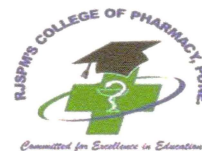




RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
COLLEGE OF PHARMACY (B.Pharm.)

Approved by PCI, AICTE, Govt. of Maharashtra & DTE
Affiliated to Savitribai Phule Pune University, Pune

DTE Code:- 6382 University Code:- CPHPO13150



Certified by ISO 9001-2015,
ISO : 14001-2015

Recognised as Green Educational
Campus

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President

Hon. Shri. Sudhir V. Mungase
Secretary

Hon. Shri. Ajit D. Gavhane
Treasurer

Dr. Kishor S. Jain
Principal

2.6.1

Teachers and students are aware of the stated Programme and course outcomes of the Programmes offered by the institution.



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COLLEGE OF PHARMACY

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Affiliated to University of Pune

Gat No.101/102, A. Post-Dudulgaon, Post-Alandi, Tal-Haveli, Dist-Pune - 412 105

E-mail: rjspmcp123@gmail.com Web: www.rjspmpharmacy.com

Univ Id: PU/PN Pharm/286/2007 College Code:1081 DTE Code:6382



Programme Outcomes (POs) and Course Outcomes (COs)

CONTENT

Sr. No.	Particulars	Details
1	Process for establishing the Cos and POs	Attached
2	Program Outcomes	Attached
3	Course Outcomes	Attached



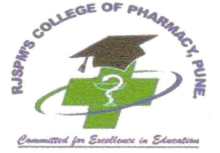


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1. Process for establishing the Cos and POs

राजमाता जिजाऊ शिक्षण प्रसारक मंडळाचे, कॉलेज ऑफ फार्मसी

Gat No.101/102, Moshi-Alandi Road, Dudulgaon, Pune.

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Process for establishing the COs and POs:

1. Course outcomes are designed by respective faculty based on the curriculum given by Savitribai Phule Pune University.
2. In the process of defining the COs and POs the reference documents used are:
 - a. The syllabus copy of the Savitribai Phule Pune University, Pune.
 - b. The syllabus copy & Education Regulations Provided by PCI.
 - c. The NAAC/NBA accreditation manual for Pharmacy Programmes.
3. The course outcomes are redefined if necessary to bridge the curricular gap and program outcomes.

Mechanism for Communication of the COs & POs:

The media in which the Course outcomes and Programme outcome statements are published are as follows:

1. The college website
2. Academic ERP (VM Edulife.)
3. The student's laboratory journals.
4. Display at prominent places in college campus.



PRINCIPAL

Rajmata Jijau Shikshan Prasarak Mandal's
COLLEGE OF PHARMACY
Dudulgaon, Pune-412 105.



RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
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2. Program Outcomes

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy,
Dudulgaon, Pune
B. Pharmacy

#	Type	ID	Program Outcome
1	PO	PO1	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	PO	PO2	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	PO	PO3	Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions
4	PO	PO4	Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations
5	PO	PO5	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 roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.
6	PO	PO6	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	PO	PO7	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



#	Type	ID	Program Outcome
8	PO	P08	Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions
9	PO	P09	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	PO	P010	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	PO	P011	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long 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





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3. Course Outcomes (A.Y. 2022-2023)

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Human Anatomy and Physiology I (BP101T)(Theory | Regular)

Course Code : BP101T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP101T.1	Understand the gross morphology, structure and functions of various tissues, organs of the human body and know about cellular level of organisation in body.	PO1, PO4, PO9, PO11	Remember, Understand	Factual, Conceptual
2	BP101T.2	Know about structure and functions of skin and know about in detailed information of skeletal system and joints.	PO1, PO4, PO9, PO11	Remember, Understand	Factual, Conceptual
3	BP101T.3	Know about Blood and various body fluids with their significance and disorders. Understand about Lymphatic system and its functions.	PO1, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
4	BP101T.4	Understand classification and functions of Peripheral nervous system and different sense organs of body.	PO1, PO4, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
5	BP101T.5	Understand the anatomy and physiology of circulatory system and disorders of heart.	PO1, PO4, PO9, PO11	Remember, Understand	Factual, Conceptual

