BAJIRAOJI KARANJEKAR COLLEGE OF PHARMACY

Nagzira Road, Sakoli, District: Bhandara (Maharashtra) 441802.

Tel./Fax: 07186-237199

E-mail: bkcpsakoli2003@gmail.com, Web Site: www.bkcp.in

Program Outcome 2023-24

- 1. **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.
- 2. **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.
- 3. **Problem analysis:** Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solvingproblems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
- 4. **Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modernpharmacy-related computing tools with an understanding of the limitations.
- 5. **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 role as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well-being.
- 6. **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.
- 7. **Pharmaceutical Ethics:** Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior 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.
- 8. **Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being ableto comprehend and write effective reports, make effective presentations and documentation, and give and receive clearinstructions.
- 9. **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.
- 10. **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.
- 11. Life –long learning: Recognize the need for, and have the preparation and ability to engage







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in independent and lifelong 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.

COURSE OUTCOME 2023-24

B.PHARM I SEMESTER	
BP101T	Human Anatomy and Physiology – I
C101.1	Understand the gross morphology, structure and functions of cell, skeletal,
	muscular, cardiovascular system of the human body.
C101.2	Understood the various homeostatic mechanisms and their imbalances.
C101.3	Identify the different types of bones in human body.
C101.4	Identify the various tissues of different systems of human body
C101.5	Learn about the various experimental techniques related to physiology.
C101.6	Learnt various techniques like blood group determination, blood pressure
	measurement, blood cells counting
BP102T	Pharmaceutical Analysis
C102.1	To develop the fundamentals of volumetric and instrumental analytical skills.
C102.2	Understand the fundamental methodology to prepare different strength of
1 6 3	solutions.
C102.3	To understand and develop skill to minimize the sources of mistakes and
	errors in analytical chemistry.
C102.4	Understand the principle of fundamental of analytical chemistry and its scope
	in pharmaceutical field.
C102.5	Understand the principles and application of electrochemical analytical techniques
	in pharmacy.
C102.6	Understand to improve skills by the course content in terms of selection analytical
DD1025	techniques to perform the estimation of different class of drugs.
BP103T	Pharmaceutics – I
C103.1	To know the historical background and profession of pharmacy and basics of
C102.2	pharmaceutical dosage forms.
C103.2	To understand the importance of prescription and posology
C103.3	To solve pharmaceutical calculations and understand the formulation of powders and liquid dosage forms.
C103.4	To develop monophasic and biphasic liquid dosage forms.
C103.4	To explain the concepts of suppositories and pharmaceutical incompatibilities.
C103.5	To formulate and evaluate semi solid dosage forms.
BP104T	Pharmaceutical Inorganic Chemistry
C104.1	Understand the history of Pharmaceutical Inorganic Chemistry, principles of limit
	tests and introduction & handling of Indian Pharmacopoeia.
C104.2	Understand introduction, properties, preparation and uses of inorganic
	pharmaceuticals.
LL	11







