



S.E. SOCIETY'S  
**SNBP College of Pharmacy**  
(Degree & Diploma)

Gat. No. 72/1,90 & 94, River Residency, Dehu-Alandi Road, Chikhali, Pune - 411062

+91 77680 04652 snbpcollegeofpharmacy@gmail.com www.pharmacy.snbpinstitutes.com

EST. Year 2024 DTE Code : 16341 DBATU Code : PH 16341 MSBTE Code : 22474 PCI ID : 8417

Intake - B.Pharm : 100 D.Pharm : 60

सुभद्राज एज्युकेशनल सोसायटीचे, एसएनबीपी कॉलेज ऑफ फार्मसी, चिखली, पुणे - 411062

**FIRST YEAR B. PHARMACY (SEMESTER-I)**

Academic Year-2024-2025

**COURSE OUTCOMES**

**BP 101T: Human Anatomy & Physiology-I**

CO 1	Illustrate the gross morphology, structure, functions of various physiological systems like cardiovascular system, Haemopoietic, lymphatic, Musculoskeletal System, Peripheral nervous system
CO 2	Elaborate the Structure and function of cell and Tissue with organelles and types.
CO 3	Generate an idea about the additional signaling pathway activation by extracellular molecule
CO 4	Explain structure and function of all organs of systems.
CO 5	Infer the type of organ on the basis of physiology
CO 6	Generate a plan to make this knowledge of internal structures and function of human body for Health promotion among society

**BP 102T: Pharmaceutical Analysis-I**

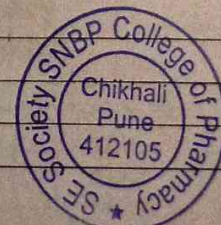
CO 1	Understand fundamentals of pharmaceutical analysis
CO 2	Prepare volumetric solution of specific strength
CO 3	Understand the concept of the sources of errors, types of errors, methods of minimizing errors
CO 4	Understand the principles of volumetric and electro chemical analysis
CO 5	Need, methodology and applications of various volumetric titrations
CO 6	Illustrate principle, types of electrodes, instrumentation, and applications of

**BP 103T: Pharmaceutics-I**

CO 1	Describe the basics of pharmacy profession with reference to history, current scope, pharmacopoeias, prescription, posology, proof spirit and pharmaceutical calculations
CO 2	Differentiate and discuss types of dosage forms and excipients used for their development
CO 3	Explain advantages, disadvantages, excipients, and techniques required for to formulate different monophasic and biphasic liquid dosage forms
CO 4	Discuss advantages, disadvantages, and techniques in development of powder dosage form
CO 5	Select the proper base and formulate semisolid dosage formulations of various types
CO 6	Examine pharmaceutical incompatibilities and solve it

**BP 104T: Pharmaceutical Inorganic Chemistry-I**

CO 1	Know the sources of impurities & methods to determine impurities in
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	pharmaceutical substances
CO 2	Understand the concepts of acids, bases, and buffers with tonicity measurements
CO 3	Understand functions of major extra and intra cellular ions, with associated diseases and their treatment also compositions, uses for inorganic compounds and their formulations as dental products
CO 4	Understand the use of inorganic compounds as gastrointestinal agents and antimicrobials
CO 5	Understand the use and mechanism for inorganic compounds used as expectorants, emetics, hematinic, antidotes, and astringents
CO 6	Acquire the knowledge of preparation, properties, storage condition and applications of radioisotopes, measurement of radioactivity and radiopharmaceuticals

### BP 105T: Communication Skills

CO 1	Understand the behavioral needs for a pharmacist to function effectively in the areas of pharmaceutical operation, analyze the barriers of communication and communicate effectively
CO 2	Apply and display appropriate verbal, non-verbal, vocal & visual elements in professional environment
CO 3	Create and structure effective writing and active listening skill
CO 4	Students will be equipped with interview skills to express confidence at all levels with great clarity
CO 5	Apply Leadership quality and carry out regular interpersonal communication at the workspace
CO 6	Become proficient in communication skills pertaining to the production and presentation of messages in multiple formats & to comprehend the significance of body language

