

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

S Mobile +918080332121 S Email- dnccop@gmail.com S Website- www.dnccop.org

Course Outcomes

PROGRAMME: B. PHARM

Name of Subject with Code	CO Code	Course Outcomes	Bloom's Level
		B. Pharm I (Semester-I)	
	BP101T_CO1	Explain the relationships between cell structure and function, histology, gross anatomy, and physiology within various organ systems.	L2, L5
	BP101T_CO2	Apply knowledge to clinical scenarios, demonstrating integration and implementation in real-world healthcare situations.	L3
BP101T - Human Anatomy	BP101T_CO3	Critically evaluate diverse information sources related to organ systems, distinguishing reliable scientific information from unsourced data and pseudoscience.	L5
and Physiology - Theory	BP101T_CO4	Assess social, environmental, and ethical implications of human health and medical research as a responsible member of society.	L5
·	BP101T_CO5	Use scientific laboratory equipment proficiently to collect and analyze data on human anatomy and physiology.	L3
	BP101T_CO6	Demonstrate a holistic understanding of how human organ systems are interrelated, applying this knowledge to approach human health comprehensively.	L2
	BP102T_CO1	Recall and understand fundamental concepts of analytical chemistry.	L1
	BP102T_CO2	Comprehend sources of errors in analytical chemistry and techniques to minimize them.	L2, L5
BP102T - Pharmaceuti cal Analysis I - Theory	BP102T_CO3	Apply and demonstrate fundamentals of volumetric analytical skills in practical scenarios.	L3
	BP102T_CO4	Analyze and explain the basic principles of electrochemical analytical techniques.	L4
	BP102T_CO5	Evaluate and enhance student interpretation skills, especially in choosing analytical techniques for estimating drugs of different categories.	L5



डॉ. नारायणराव चाटे कॉलेज ऑफ फार्मसी लातूर-निदेड महामार्ग, चापोली ता. चाक्ट्र, जि. लातूर, महाराष्ट्र - ४१३५१३

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

	BP103T_CO1	Acquire fundamental knowledge of preparatory pharmacy, including the arts and science of preparing conventional dosage forms.	L1, L3
DD102T	BP103T_CO2	Understand the history of the pharmacy profession and	L2, L5
BP103T - Pharmaceuti cs I - Theory	BP103T_CO3	Understand the basics of dosage forms, pharmaceutical incompatibilities, and various pharmaceutical calculations.	L2, L5
	BP103T_CO4	Apply knowledge to prepare various conventional dosage forms.	L3
	BP103T_CO5	Analyze the professional way of handling prescriptions.	L4
	BP104T_CO1	Recall the principles of limit tests	L1
	BP104T_CO2	Comprehend different classes of inorganic pharmaceuticals.	L2, L5
BP104T - Pharmaceuti cal Inorganic	BP104T_CO3	Understand and explain different pharmaceutical buffers, their preparations, uses in pharmaceutical systems, measurement of tonicity, identification of different anions, cations, and different inorganic pharmaceuticals.	L2, L5
Chemistry - Theory	BP104T_CO4	Apply knowledge about sources of impurities and methods to determine impurities in inorganic drugs and pharmaceuticals.	L3
	BP104T_CO5	Analyze the medicinal and pharmaceutical importance of inorganic compounds	L4
	BP104T_CO6	Recall a variety of inorganic drug classes.	L1
BP105T -	BP105T_CO1	Understand the behavioral needs for a pharmacist to function effectively in pharmaceutical operations.	L2, L5
Communicat ion Skill -	BP105T_CO2	Communicate effectively, both verbally and non-verbally.	L1
Theory	BP105T_CO3	Effectively manage a team as a team player.	L3
	BP105T_CO4	Develop interview skills, leadership qualities, and essentials.	L3, L6
	BP105T_CO1	Study the classification and salient features of the five kingdoms of life.	L3, L4
BP106RBT -	BP106RBT_CO	Understand the basic components of anatomy & physiology of plants with a special reference to humans.	L2, L5
Remedial Biology - Theory	BP106RBT_CO	Understand the basic components of anatomy & physiology of animals, with a special reference to humans.	L2, L5



डॉ. नारायणराव चाटे कॉलेज ऑफ फार्मसी लातूर-नांदेड महामार्ग, चापोली ता. चाकूर, जि. लातूर, महाराष्ट्र - ४१३५१३