R Gaikwad



Shakilq



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Pharmaceutical Analysis I (BP102T)(Theory | Regular)

Course Code : BP102T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP101T.1	Explain the principles of volumetric and electrochemical analysis	PO1, PO3, PO11	Remember, Understand, Apply, Evaluate	Factual, Conceptual, Procedural, Practical Constraints
2	BP101T.2	Carry out various volumetric and electrochemical titrations	PO1, PO3, PO11	Remember, Understand, Apply, Evaluate	Factual, Conceptual, Procedural, Practical Constraints
3	BP101T.3	Develop analytical skills	PO1, PO2, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints
4	BP101T.4	Outline the method of expressing the concentration with preparation and standardization of various molar and normal solutions.	PO1, PO3, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints
5	BP101T.5	Recall the sources, type and method of minimizing the errors.	PO1, PO2, PO11	Remember, Understand	Factual, Conceptual
6	BP101T.6	Explain the principle involved in volumetric and electrochemical analysis of inorganic compounds.	PO1, PO3, PO11	Remember, Understand	Factual, Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Pharmaceutics I (BP103T)(Theory | Regular)

Course Code : BP103T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP103T.1	Know the history of profession of Pharmacy	PO1, PO11	Understand	Conceptual
2	BP103T.2	Understand the various dosage form, pharmaceutical calculation and incompatibilities	PO1, PO3, PO4, PO11	Remember, Understand, Apply	Conceptual, Procedural
3	BP103T.3	Understand the professional way of handling the prescription	PO1, PO7, PO8, PO11	Remember, Understand, Apply	Conceptual
4	BP103T.4	Prepare various conventional dosage form	PO1, PO2, PO3, PO4, PO5	Remember, Understand, Apply, Analyse, Evaluate, Create	Conceptual, Procedural

Jijau

अज्ञानं





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Pharmaceutical Inorganic Chemistry (BP104T)(Theory | Regular)

Course Code : BP104T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP104T.1	Recite the history of Pharmacopoeia.	PO1	Remember, Understand	Factual
2	BP104T.2	Understand different sources of impurities & method for determining the impurities in inorganic drugs & pharmaceuticals.	PO1	Remember, Understand, Evaluate	Factual, Conceptual, Procedural, Criteria & Specifications
3	BP104T.3	Recognize types of water and methods for reducing hardness of water.	PO1, PO10, PO11	Understand, Evaluate	Procedural
4	BP104T.4	Understand the basic concepts of acidity & basicity, buffers and tonicity applicable in pharmaceuticals & also explain the methods of adjusting isotonicity.	PO1	Understand, Apply	Conceptual, Procedural, Criteria & Specifications
5	BP104T.5	Acquire knowledge of various major intra and extra cellular electrolytes and their physiological role along with pharmaceutical compounds.	PO1	Remember, Understand	Factual, Criteria & Specifications
6	BP104T.6	Recall the medicinal and pharmaceutical importance of inorganic compounds.	PO1, PO9	Remember, Understand	Factual
7	BP104T.7	Explain various aspects of radiopharmaceuticals	PO1	Understand	Conceptual, Procedural

Hedgawar



AP



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Communication Skills (BP105T)(Theory | Regular)

Course Code : BP105T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP105T.1	Knowledge of basic aspects & soft skills for effective communication.	PO1, PO2, PO8, PO11	Remember, Understand, Apply	Procedural, Meta-cognitive
2	BP105T.2	Distinguish the elements of communication & communication style & its application for effectively manage the team as a team player.	PO1, PO2, PO8, PO11	Understand, Apply, Analyse, Evaluate, Create	Conceptual, Meta-cognitive, Criteria & Specifications, Practical Constraints
3	BP105T.3	Understand the basic listening skills & its importance in pharmacy practice.	PO1, PO2, PO8, PO11	Remember, Understand, Apply, Analyse, Evaluate, Create	Factual, Conceptual, Procedural
4	BP105T.4	Acquire the knowledge of technical writing skill	PO1, PO2, PO8, PO11	Understand, Apply	Conceptual, Procedural, Meta-cognitive
5	BP105T.5	Develop the interview skills & group discussion skills.	PO1, PO2, PO8, PO11	Remember, Understand, Apply, Create	Factual, Procedural, Meta-cognitive, Practical Constraints