### BP106RMT: Remedial Mathematics

CO 1	Discuss the method of partial fraction, logarithm, function, and continuity in the mathematics and apply in pharmacy to solve problems
CO 2	Understand, analyze and apply the methods of system of linear equation in pharmacy to solve problems such as pharmacokinetic equations
CO 3	Characterize, analyze and compute the role of calculus in pharmacy to solve problems
CO 4	Discuss, construct and explain methods of analytical geometry in pharmacy
CO 5	Elaborate, analyze and apply the role of integration (indefinite and definite) in pharmacy to solve problems
CO 6	Describe, classify and apply the method of differential equations and







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	Laplace transform and their application in pharmacy
<b>PRACTICAL OUTCOMES</b>	
<b>BP 107P: Human Anatomy &amp; Physiology-I</b>	
CO 1	To explain the use of different parts of the microscope for microscopic study of various tissues.
CO 2	To elaborate the various tissues and organs of different systems of human body.
CO 3	To identify axial and appendicular bones of human skeleton.
CO 4	To Estimate the hematological tests will be able to determine the abnormalities in the ranges of blood and physiological parameters through interpreting the normal values
CO 5	Students will utilize their knowledge of normal physiology
CO 6	To understand the clinical manifestations in pathophysiology
<b>BP108P: Pharmaceutical Analysis-I</b>	
CO 1	To practice proper handling of volumetric apparatus and their calibration
CO 2	To Prepare and standardise the solution of different concentrations
CO 3	To Understand concept of various volumetric analysis
CO 4	To Perform the assay of compounds using different titration methods
CO 5	To develop analytical skills in data interpretation and calculations.
<b>BP 109P: Pharmaceutics-I</b>	
CO 1	Understand different excipients and their roles in formulations
CO 2	Differentiate between types of dosage forms.
CO 3	Calculate the quantities of ingredients for preparing formulations
CO 4	Prepare the various types of dosage forms
CO 5	Select the proper excipient for formulation of dosage form
CO 6	Combine the different techniques to develop preparation
<b>BP 110P: Pharmaceutical Inorganic Chemistry-I</b>	
CO 1	Understand and perform the pharmacopoeial procedures for the limit tests as tests for purity
CO 2	Determine the inorganic impurities present in pharmaceutical substances using pharmacopoeial limit tests
CO 3	To perform the qualitative identification tests for inorganic compounds of pharmaceutical importance
CO 4	To perform the qualitative tests for pharmacopoeial identification inorganic compounds of pharmaceutical importance .
CO 5	Perform tests for purity according to pharmacopoeial procedures .
CO 6	Prepare and purify the inorganic compounds of pharmaceutical importance.
<b>BP 111P: Communication Skills</b>	
CO 1	Understand, analyse and instill the confidence to speak English flawlessly with maximum zeal







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CO 2	Develop ability to do better pronunciation, word accent, and intonation
CO 3	To apply the essential critical components of effective oral and written communication necessary for professional development
CO 4	Experiment with different communication techniques to create high impact messages
CO 5	Develop learning to construct and deliver messages that incorporate the appropriate use of organizing content, language, vocabulary, kinesics, eye contact, visual aids and time constraints
CO 6	Develop the skills to prepare for job search artifacts & negotiate their use in Group Discussion's & interview





**FIRST YEAR B. PHARMACY (SEMESTER-II)****BP 201T: Human Anatomy & Physiology-II**

CO 1	Analyze the gross morphology, structure and functions of various physiological systems such as the nervous system, respiratory system, and urinary system
CO 2	Explain the mechanism of digestion and metabolism and discuss the role of various digestive secretions in digestive process
CO 3	Categorize various hormones of endocrine gland, their functions and discuss the action the action and regulation of endocrine secretions
CO 4	Explain structure of male and female reproductive system and discuss the spermatogenesis, menstrual cycle, Oogenesis, and role of various hormones in reproduction
CO 5	Infer the type of organ on the basis of physiology
CO 6	Generate a plan to make this knowledge of internal structures and function of human body to educate medical and paramedical students

