical characteristics.
CO2	To isolate phytoconstituents from crude drugs.
CO3	To perform Paper and Thin Layer Chromatography.
CO4	To isolate and analyses volatile oils.
CO5	To Carryout chemical tests for the identification of unorganized crude drugs.
CO6	Analyze herbal extracts for the identification of phytoconstituents.

### **SEMESTER: VI**

### Subject: BP601T Medicinal Chemistry III – Theory

CO NO.	Course Outcome (CO)
CO1	Understand the importance of drug design and different techniques of drug
	design.
CO2	Understand the chemistry of drugs with respect to their biological activity.
CO3	Know the metabolism, mode of action adverse effects and therapeutic value
	of drugs.
CO4	Know the importance of SAR of drugs.
CO5	Study the chemical synthesis of selected drugs

## Subject: BP602T Pharmacology III – Theory

CO NO.	Course Outcome (CO)
CO1	Students should able to Describe, recognize the pharmacology of drugs acting on respiratory, and GI system.
CO2	Student shall able to classify the drugs acting on various system.
CO3	Students shall able to explain chemotherapy of specific infection and infestations.
CO4	Explain the pharmacology of immune stimulants and Immuno suppressants.



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CO5 Student should able to comprehend the principles of toxicology and treatment of various poisonings

# Subject: BP603T Herbal Drug Technology – Theory

CO NO.	Course Outcome (CO)
CO1	Understand raw material as source of herbal drugs from cultivation to herbal
	drug product
CO2	Analyse the quality assurance aspects of GAP, GLP and GMP involved in
	Indian systems of medicine formulation industry
CO3	Explain the basic principles of Indian systems of medicine.
CO4	Discuss the concepts of traditional systems of medicine, their development
	and various formulations including their manufacture, quality control and
	safety monitoring.
CO5	Predict herb-drug, herb-herb interactions.
CO6	To know the Intellectual property rights and regulatory affairs for herbal
	products.

## Subject: BP604T Biopharmaceutics and Pharmacokinetics – Theory

CO NO.	Course Outcome (CO)
CO1	Define the basic concepts in biopharmaceutics and pharmacokinetics.
CO2	Select the correct pharmacokinetic model based on plasma level or urinary excretion data that best describes the process of drug absorption, distribution, metabolism and elimination (ADME), Determine the effect of Pharmacokinetic (ADME) parameters on the biological effects of the drug.
CO3	Carry out biopharmaceutical studies and use data so obtained in the development of new drugs or dosage forms.
CO4	Calculate various pharmacokinetic parameters from plasma and urinary excretion data applying compartment modelling and model independent methods
C05	Design dosage regimens for patients based on calculated pharmacokinetic parameters, Design Bioavailability and Bioequivalence studies of new drugs or dosage forms.
CO6	Evaluate drug-protein binding as a tool to predict pharmacokinetics of drugs



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### Subject: BP605T Pharmaceutical Biotechnology – Theory

CO NO.	Course Outcome (CO)
CO1	Understand the importance of microbes in enzyme biotechnology, protein
	engineering and biosensor applications
CO2	Understand the New concepts of Biotechnology, Genetic engineering
	techniques and recombinant DNA technology.
CO3	Understand the immune mechanism and employ it for the production of
	immunological products.
CO4	Recognize the importance of microbial genetics and its application in
	biotechnology.
CO5	Sketch various process involved in the fermentation technology and apply
	them in the production of pharmaceutical products.

## Subject: BP606T Quality Assurance – Theory

CO NO.	Course Outcome (CO)
CO1	Describe the cGMP, GLP aspects in a pharmaceutical industry.
CO2	Explain the documentation practices, record keeping and appreciate the importance of documentation.
CO3	Explain the scope of quality certifications applicable to pharmaceutical industries such as ISO 9000, ISO 14000, NABL.
CO4	Discuss the role and responsibilities of QA & QC departments.
CO5	Describe the significance of calibration and validation in quality assurance.

## Subject: BP608P Pharmacology III – Practical

CO NO.	Course Outcome (CO)
CO1	Students should be able to the anti-ulcer activity in rat models
CO2	Students should be able to demonstrate of effect of drugs on gastrointestinal
	motility and the effect of agonist/antagonists on guinea pig ileum



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CO3	Students should be able to analyze effect of saline purgative on frog intestine,
	insulin hypoglycemic effect and test for pyrogens using rabbit method.
CO4	Students should be able to evaluate acute oral toxicity (LD50), acute skin
	irritation / corrosion and acute eye irritation / corrosion of a test substance
CO5	Students should be able to predict the pharmacokinetic parameters and adapt
	the biostatistics methods in experimental pharmacology.