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C202.2 C202.3 C202.4 C202.5 C202.6 P203 T C203.1	nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism. Name the functional groups and different class of organic compounds. To know the reaction of various of alkane, alcohol, carbonyl compound, amines and carboxylic acid. Understand the reactivity and stability of organic compounds. To know the name, structure of organic compound and its use in pharmacy. Illustrate stereochemistry of organic reaction. Biochemistry Understand history of Biochemistry and introduction, classification, chemical nature &
C202.2 C202.3 C202.4 C202.5 C202.6	nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism. Name the functional groups and different class of organic compounds. To know the reaction of various of alkane, alcohol, carbonyl compound, amines and carboxylic acid. Understand the reactivity and stability of organic compounds. To know the name, structure of organic compound and its use in pharmacy. Illustrate stereochemistry of organic reaction.
C202.2 C202.3 C202.4 C202.5	nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism. Name the functional groups and different class of organic compounds. To know the reaction of various of alkane, alcohol, carbonyl compound, amines and carboxylic acid. Understand the reactivity and stability of organic compounds. To know the name, structure of organic compound and its use in pharmacy.
C202.2 C202.3	nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism. Name the functional groups and different class of organic compounds. To know the reaction of various of alkane, alcohol, carbonyl compound, amines and carboxylic acid. Understand the reactivity and stability of organic compounds.
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C202.2	nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism. Name the functional groups and different class of organic compounds.
\	nomenclature, structural isomerism, stereochemistry, chemical reactions and mechanism.
0202.1	nomenclature, structural isomerism, stereochemistry, chemical reactions and
2202.1	
	To Know and recall the fundamental principles of organic chemistry that include
P202T	Pharmaceutical Organic Chemistry – I
	pulse and respiratory volume.
0201.3	estimation, bleeding/clotting time etc and also record blood pressure, heart rate,
C201 5	Understand some hematological tests like blood cell counts, haemoglobin
2201.7	(homeostasis) of human.
C201 4	Learnt interlinked mechanisms in the maintenance of normal functioning
C201.5	system.
	Understand to elaborate coordinated working pattern of different organs of each
C201.2	human body. Learnt details about various tissues and organs of different systems of human body.
C201.1	Understand the gross morphology, structure and functions of various organs of the
	Human Anatomy and Physiology – II Understand the gross merchalogy structure and functions of verious organs of the
0.2017	B.PHARM II SEMESTER
C105.6	Learnt planning, preparation and delivering techniques of presentations.
	Understand Leadership qualities.
	Understand interview skills.
	Understand effectively manage the team as a team member.
	Understand to communicate effectively - Verbal and Non Verbal.
G107.5	areas of pharmaceutical operation.
C105.1	Understand the behavioral needs for a pharmacist to function effectively in the
P105T	Communication Skills
l .	Learnt principles and preparation procedures of inorganic drugs.
	Understand the medicinal and pharmaceutical importance of radiopharmaceuticals.
	classes.
C104.4	Understand introduction and applications of pharmaceutical drugs used in different
	Understand introduction, sources and identification tests for impurities in inorganic pharmaceuticals.
	C104.5 C104.6 P105T







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		introduction, precautions and treatment.
	C203.6 Understand the genetic information of mammalian genome and introduction &	
	C203.0	functions of DNA, RNA, proteins and enzymes.
BI	P 204T	Pathophysiology
	C204.1	Understand mechanism of cell injury and process of inflammation and repair.
	C204.2	Learnt the sign and symptoms of the disease.
C 7 1		Understand the etiology and complications of disease.
	C204.4 Know most commonly encountered pathophysiological state.	
	C204.5 Know the disease mechanism and clinical testing requirements.	
	C204.6 Understand the importance of systems working in human body.	
Bl	P205 T	Computer Applications in Pharmacy
	C205.1	Know the various types of application of computers in pharmacy
	C205.2	Know the various types of databases
	C205.3	Know the various applications of databases in pharmacy
	C205.4	Understand to solve and work with a professional context pertaining to ethics,
		social, cultural and regulations with regard to pharmacy
	C205.5	Understand to integrate and apply efficiently the contemporary IT tools to all
		pharmaceutical related activities
	C205.6	Understand to design and develop solutions to analyze pharmaceutical problems
		using computers
BF	BP 206 T Environmental Sciences	
	C206.1	Understand to create the awareness about environmental problems among learners
	C206.2	Understand to develop basic knowledge about the environment and its allied
		problems
	C206.3	Understand to develop an attitude of concern for the environment
	C206.4	Learn participation in environment protection and environment improvement
- 1	C206.5	Acquire skills to help the concerned individuals in identifying and solving
	C20.6.6	environmental problems
	C206.6	Strive to attain harmony with Nature
	D201/T	B.PHARM III SEMESTER
В	P301T	Pharmaceutical Organic Chemistry – II
	C301.1	Understand basic knowledge about common methods of preparation of organic
	C301.2	compounds. Understand the reactions of organic compounds.
	C301.2	Understand the reactivity and orientation in organic chemistry.
	C301.3	Understand the mechanism of organic reactions.
	C301.5	To acquire knowledge about electrophilic substitution reactions of aromatic
	C301.3	compounds.
	C301.6	Understand the reactions and methods of analysis of fats and oils.
R	P302T	Physical Pharmaceutics – I
	C302.1	Understand the physicochemical properties of drug molecules, pH, and solubility.
	C302.2	Understand the role of surfactants, interfacial phenomenon and thermodynamics.
1	C302.2	
	C302.3 C302.4	Understand the flow behavior of fluids and concept of complexation. Analyze the chemical stability tests of various drug products.