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

	BP106RBT_CO	Apply knowledge to learn and understand the components of the living world, structure, and functional systems of the plant and animal kingdom.	L3
BP106RMT - Remedial	BP106RMT_C O1	Recall and demonstrate fundamental mathematical concepts and operations.	L1
Mathematics - Theory	BP106RMT_C O2	Understand the principles and applications of basic mathematical operations, including arithmetic, algebra, and geometry.	L2, L5
	BP106RMT_C O3	Apply mathematical concepts to solve real-world problems and scenarios.	L3
	BP106RMT_C O4	Analyze and interpret mathematical data, recognizing patterns and relationships.	L4
	BP106RMT_C O5	Evaluate mathematical solutions for accuracy and relevance in specific contexts.	L5
	BP106RMT_C O6	Develop problem-solving strategies and methods for approaching mathematical challenges.	L3, L6
	BP106RMT_C O7	Applying Mathematical Skills: Apply mathematical skills to other academic disciplines and practical situations.	L3
	BP107P_CO1	Recall and describe the gross morphology, structure, and functions of cells, skeletal, muscular, and cardiovascular systems of the human body.	L1
BP107P -	BP107P_CO2	Understand various homeostatic mechanisms and recognize their imbalances.	L2, L5
Human Anatomy and	BP107P_CO3	Identify different types of bones in the human body.	L3
Physiology - Practical	BP107P_CO4	Identify different the various tissues in the human body.	L3
Tractical	BP107P_CO5	Apply knowledge of experimental techniques related to physiology.	L3
	BP107P_CO6	Perform various techniques such as blood group determination, blood pressure measurement, and blood cell counting.	L3
	BP108P_CO1	Explore and comprehend key concepts relevant to drug analysis	L2, L5
BP108P - Pharmaceuti	BP108P_CO2	Acquire skills in the identification and characterization of pure drug substances using various analytical techniques	L1, L3
cal Analysis I - Practical	BP108P_CO3	Perform assays related to pharmaceutical analysis.	L3
	BP108P_CO4	Understand the concept of analysis in pharmaceuticals.	L2, L5



डॉ. नारायणराव चाटे कॉलेज ऑफ फार्मसी लातूर-निदेड महामार्ग, चापोली ता. चाक्ट्र, जि. लातूर, महाराष्ट्र - ४१३५१३

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

	BP109P_CO1	Recall the principles used in the preparation of solid, liquid, and semi-solid dosage forms.	L1
BP109P - Pharmaceuti cs I - Practical	BP109P_CO2	Experiment with monophasic liquid dosage forms for internal and external administration.	L4, L6
	BP109P_CO3	Experiment with biphasic liquid dosage forms for internal and external administration	L4, L6
Tractical	BP109P_CO4	Design powders, granules dosage forms	L6
	BP109P_CO5	Design semi-solid dosage forms	L6
	BP109P_CO6	Formulate suppositories dosage forms.	L6
	BP110P_CO1	Prepare exact solutions for quantitative analysis.	L3
BP110P -	BP110P_CO2	Identify the purity of inorganic compounds quantitatively.	L3
Pharmaceuti	BP110P_CO3	Analyze inorganic samples qualitatively.	L4
cal	BP110P_CO4	Synthesize inorganic compounds.	L6
Inorganic	BP110P_CO5	Identify inorganic pharmaceuticals.	L3
Chemistry - Practical	BP110P_CO6	Adjudge the level of specific impurities in given inorganic compounds through different limit tests.	L5
	BP111P_CO1	Develop knowledge, skills, and judgment around human communication for effective collaboration.	L3, L6
BP111P -	BP111P_CO2	Apply practical skills for effective communication, both verbal and non-verbal.	L3
Communicat ion Skill -	BP111P_CO3	Distinguish pronunciation of vowel and consonant sounds.	L4
Practical	BP111P_CO4	Take part in advanced learning on comprehension, direct and indirect speech, and develop interview handling skills.	L3
	BP111P_CO5	Improve email etiquette for professional communication.	L6
	BP112RBP_CO	Identify and classify organisms based on their characteristics and salient features within the five kingdoms of life.	L3
	BP112RBP_CO 2	Observe and analyze the basic components of plant anatomy and physiology.	L2, L3, L5
BP112RBP - Remedial Biology -	BP112RBP_CO	Understand the fundamental components of animal anatomy and physiology, with a special focus on human biology.	L2, L5
Practical	BP112RBP_CO	Apply knowledge of the components of the living world to comprehend the structure and functional systems of plant and animal kingdoms.	L3
	BP112RBP_CO 5	Analyze and interpret experimental data related to biological concepts.	L4