## Subject: BP609P Herbal Drug Technology – Practical

CO NO.	Course Outcome (CO)
CO1	Perform phytochemical screening of the extracts
CO2	Prepare herbal formulations and herbal cosmetics using standardized extracts
CO3	Evaluate excipients of natural origin
CO4	Carryout monograph analysis of herbal drugs
CO5	Determine alcohol content, aldehyde content, total alkaloids and phenol
	content

### **SEMESTER: VII**

# Subject: BP701T Instrumental Methods of Analysis – Theory

CO NO.	Course Outcome (CO)
CO1	Explain the interaction of matter with electromagnetic radiations and justify
	its applications in drug analysis.
CO2	Explain basic principles and instrumentation of Spectroscopy.
CO3	Classify the chromatographic separation methods and choose appropriate
	technique for analysis of drugs.
CO4	Explain theory, basic principles and instrumentation of various
	chromatography.
CO5	Learn applications of various chromatographic techniques for organic,
	inorganic and natural products.

# Subject: BP702T Industrial Pharmacy-II – Theory

CO NO.	Course Outcome (CO)
CO1	Know the process of pilot plant and scale up of pharmaceutical dosage forms



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	and SUPAC guidelines.
CO2	Understand the process of technology transfer from lab scale to commercial
	batch
CO3	Know different Laws and Acts that regulate pharmaceutical industry.
CO4	Understand the approval process and regulatory requirements for drug products
CO5	Understand concept of Total Quality Management.

## **Subject: BP703T Pharmacy Practice – Theory**

CO NO.	Course Outcome (CO)
CO1	To understanding the various methods used for hospital medicine distribution
	and appreciating pharmacy store administration and inventory control.
CO2	To study clinical evaluation of the patient's medication file, medication
	history interviewing, and patient counseling are used to track the patient's
	drug therapy.
CO3	Identify issues relating to drugs. Find and evaluate risk of drug responses
CO4	evaluate specific test findings related to particular illness states and be aware
	of pharma care services
CO5	provide patient counseling at community pharmacies and understand the
	rational drug idea

### Subject: BP705P Instrumental Methods of Analysis – Practical

CO NO.	Course Outcome (CO)
C01	Perform quantitative & qualitative analysis of drugs using various analytical
	instruments
CO2	Acquire the basics of analytical instrumentation and its analytical
	performance characteristics.
CO3	Select the most appropriate analytical and chromatographic methods to
	analyses a given analyte and matrix.
CO4	Learning to operate the analytical instruments, calibrate and analyses the data
	from the experiments.
CO5	Understand the potential and limitations of the instrumental methods studied
	in solving analytical problems.



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CO6 Take appropriate safety measures while handling instruments, chemicals and apparatus.

## **SEMESTER: VIII**

## Subject: BP801T Biostatistics and Research Methodology

CO NO.	Course Outcome (CO)
CO1	Understand the basic concepts of biostatistics
CO2	Know the various statistical methods to solve different types of problems
CO3	Learn different parametric and non-parametric tests
CO4	Operate various statistical software packages
CO5	Choose the appropriate research design and develop appropriate research
	hypothesis for a research project

## Subject: BP802T Social and Preventive Pharmacy

CO NO.	Course Outcome (CO)
CO1	Acquire high consciousness/realization of current issues related to health and
	pharmaceutical problems within the country and worldwide
CO2	Have a critical way of thinking based on current healthcare development in
	community
CO3	Evaluate alternative ways of solving problems related to health care and
	pharmaceutical issues in community
CO4	Recognize the community services in rural, urban and school health ,primary
	healthcare centre
CO5	Explain the general measures and strategies to be followed in social and
	preventive pharmacy by national healthcare programme

### Subject: BP803ET Pharma Marketing Management

CO NO.	Course Outcome (CO)
CO1	Describe and enumerate the concept of pharmaceutical marketing and product
	management in pharmaceutical industry.
CO2	Discuss the various components of promotion of pharmaceutical products
<b>CO3</b>	Discuss the various components of promotion of pharmaceutical products



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CO4	Discuss the role and responsibility of professional sales representative
CO5	Discuss the roles and responsibilities of pricing authorities in India
CO6	Discuss the role market research and emerging concepts of marketing

## Subject: BP805ET Pharmacovigilance

CO NO.	Course Outcome (CO)
CO1	Understand importance of drug safety monitoring and Vaccine safety
	surveillance
CO2	understand about History, development, National and international scenario of
	pharmacovigilance & comprehend dictionaries, coding and terminologies
	used in pharmacovigilance
CO3	Understand detection and assessment of new adverse drug reactions, Adverse
	drug reaction reporting systems and communication in pharmacovigilance,
	Pharmacovigilance Program of India (PvPI) requirement for ADR reporting
	in India ICH guidelines for ICSR, PSUR, expedited reporting,
	pharmacovigilance planning. CIOMS requirements for ADR reporting
CO4	Write case narratives of adverse events and their quality.
CO5	Write case narratives of adverse events and their quality.

## Subject: BP809ET Cosmetic Science

CO NO.	Course Outcome (CO)
CO1	Classify and define Cosmetics and Cosmeceuticals as per Indian and EU
	regulations.
CO2	Describe the role of cosmetic excipients and building blocks in the
	formulation of cosmetics and explain the structure and function of the skin,
	hair, teeth, and gums.
CO3	Describe the fundamentals of sun protection and the formulation of
	Sunscreens, antiperspirants, and deodorants.
CO4	Formulate cosmetics for skin care and hair care as well as dental and oral
	care.
CO5	Understanding of the terms Comedogenic, dermatitis and problems associated
	with hairs.