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	C302.5	Understand the physical properties of solutions, buffers, isotonicity, disperse	
	G202 1	systems and rheology. Understand of physicachemical properties of drugs including solubility, distribution	
	C302.6 Understand of physicochemical properties of drugs including solubility, distribution		
	202 15	adsorption, and stability.	
		Pharmaceutical Microbiology	
	C303.1	Understand structure of bacteria and different types of microscope.	
	C303.2	, · · · · · · · · · · · · · · · · · · ·	
	G202.2	microorganisms.	
	C303.3	Understand the importance and implementation of sterilization in pharmaceutical	
	G202.4	processing and industry.	
	C303.4	Learn sterility testing of pharmaceutical products.	
	C303.5	Carried out microbiological standardization of Pharmaceuticals.	
	C303.6	Understand the cell culture technology and its applications in pharmaceutical	
DD	20.4 //	industries.	
BP	304 T	Pharmaceutical Engineering	
	C304.1	Know about the various unit operation processes used in pharmaceutical industry.	
	C304.2	Comprehend the various material handling technique.	
	C304.3	Carry out the various processes involved in pharmaceutical manufacturing process.	
	C304.4	Understand the various tests for preventing the environmental pollution.	
	C304.5	Appreciate and understand the significance of plant lay out design for optimal uses	
	G204.6	of resources.	
	C304.6	Know about the various preventive methods for corrosion control used in	
	pharmaceutical industries.		
D	D404T	1	
В	P401T	Pharmaceutical Organic Chemistry – III	
В	C401.1	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application.	
В	C401.1 C401.2	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds.	
В	C401.1 C401.2 C401.3	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions.	
В	C401.1 C401.2 C401.3 C401.4	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds.	
В	C401.1 C401.2 C401.3 C401.4 C401.5	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry.	
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	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs.	
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	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs.	
	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3 C402.4	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs. Understand synthetic procedures of drug molecules with chemical reactions.	
	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3 C402.4 C402.5	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs. Understand synthetic procedures of drug molecules with chemical reactions. Understand structure, nomenclature, mode of action and uses of drug molecules.	
В	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3 C402.4 C402.5 C402.6	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs. Understand synthetic procedures of drug molecules with chemical reactions. Understand structure, nomenclature, mode of action and uses of drug molecules. Understand structure activity relationship of selective class of drugs.	
В	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3 C402.4 C402.5 C402.6 P403 T	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs. Understand synthetic procedures of drug molecules with chemical reactions. Understand structure, nomenclature, mode of action and uses of drug molecules. Understand structure activity relationship of selective class of drugs. Physical Pharmaceutics – II	
В	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3 C402.4 C402.5 C402.6	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs. Understand synthetic procedures of drug molecules with chemical reactions. Understand structure, nomenclature, mode of action and uses of drug molecules. Understand structure activity relationship of selective class of drugs. Physical Pharmaceutics – II Understand various physicochemical properties of drug molecules in the designing	
В	C401.1 C401.2 C401.3 C401.4 C401.5 C401.6 P402T C402.1 C402.2 C402.3 C402.4 C402.5 C402.6 P403 T	Pharmaceutical Organic Chemistry – III Understand the various nomenclature system in stereochemistry and its application. Understand the various stereochemical aspects of organic compounds. Understand the detail mechanism of some useful organic reactions. To acquire knowledge about structures of different heterocyclic compounds. Understand the nomenclature rules in heterocyclic chemistry. Understand preparations, reactions and medicinal uses of various heterocyclic compounds. Medicinal Chemistry – I Understand the history of Medicinal Chemistry and introduction & importance of physicochemical properties related to biological actions of drugs. Understand the phases present in drug metabolism with chemical reactions. Understand different classes of drugs according to mechanism of action of drugs. Understand synthetic procedures of drug molecules with chemical reactions. Understand structure, nomenclature, mode of action and uses of drug molecules. Understand structure activity relationship of selective class of drugs. Physical Pharmaceutics – II	