डॉ. नारायणराव चाटे कॉलेज ऑफ फार्मसी लातूर-निदेड महामार्ग, चापोली ता. चाकूर, जि. लातूर, महाराष्ट्र - ४१३५१३

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

	BP112RBP_CO	Perform experiments related to classification, anatomy, and physiology to reinforce theoretical knowledge.	L3
	BP112RBP_CO	Apply biological concepts learned in theory to practical situations and scenarios.	L3
	BP112RBP_CO 8	Engage in problem-solving exercises that require the application of biological principles.	L3
		B. Pharm I (Semester-II)	
BP201T - Human	BP201T_CO1	Recall and describe the structure and function of the nervous, endocrine, respiratory, urinary, and reproductive systems in the human body.	L1
Anatomy and Physiology II - Theory	BP201T_CO2	Understand the interlinked mechanisms involved in the maintenance of normal functioning of the human body, emphasizing energy and metabolism.	L2, L5
	BP201T_CO3	Apply practical knowledge by performing experiments such as neurological reflex, body temperature measurement, olfaction, gustation reflex, and eyesight.	L3
	BP201T_CO4	Apply the knowledge gained to analyze and explain physiological processes within the human body.	L3
	BP202T_CO1	Recall the structure and name of organic compounds	L1
	BP202T_CO2	Understand the types of isomerism	L2, L5
BP202T -	BP202T_CO3	Recall the reaction, name the reaction and orientation of reactions	L3
Pharmaceuti cal Organic	BP202T_CO4	Understand the concept of reactivity/stability of compounds.	L4
Chemistry I - Theory	BP202T_CO5	Apply knowledge to identify and confirm unknown organic compounds.	L3
Incory	BP202T_CO6	Analyze and name reactions of carbonyl compounds.	L4
	BP202T_CO7	Perform common laboratory techniques including reflux, distillation, recrystallization, vacuum filtration, etc.	L3
BP203T - Biochemistr	BP203T_CO1	Recall and explain the role, classification, and metabolism of various biomolecules (carbohydrates, proteins, and lipids).	L1
y - Theory	BP203T_CO2	Understand the concepts of biological oxidation and bioenergetics.	L2, L5
	BP203T_CO3	Apply knowledge to discuss the metabolism of nucleic acids and protein biosynthesis.	L3



डॉ. नारायणराव चाटे कॉलेज ऑफ फार्मसी लातूर-नांदेड महामार्ग, चापोली ता. चाकूर, जि. लातूर, महाराष्ट्र - ४१३५१३

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

1 .		1	
	BP203T_CO4	Analyze the application of enzyme inhibition in the pharmaceutical industry.	L4
	BP204T_CO1	Apply the knowledge of pathophysiology to understand the rationale behind pharmacological interventions and treatment modalities.	L3
	BP204T_CO2	Analyze the etiology and pathogenesis of selected disease states, name the signs and symptoms of diseases, and mention complications.	L4
BP204T - Pathophysiol ogy - Theory	BP204T_CO3	Understand the fundamental principles of pathophysiology, including the normal physiological processes that can be disrupted in disease states.	L2, L5
	BP204T_CO4	Identify the manifestations and clinical signs of different diseases, recognizing the importance of early detection and diagnosis.	L3
	BP204T_CO5	Explain the mechanisms of inflammation and immune response in the context of various diseases, including autoimmune disorders.	L2, L5
BP205T - Computer	BP205T_CO1	Recall knowledge about the decimal, binary, octal, and hexadecimal number systems.	L1
Applications in Pharmacy - Theory	BP205T_CO2	Apply knowledge in project-based web development for creating dynamic web pages and understanding web applications and internet tools.	L3
	BP205T_CO3	Instruct on collecting drug data, records, and files, drug management,	L3
	BP205T_CO4	Identify and analyze biological drug targets	L3
	BP205T_CO5	Teach computers as data analysis tools in preclinical development using software applications.	L1, L3
	BP206T_CO1	Create awareness about environmental problems among learners.	L6
BP206T -	BP206T_CO2	Impart basic knowledge about the environment and related problems.	L3
Environmen tal Science - Theory	BP206T_CO3	Develop an attitude of concern for the environment and motivate learners to participate in environmental protection.	L3, L6
	BP206T_CO4	Acquire skills to help individuals identify and solve environmental problems.	L1, L3
	BP206T_CO5	Strive to attain harmony with nature.	L3
	BP207P_CO1	Identify and demonstrate the anatomical structures of the nervous, endocrine, respiratory, urinary, and reproductive systems through handson practical sessions.	L3