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Human Anatomy and Physiology (BP107P)(Practical | Regular)

Course Code : BP107P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP107P.1	Explain the anatomy, physiology and functions of various Tissues and cell, organization of cellular system.	PO1, PO11	Remember, Understand, Apply	Factual, Conceptual, Practical Constraints
2	BP107P.2	Identify the various tissues and organs and bones of different systems of human body	PO1, PO6, PO11	Remember, Understand, Apply, Analyse	Factual, Conceptual, Procedural, Meta-cognitive
3	BP107P.3	Understand the parts of compound microscope and its function	PO1, PO4, PO11	Remember, Understand	Factual, Conceptual
4	BP107P.4	Determine the heart rate, pulse rate and parameters of blood such as bleeding time, clotting time, erythrocyte sedimentation rate and haemoglobin content	PO1, PO9, PO11	Apply, Analyse	Factual, Conceptual, Procedural
5	BP107P.5	Know the basic knowledge of haemocytometry	PO1, PO4, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural
6	BP107P.6	Record the blood pressure.	PO1, PO6, PO11	Remember, Evaluate	Factual, Procedural

Waidya

Shakila





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B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Pharmaceutical Analysis I (BP108P)(Practical | Regular)

Course Code : BP108P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP108P.1	Carry out various volumetric and electrochemical Titrations.	PO1, PO2, PO3, PO4, PO6, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints
2	BP108P.2	Determination of Normality by electro-analytical methods.	PO1, PO3, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints
3	BP108P.3	Develop analytical skills.	PO1, PO2, PO3, PO4, PO11	Remember, Understand, Create	Factual, Conceptual, Procedural, Meta-cognitive, Fundamental Design Principles, Criteria & Specifications
4	BP108P.4	Prepare and standardize primary and secondary standard solutions of various normality and molarity	PO1, PO2, PO3, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints

Vaidya



AF



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B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Pharmaceutics I (BP109P)(Practical | Regular)

Course Code : BP109P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP109P.1	Able to explain formulation, role of ingredients and labeling and of Syrup, Elixir and Linctus	PO1, PO2, PO6, PO7, PO9, PO11	Remember, Understand	Conceptual
2	BP109P.2	Able to explain formulation, role of ingredients and labeling and of Solutions, Suspensions and Emulsions	PO1, PO2, PO4, PO11	Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Practical Constraints
3	BP109P.3	Able to explain formulation, role of ingredients and labeling and of Powder, Granules, Mouthwashes and Gargles	PO1, PO4, PO11	Apply, Analyse	Factual, Procedural, Practical Constraints
4	BP109P.4	Able to explain formulation, role of ingredients and labeling of Suppositories and Semisolid Preparations	PO1, PO2, PO4, PO11	Apply, Analyse, Evaluate	Factual, Procedural, Practical Constraints

Jijau

राजमाता





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Pharmaceutical Inorganic Chemistry (BP110P)(Practical | Regular)

Course Code : BP110P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP110P.1	Understand & perform the limit test of chloride, sulfate , Iron, arsenic ,lead and heavy metals	PO1	Remember, Understand, Apply, Analyse	Procedural, Practical Constraints
2	BP110P.2	Know about identification test for the sodium bicarbonate, magnesium hydroxide, copper sulfate , calcium gluconate & ferrous sulphate.	PO1	Understand, Apply, Analyse, Evaluate	Procedural, Practical Constraints
3	BP110P.3	Understand and perform the test of purification of Bentonite by measuring swelling power/index	PO1	Understand, Apply, Analyse	Procedural, Practical Constraints
4	BP110P.4	Understand and perform the test for purification of neutralizing capacity of Aluminium hydroxide gel	PO1	Understand, Apply, Analyse	Procedural, Practical Constraints
5	BP110P.5	Determination of potassium iodate and iodine in potassium iodide	PO1	Understand, Apply, Analyse	Procedural, Practical Constraints
6	BP110P.6	Preparation of inorganic pharmaceuticals such as boric acid, potash alum and ferrous sulphate	PO1	Understand, Apply, Analyse	Procedural, Practical Constraints