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	C403.3	Understand the physical properties of solutions, buffers, isotonicity, disperse
		systems, colloidal and rheology.
	C403.4	Understand the chemical stability of various drug product.
	C403.5	Understand the role of optical, kinetic & electrical properties.
	C403.6	Understand the principles of chemical kinetics and to used them for stability testing
	and determination of expiry date of formulation	
BP	404 T	Pharmacology – I
	C404.1	Understand the pharmacological actions of different categories of drugs.
	C404.2	Understand the mechanism of drug action at organ system/sub cellular/
		macromolecular levels.
	C404.3	Understand how to apply the basic pharmacological knowledge in the prevention
		and treatment of various diseases.
	C404.4	Understand the adverse drug reactions and drug interactions.
	C404.5	Understand correlation of pharmacology with other bio medical sciences
	C404.6	Understand the signal transduction mechanism of various receptors
BP	405 T	Pharmacognosy and Phytochemistry – I
	C405.1	Know techniques in the cultivation and production of crude drugs
	C405.2	Know the crude drugs, their uses and chemical nature.
	C405.3	Know evaluation techniques for evaluation of drugs.
	C405.4	Understand microscopic & morphological evaluation of crude drugs.
	C405.5	Understanding traditional system of medicine along primary & secondary
		metabolite.
	C405.6	Understand recognition of medicinal plants, identification of adulteration &
		contamination
	D = 0.4 m	B.PHARM V SEMESTER
B	P501T	Medicinal Chemistry – II
	C501.1	Understand the structure of various drugs and their IUPAC names.
	C501.2	To acquire basic knowledge about different diseases.
	C501.3	To acquire knowledge about synthesis of some drugs.
	C501.4	To know the structure activity relationship of different classes of drugs.
	C501.5	To understand the mode of action of medicinal compounds.
DI	C501.6	To acquire knowledge about uses of different medicinal agents.
BL	2502 T	Industrial Pharmacy – I
	C502.1	Understand the various drug delivery system and its mechanisms.
	C502.2	Students will learn advanced drug delivery system early stage.
	C502.3	Developing a preparation of the drug which is both stable and acceptable to the
	C502.4	patient. They know your well shout erelly administered drugs injectables acrossl and
	C502.4	They know very well about orally administered drugs, injectables, aerosol and
	C502.5	semisolid preparations with standard protocols.
	C502.5	Formulated drugs are stored in a suitable container closure system for extended
	C502.6	periods of time. Also they know the stability study and its standard evaluation precedure for better
	C502.6	Also they know the stability study and its standard evaluation procedure for better
DI	D502 T	storage conditions.
	P503.T	Pharmacology – II







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	C502.1	TT 1
	C503.1	Understand the mechanism of drug action and its relevance in the treatment of
	C502.2	different diseases.
	C503.2	Understand isolation of different organs and tissues from the laboratory animals by
\vdash	C502.2	simulated experiments.
\vdash	C503.3	Understand the various receptor actions using isolated tissue preparation.
	C503.4	Understand correlation of pharmacology with related medical sciences.
C503.5 Understand the cell communication mechanism.		
	C503.6	Understand the newer targets of several disease conditions for treatment.
	504 T	Pharmacognosy and Phytochemistry – II
	C504.1	To outline the metabolic pathway in higher plants and their biogenetic studies.
	C504.2	To the pharmacognostic study of secondary metabolites like alkaloids, glycosides,
		tannins, volatile oils etc.
	C504.3	To demonstrate the different types and steps involved in isolation, identification and
		analysis of Phytoconstituents like terpenoids, glycosides, alkaloids and resins.
	C504.4	To plan the industrial production, estimation and utilization of Phytoconstituents
	C504.5	To assess the crude drug by modern methods of extraction, spectroscopy,
	1	chromatography, isolation and purification.
	C504.6	Understand Ethnobotany and Ethnopharmacology in drug discovery process
	505 T	Pharmaceutical Jurisprudence
	C505.1	Know the Pharmaceutical legislations and their implications in the development and
		marketing
	C505.2	Know various Indian pharmaceutical Acts, Laws and schedule
	C505.3	Know the regulatory authorities and agencies governing the manufacture and sale of
		pharmaceuticals
	C505.4	Know code of ethics during the pharmaceutical practice
	C505.5	Understand the knowledge of IPR.
	C505.6	Know the narcotic drugs and psychotropic substances act-1985 and rules
- 1		B.PHARM VI SEMESTER
BP	601T	Medicinal Chemistry – III
	C601.1	To acquire knowledge about microbial and parasitic diseases.
	C601.2	Understand the structure of various drugs and their IUPAC names.
	C601.3	Understand the various drugs used in the treatment of different microbial and
		parasitic diseases.
	C601.4	To acquire knowledge about synthesis of some drugs.
	C601.5	Understand physicochemical properties of drugs and different techniques for
		development of drugs.
	C601.6	To acquire knowledge about uses of different medicinal agents.
BP	602 T	Pharmacology – III
	C602.1	Understand mechanism of drug action and its relevance in the treatment of different
		infectious diseases.
	C602.2	Understand the principles of toxicology and treatment of various poisonings
	C602.3	Understand the methods of toxicity studies.
	C602.4	Understand study about symptoms of several poisonings
	C602.5	Understand the toxicity profile of each drugs
	J	·