**BP 202T: Pharmaceutical Organic Chemistry-I**

CO 1	Deduce the structure, name of the organic compound, and discuss applications of compounds belonging to different classes
CO 2	Knowledge about the type of isomerism
CO 3	Understand the concepts of hybridization of organic molecules
CO 4	Understand the named reactions and reaction orientation rules
CO 5	Acquire knowledge about preparation and reactivity of compounds with functional groups, such as alkanes, alkenes, aldehydes and ketones, alcohols, carboxylic acids, amino and azo compounds
CO 6	Explain the mechanism involved in the nucleophilic substitution, addition, and elimination reactions

**BP 203T: Biochemistry**

CO 1	Explain the classification & biological functions of carbohydrate, lipids, amino acid, nucleic acid & proteins as well concepts of energies in biochemical processes with energy rich compounds
CO 2	Understand the metabolism of carbohydrates with biological oxidation, phosphorylation and associated physiological and pathological conditions
CO 3	Able to analyse the metabolism of lipids as saturated fatty acid oxidation, de novo synthesis with example of palmitic acid. Understanding reactions for metabolism of amino acids and its disorders with synthesis of and catabolism of biological substances
CO 4	Understand the biosynthesis and catabolism nucleotides along with diseases as



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**PRACTICAL OUTCOMES****BP 208P: Pharmaceutical Organic Chemistry**

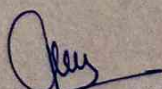
CO 1	After conducting basic melting point, boiling point, and derivatization procedures for organic compounds, students will be able to identify reference organic compounds
CO 2	Through qualitative analysis, students will gain the ability to distinguish the characteristics of various organic classes
CO 3	By performing qualitative analysis, students can identify basic elements. This knowledge can be applied to synthetic research projects
CO 4	After completing solubility experiments, students will understand concepts related to saturation, unsaturation, and polarity. They will also be able to identify the main organic class
CO 5	Qualitative analysis helps students realize theoretical concepts in organic chemistry. They can then apply these concepts to develop synthesis methods

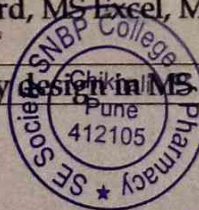
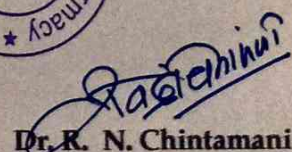
**BP 209P: Biochemistry**

CO 1	Perform the qualitative identification tests for the carbohydrates and proteins
CO 2	Calculate the quantities for the preparation of buffer solutions, prepare buffer and measure the pH
CO 3	Quantify the reducing sugars and proteins and determine the sugar, total cholesterol, and creatinine in the blood/serum.
CO 4	Perform qualitative tests for abnormal constituents in urine
CO 5	Examine the enzyme activity and demonstrate the effect of pH, temp., acid hydrolysis and substrate concentration on the enzyme activity
CO 6	Estimate the quality of lipids (oils and fats) as saponification/ iodine/ acid value along with demonstrative use of polarimeter.

**BP 210P: Computer Applications in Pharmacy**

CO 1	To design a questionnaire using a word processing package to gather information about a particular disease.
CO 2	To create HTML web page to show personal information
CO 3	To create mailing labels Using Label Wizard, generating label in MS WORD
CO 4	To demonstrate and make use of MS Office, MS Word, MS Excel, MS Access and MS Power point
CO 5	To understand the form design, report design, query design in MS Access


Ms. Sonali B. Pawar  
Academic Coordinator

Mr. Sohail K. Shaikh  
HOD


Dr. R. N. Chintamani