H. Jayaram



PH



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 1

Subject : Communication skills (BP111P)(Practical | Regular)

Course Code : BP111P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP111P.1	Understand basic communication skills to interact effectively.	PO6, PO8, PO9, PO11	Understand, Apply	Meta-cognitive, Practical Constraints
2	BP111P.2	Knowledge of soft skills set to work cohesively with team as a team player.	PO6, PO8, PO9	Apply, Analyse, Create	Conceptual, Meta-cognitive, Practical Constraints

Deek

SPM





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : COMMUNICATION SKILL(Practical | Elective)

Course Code : BP111P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP111P.1	Understand basic communication skills to interact effectively.	PO6, PO8, PO9, PO11	Understand, Apply	Meta-cognitive, Practical Constraints
2	BP111P.2	Knowledge of soft skills set to work cohesively with team as a team player.	PO6, PO8, PO9, PO11	Apply, Analyse, Create	Conceptual, Meta-cognitive, Practical Constraints
3	BP11P.3	Pronounce different sounds in Consonant, Vowels and Nouns	PO6, PO8, PO11	Remember, Understand, Apply	Factual, Conceptual
4	BP11P.4	Able to Handle the language laboratory software properly	PO4, PO11	Understand, Apply, Analyse	Conceptual, Practical Constraints

SrB

J. Sohamal





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CO-PO Attainment Report
(Sem - 2)
(A.Y. 2022-2023)



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Human Anatomy and Physiology II (BP201T)(Theory | Regular)

Course Code : BP201T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP207P.1	Understand various systems using specimen, models, etc.,	PO1, PO4, PO6, PO9	Remember, Understand	Factual, Conceptual
2	BP207P.2	Demonstrate the neurological examination, function of olfactory nerve, visual acuity, reflex activity and positive and negative feedback mechanism	PO1, PO9	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
3	BP207P.3	Record the body temperature and and basal mass index	PO1, PO6, PO9	Remember, Understand, Apply, Analyse	Factual, Conceptual, Procedural
4	BP207P.4	Determine different types of taste as well as tidal volume and vital capacity	PO1, PO6, PO9	Remember, Understand, Analyse	Factual, Conceptual, Procedural
5	BP207P.5	Study the family planning devices and pregnancy diagnosis test	PO1, PO6, PO9	Remember, Understand	Factual, Conceptual
6	BP207P.6	Study of different systems present in our body.	PO1	Remember, Understand	Conceptual
7	BP207P.7	Practice and understand the procedure for calculating Platelet count and differential leukocyte count.	PO1	Remember, Understand	Conceptual, Procedural
8	BP207P.8	Study of some changes in our metabolism and reflex activity.	PO1	Understand	Conceptual





**Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy,
Dudulgaon, Pune**

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Pharmaceutical Organic Chemistry I (BP202T)(Theory | Regular)

Course Code : BP202T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP202T.1	Study the basic principles of organic chemistry like hybridization, bond fission, intermolecular forces, structural effects, concept of isomerism and tautomerism etc.	PO1, PO2, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual
2	BP202T.2	Describe the classification of organic compounds and Practice the IUPAC nomenclature system.	PO1	Remember, Understand, Apply	Factual, Conceptual, Practical Constraints
3	BP202T.3	Understand stabilities of alkenes, conjugated dienes, mechanism, orientation of elimination, Electrophilic, free radical and Nucleophilic addition reaction and mechanism, kinetics, stereochemistry and factors affecting SN1 & SN2 reaction.	PO1, PO2, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural, Practical Constraints
4	BP202T.4	Discuss the acidity of carboxylic acids and basicity of amines and Know different qualitative test for the different functional group.	PO1	Remember, Understand, Apply	Factual, Conceptual, Practical Constraints
5	BP202T.5	Discuss the mechanism of some named reaction.	PO1, PO2	Remember, Understand, Apply, Analyse	Factual, Conceptual, Procedural, Practical Constraints
6	BP202T.6	Study structures, qualitative tests and uses of different functional groups and related organic compounds	PO1, PO2	Remember, Understand, Apply	Factual, Conceptual, Practical Constraints