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C602.6	Understand the classification of each drug used in the treatment of cancer and	
C002.0	compare and contrast the mechanisms of action, uses, and adverse effects.	
BP 603 T Herbal Drug Technology		
C603.1		
	agriculture techniques.	
C603.2		
C603.3		
C603.4		
patenting.		
C603.5 To illustrate the scope and future prospects of the herbal drug industry.		
C603.6	To establish and follow the SOP's, infrastructure of industries as per GMP.	
BP 604 T	Biopharmaceutics and Pharmacokinetics	
C604.1	Basic understanding about the concepts of biopharmaceutics and pharmacokinetics	
	and their significance.	
C604.2		
	or urinary excretion data for drug and also describe the kinetics of drug absorption,	
1	distribution, metabolism, excretion, elimination.	
C604.3	i i i	
9.00	products and their significance.	
C604.4		
06045	applications 1.1	
C604.5		
C604.6 BP 605 T		
	Pharmaceutical Biotechnology Understand the various techniques used in medern histochnology	
C605.1 C605.2	Understand the various techniques used in modern biotechnology.	
C003.2	Design research strategy with step -by -step instructions to address a research problem	
C605.3		
C003.3	different areas like medical, microbial, environmental, bioremediation, agricultural,	
	plant, animal, and forensic	
C605.4		
C605.5		
	for the production of pharmaceutical products	
C605.6	Explain the general principles of generating transgenic plants, animals and microbes	
BP606T	Pharmaceutical Quality Assurance	
C606.1	Understand the importance of quality in pharmaceutical products.	
C606.2	Explored into importance of Good practices such as GMP, GLP	
C606.3	U 1 V 1	
C606.4		
C606.5		
	and activity is learnt.	
C606.6		
	B.PHARM VII SEMESTER	
BP701T	Instrumental Methods of Analysis	







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C701.1 Understand the basic principles and instrumentation of UV, fluorimeter, flame

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C/01.1	photometer and atomic absorbtion spectroscopy.	
C701.2	Understand the basic principles involved in TLC, column chromatography and	
	paper chromatography.	
C701.3	To know the theory and instrumentation of GC, HPLC, gel chromatography, ion	
	exchange chromatography and affinity chromatography.	
C701.4 Learn separation and identification of compounds by various chromatograp		
	techniques.	
C701.5	Learn applications of various chromatographic techniques for organic, inorganic and	
	natural products.	
C701.6	To know Instrumentation, separation and identification of compounds by	
	electrophoresis technique.	
BP 702 T	Industrial Pharmacy – II	
C702.1	Understand the process of pilot plant and scale up of pharmaceutical dosage forms.	
C702.2	Know the various pharmaceutical dosage forms and their manufacturing techniques.	
C702.3	Understand the process of technology transfer from lab scale to commercial batch.	
C702.4	Know different Laws and Acts that regulate pharmaceutical industry.	
C702.5	Understand the approval process and regulatory requirements for drug products.	
C702.6	Understand the process of Quality management systems and Indian Regulatory	
	Requirement.	
BP 703T	Pharmacy Practice	
C703.1	Demonstrate knowledge of and ability to use principles of therapeutics, quality	
	improvement, communication, economics, health behavior, social and	
	administrative aspects, health policy and legal issues in the practice of pharmacy.	
C703.2	Use knowledge of drug distribution methods in hospital and apply it in the practice	
	of pharmacy.	
C703.3	Effectively apply principles of drug store management and inventory control to	
	medication use.	
C703.4	Provide patient-centered care to diverse patients using the best available evidence	
1	and monitor drug therapy of patient through medication chart review, obtain	
	medication history interview and counsel the patients, identify drug related	
	problems.	
C703.5	Engage in innovative activities by making use of the knowledge of clinical trials	

Exhibit professional ethics by producing safe and appropriate medication use

Understand various approaches used for development of novel drug delivery

To know the criteria for selection of drugs and polymers used in the development

Understand the various criteria for formulation and evaluation of Novel drug

The students will know the latest drug delivery knowledge and think to develop new



throughout society

delivery systems.