डॉ. नारायणराव चाटे कॉलेज ऑफ फार्मसी लातूर-नांदेड महामार्ग, चापोली ता. चाकूर, जि. लातूर, महाराष्ट्र - ४१३५१३

Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513

(Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai)

(College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

	BP207P_CO2	Apply practical skills to perform experiments related to neurological reflexes, body temperature measurement, olfaction, gustation reflex, and eyesight, ensuring accuracy and precision.	L3
	BP207P_CO3	Analyze experimental results to draw conclusions about the functioning of physiological mechanisms within the human body.	L4
BP207P - Human	BP207P_CO4	Interpret data obtained from practical sessions to understand the physiological responses of the human body in various scenarios.	L2, L5
Anatomy and Physiology II - Practical	BP207P_CO5	Engage in problem-solving exercises related to physiological experiments, including troubleshooting and proposing solutions to challenges encountered.	L3
	BP207P_CO6	Apply common laboratory techniques proficiently, including proper handling of laboratory equipment, maintaining safety protocols, and recording accurate observations.	L3
	BP207P_CO7	Collaborate with peers to perform group experiments, fostering teamwork and communication skills.	L6
	BP207P_CO8	Effectively communicate findings and observations through written reports, reinforcing the importance of clear and concise scientific communication.	L3



Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513 (Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai) (College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)

	BP208P_CO1	Explain the qualitative analysis and preparation of pharmaceutical organic compounds.	L2, L5
	BP208P_CO2	Identify functional elements present in pharmaceutical organic compounds.	L3
BP208P - Pharmaceuti	BP208P_CO3	Analyze the presence of various functional groups in pharmaceutical compounds.	L4
cal Organic Chemistry I	BP208P_CO4	Appraise the rules concerned with reactivity and orientation of organic compounds.	L5
- Practical	BP208P_CO5	Analyze unknown pharmaceutical organic compounds by determining their melting point/boiling point.	L4
	BP208P_CO6	Prepare and characterize derivatives of organic compounds.	L3
	BP209P_CO1	Practice determining carbohydrates and proteins.	L3
BP209P - Biochemistr	BP209P_CO2	Practice handling various instruments used in biochemical investigations and perform identification tests as per the Indian Pharmacopoeia.	L3
y - Practical	BP209P_CO3	Identify normal and abnormal biochemical constituents of urine.	L3
	BP209P_CO4	Analyze and determine the factors affecting enzyme activity.	L4
	BP210P_CO1	Create documents demonstrating proficiency in word processing.	L6
	BP210P_CO2	Develop skills in using Microsoft Access effectively.	L3, L6
BP210P - Computer	BP210P_CO3	Instruct on reporting and printing reports from the patient database using MS Access.	L3
Applications in Pharmacy - Practical	BP210P_CO4	Design forms in MS Access for viewing, adding, deleting, and modifying patient records.	L6
	BP210P_CO5	Practice using computers for drug data information, record-keeping, and data recovery.	L3
	BP210P_CO6	Practice adding information to web pages using tables, queries, forms, and reports.	L3
	BP210P_CO7	Design the web pages using HTML and XML.	L6



Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513 (Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai) (College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)



Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513 (Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai) (College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)



Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513 (Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai) (College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)



Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513 (Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai) (College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)



Navyuvak Shikshan Prasarak Mandal, Chapoli's

DR. NARAYANRAO CHATE COLLEGE OF PHARMACY

Latur-Nanded Highway, Chapoli, Tal. Chakur, Dist. Latur, Maharashtra-413513 (Approved by PCI, New Delhi & Govt. of Maharashtra, Affiliated to SRTM University, Nanded & MSBTE, Mumbai) (College Codes- PCI: 6721 DTE: 2645 MSBTE: 52350 University: 982)