Hedpawar

JH





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Biochemistry (BP203T)(Theory | Regular)

Course Code : BP203T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP203T.1	Understand the catalytic role of enzymes and importance of enzyme in biochemical process.	PO1, PO6, PO10, PO11	Remember, Understand	Conceptual
2	BP203T.2	Understand the metabolism of nutrient molecules in physiological and pathological conditions.	PO1, PO6, PO10, PO11	Remember, Understand	Conceptual
3	BP203T.3	Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.	PO1, PO6, PO10, PO11	Remember, Understand	Conceptual
4	BP203T.4	Describe the chemistry, biological importance and metabolism pattern of Biomolecules.	PO1, PO6, PO10, PO11	Remember, Understand	Factual, Conceptual
5	BP203T.5	Summarizes the concept of biological oxidation emphasizing on ETC and oxidative phosphorylation and identifying related inhibitors.	PO1, PO6, PO10, PO11	Remember, Understand	Factual, Conceptual
6	BP203T.6	Explain catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzyme	PO1, PO6, PO10, PO11	Remember, Understand	Factual, Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Pathophysiology (BP204T)(Theory | Regular)

Course Code : BP204T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP204T.1	Learn the basic principles of cell injury and cellular adaptation	PO1, PO3, PO11	Remember, Understand, Analyse	Factual, Conceptual
2	BP204T.2	Study the basic mechanism involved in the process of inflammation and repair	PO1, PO3, PO11	Remember, Understand, Analyse	Factual, Conceptual
3	BP204T.3	Describe the etiology of the selected disease states	PO1, PO11	Remember, Understand, Analyse, Evaluate	Factual, Conceptual, Criteria & Specifications
4	BP204T.4	Explain the pathogenesis of the selected disease states	PO1, PO11	Remember, Understand, Analyse, Evaluate	Factual, Conceptual
5	BP204T.5	Name the signs and symptoms of the selected disease states	PO1, PO11	Remember, Understand, Analyse, Evaluate	Factual, Conceptual
6	BP204T.6	Know the clinical features and diagnostic tests for detection of the selected disease states	PO1, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : COMPUTER APPLICATION IN PHARMACY (BP205T)(Theory | Regular)

Course Code : BP205T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP205T.1	Know various types of application of computers in pharmacy	PO4	Remember, Understand, Apply	Factual, Conceptual, Criteria & Specifications
2	BP205T.2	Know the various types of databases.	PO4	Remember, Understand, Analyse	Factual, Procedural, Practical Constraints
3	BP205T.3	.Know the various applications of databases in pharmacy.	PO4, PO11	Remember, Understand, Evaluate	Factual, Conceptual, Procedural
4	BP205T.4	Know the number system used in computer	PO3, PO11	Remember, Understand, Apply, Evaluate	Factual, Conceptual, Criteria & Specifications
5	BP205T.5	know the concepts of information system and software	PO2, PO4, PO11	Remember, Understand, Apply	Factual, Conceptual, Practical Constraints
6	BP205T.6	know the various bioinformatics and its impact on vaccines	PO1, PO3, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Environmental sciences (BP206T)(Theory | Regular)

Course Code : BP206T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP206T.1	Create the awareness about environmental problems among learners.	PO9, PO10	Create	Conceptual
2	BP206T.2	Impart basic knowledge about the environment and its allied problems.	PO10	Create	Conceptual
3	BP206T.3	Develop an attitude of concern for the environment.	PO10	Remember, Create	Conceptual
4	BP206T.4	Motivate learner to participate in environment protection and environment improvement.	PO10	Create	Conceptual
5	BP206T.5	Acquire skills to help the concerned individuals in identifying and solving environmental problems.	PO10	Create	Conceptual
6	BP206T.6	Strive to attain harmony with Nature.	PO10	Create	Conceptual