Novel Drug Delivery Systems

process of Novel drug delivery systems.

To know about the various microencapsulation methods.

formulation based on the individual Requirement.

C703.6

C704.1

C704.2

C704.3

C704.4

C704.5

BP 704T





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C704.6	Understand the information for ADME of Drug compound in the body as needed to	
BP706PS	safely achieve its desired therapeutic effect. Practice School	
C706.1	Understand the basic theoretical knowledge on document compilation.	
C706.1	Understand the practical skills using various instrumentation techniques.	
C/06.3	and express the observations with conclusion.	
C706.4	C706.4 Understand the GMP procedures for the manufacture of Active Pharmaceut	
	Ingredients and new chemical entities for the drug development phases.	
C706.5	Upon completion of practice school the student will know all the aspects of GLP to	
	do different pharmaceutical procedures involved in formulation, preparation and	
	evaluation of different dosage forms.	
C706.6	Student will able to develop skills by increasing the knowledge which helps in	
	successful completion of project work in B. Pharm. final year.	
	B.PHARM VIII SEMESTER	
BP801T	Biostatistics and Research Methodology	
C801.1	Know the various statistical methods to solve different types of problems	
C801.2	Understand the importance of computer in Hospital and Community Pharmacy	
C801.3	Know the principles of statistics, biostatistics and frequency distribution	
C801.4	Understand the process of measures of central tendency, regression and probability	
C801.5	Understand the principles measures of dispersion - dispersion, range, standard	
	deviation	
C801.6	Understand the role of correlation, multiple correlation and parametric test	
BP 802T	Social and Preventive Pharmacy	
C802.1	Acquire high consciousness/realization of current issues related to health and	
	pharmaceutical problems within the country and worldwide	
C802.2	Understand critical way of thinking based on current healthcare development	
C802.3	Evaluate alternative ways of solving problems related to health and pharmaceutical	
	issues	
C802.4	Knowledge about national health programme	
C802.5	Understand community services	
C802.6	Understand importance of national health programme to pharmacy field	
BP809ET	Cosmetic Science	
C809.1	Basic understand the classification of cosmetic and cosmeceutical products.	
C809.2	Understand the principles and building blocks of skin care products and there	
	formulations.	
C809.3	To know the role of herbs used in cosmetics.	
C809.4	Know the principles of Cosmetic Evaluation.	
C809.5	Understand the various cosmetic problems.	
C809.6	Understand the manufacturing procedure used in formulation of cosmetic products.	
BP 811 ET	Advanced Instrumentation Techniques	
	· · · · · · · · · · · · · · · · · · ·	
	Fluorimeter, Flame Photometer, HPLC and GC.	
C811.1	Understand the calibration and validation of various analytical instruments like electronic balance, UV-Visible spectrophotometer, IR spectrophotometer,	







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C811.2	To understand the analysis of drugs using various analytical instruments.	
C811.3	To understand principle and application of hyphenated techniques-LC-MS/MS, GC-	
	MS/MS, HPTLC-MS.in pharmacy.	
C811.4	To know the general principle and procedure involved in the solid phase extraction	
	and liquid-liquid extraction.	
C811.5	To know the instrumentation of various method of Thermal Methods of Analysis.	
C811.6	To know the basics instrumentation and application of NMR and mass	
	spectroscopy.	
BP813PW	Project	
C813.1	The basic theoretical knowledge on document compilation created on small project	
	work.	
C813.2	Practical skills for the analysis of drugs and excipients using various instrumentation	
	techniques.	
C813.3	To make accurate analysis and report the results in defined formats to learn	
	documentation and express the observations with conclusion.	
C813.4	4 The pilot plant procedure for the manufacture of Active Pharmaceutical Ingredients	
1 -	and new chemical entities for the drug development phases.	
C813.5	Upon completion of project work the student will know the formulation aspects of	
400	different dosage forms to do different pharmaceutical calculations involved in	
	formulation and appreciate the importance of good formulation for effectiveness.	
C813.6	Student will able to develop dynamics of motivation and concept development by	
	increasing the knowledge to handle the challenges in project work.	