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Human Anatomy and Physiology II (BP207P)(Practical | Regular)

Course Code : BP 207 P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP207P.1	Understand various systems using specimen, models, etc.,	PO1, PO4, PO6, PO9	Remember, Understand	Factual, Conceptual
2	BP207P.2	Demonstrate the neurological examination, function of olfactory nerve, visual acuity, reflex activity and positive and negative feedback mechanism	PO1, PO9	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
3	BP207P.3	Record the body temperature and and basal mass index	PO1, PO6, PO9	Remember, Understand, Apply, Analyse	Factual, Conceptual, Procedural
4	BP207P.4	Determine different types of taste as well as tidal volume and vital capacity	PO1, PO6, PO9	Remember, Understand, Analyse	Factual, Conceptual, Procedural
5	BP207P.5	Study the family planning devices and pregnancy diagnosis test	PO1, PO6, PO9	Remember, Understand	Factual, Conceptual
6	BP207P.6	Study of different systems present in our body.	PO1	Remember, Understand	Conceptual
7	BP207P.7	Practice and understand the procedure for calculating Platelet count and differential leukocyte count.	PO1	Remember, Understand	Conceptual, Procedural
8	BP207P.8	Study of some changes in our metabolism and reflex activity.	PO1	Understand	Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Pharmaceutical Organic Chemistry I (BP208P)(Practical | Regular)

Course Code : BP208P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP208P.1	Explain and understand the principle and application of each experiment performed in laboratory.	PO1, PO11	Remember, Understand, Apply, Create	Factual, Conceptual, Procedural, Practical Constraints
2	BP202P.2	Discuss principle behind various qualitative tests and analyse the given unknown organic compounds having different functional groups.	PO1, PO3, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural, Practical Constraints
3	BP202P.3	Understand the basic organic chemistry laboratory techniques, including calibration of thermometer, distillation, recrystallization, melting point and boiling determination.	PO1, PO11	Understand, Apply, Analyse	Factual, Conceptual, Procedural, Practical Constraints
4	BP202P.4	Understand and apply safe laboratory practices through the use of appropriate personal protective equipment and appropriate handling of all chemicals, including proper disposal of waste.	PO1, PO11	Remember, Understand, Apply, Evaluate, Create	Factual, Conceptual, Procedural, Practical Constraints
5	BP202P.5	Construct molecular models of compounds using atomic models sets.	PO1, PO4, PO11	Understand, Apply	Factual, Conceptual, Procedural, Practical Constraints
6	BP202P.6	Know the Preparation methods of suitable solid derivatives from organic compounds with their reaction mechanism.	PO1, PO3, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural, Practical Constraints





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : Biochemistry (BP209P)(Practical | Regular)

Course Code : BP 209P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP209P.1	Know about the qualitative analysis of carbohydrates (glucose,fructose,lactose,maltose,sucrose,and starch)	PO1, PO9, PO11	Remember, Understand, Analyse	Conceptual, Procedural, Practical Constraints
2	BP209P.2	Know about the identification test for proteins	PO1, PO9, PO11	Remember, Understand, Evaluate	Conceptual, Procedural, Practical Constraints
3	BP209P.3	Know about the qualitative analysis of reducing sugars(DNSA method) and proteins (Biuret method)	PO1, PO9, PO11	Understand, Analyse	Conceptual, Procedural, Practical Constraints
4	BP209P.4	Understand the qualitative analysis of urine for abnormal constituents	PO1, PO9, PO11	Remember, Evaluate	Conceptual, Procedural, Practical Constraints
5	BP209P.5	Study about the determination of blood creatinine, blood sugars	PO1,	Understand, Apply	Procedural, Practical Constraints
6	BP209P.6	Understand the determination of serum total cholesterol and preparation of buffer solution and measurement of PH	PO1,	Understand, Evaluate	Procedural, Practical Constraints
7	BP209P.7	Study of the enzymatic hydrolysis of starch.	PO1, PO9, PO11	Understand, Evaluate	Procedural, Practical Constraints
8	BP209P.8	Determination of salivary amylase activity.	PO1, PO11	Understand, Apply	Conceptual, Procedural, Practical Constraints

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : First Year - Sem 2

Subject : COMPUTER APPLICATION IN PHARMACY (BP210P)(Practical | Regular)

Course Code : BP210P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP210P.1	Create questionnaires, mailing labels and other documentation related to pharmacy by using MS WORD.	PO1, PO4, PO11	Understand, Apply, Create	Factual, Practical Constraints
2	BP210P.4	Create, View, Add, Delete and modify the data bases using MS Access.	PO1, PO4, PO11	Understand, Apply, Create	Conceptual, Procedural, Practical Constraints
3	BP210P.3	Create databases and webpages using HTML.	PO1, PO4, PO11	Understand, Apply, Create	Conceptual, Procedural, Practical Constraints
4	BP210P.5	Generate report; work with queries, invoice tables using MS Access.	PO1, PO4, PO11	Understand, Apply, Create	Conceptual, Procedural, Practical Constraints
5	BP210P.6	Export table, forms and queries using web and XML pages to	PO1, PO4, PO11	Understand, Apply, Create	Conceptual, Procedural, Practical Constraints
6	BP210P.2	Retrieve the information using online tools.	PO1, PO4, PO11	Understand, Apply, Create	Conceptual, Procedural, Practical Constraints

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RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
COLLEGE OF PHARMACY (B.Pharm.)

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Dr. Kishor S. Jain
Principal

CO-PO Attainment Report
(Sem - 3)
(A.Y. 2022-2023)



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : Pharmaceutical Organic Chemistry II (BP301T)(Theory | Regular)

Course Code : BP301T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP301T.1	Write the structure, name and the type of isomerism of the organic compound	PO1, PO4, PO7, PO11	Remember, Understand	Conceptual, Procedural
2	BP301T.2	Write the reaction, name the reaction, and orientation of the reactions	PO1, PO4, PO7, PO11	Remember, Understand	Factual
3	BP301T.3	Account for reactivity/stability of compounds	PO1, PO7, PO11	Apply, Analyse	Conceptual
4	BP301T.4	Understand the preparation of various organic compounds.	PO1, PO6, PO7, PO9, PO11	Remember, Understand, Apply, Analyse, Create	Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : Physical Pharmaceutics I (BP302T)(Theory | Regular)

Course Code : BP302T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP302T.1	Explain and apply the key physical pharmacy concepts of solubility and dissolution and also compare and contrast between one, two & three component system	PO1, PO11	Analyse, Evaluate	Factual, Practical Constraints
2	BP302T.2	Investigate and apply various theories, laws and equations related to different states of matter	PO1, PO11	Understand, Apply	Factual, Practical Constraints
3	BP302T.3	Know about crystallization as well as various parameters of crystal like crystal forms, habits, lattice angle, methods of crystal analysis, polymorphism	PO1	Apply, Analyse	Conceptual, Procedural
4	BP302T.4	Acquire sufficient knowledge of surface and interfacial tension between the surfaces	PO1, PO3, PO11	Understand, Apply, Evaluate	Factual, Procedural
5	BP302T.5	Distinguish the principles of complexation/ protein binding & to use them for calculations of drug release and stability constant	PO1	Understand, Analyse	Factual, Procedural
6	BP302T.6	Adapt knowledge of pH, buffers and isotonic solutions.	PO1, PO11	Remember, Understand, Analyse	Factual, Conceptual, Procedural





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : Pharmaceutical Microbiology (BP303T)(Theory | Regular)

Course Code : BP303T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP303T.1	To Understand methods of identification, cultivation and preservation of various Microorganisms	PO1, PO6, PO11	Remember, Understand, Create	Factual, Conceptual
2	BP303T.2	To understand the importance and implementation of sterilization in pharmaceutical processing and industry	PO1, PO11	Remember, Understand	Factual, Conceptual
3	BP303T.3	To Learn sterility testing of pharmaceutical products.	PO1, PO11	Remember, Understand	Factual, Conceptual
4	BP303T.4	To Carry out microbiological standardization of Pharmaceuticals.	PO1, PO6, PO11	Remember, Understand	Conceptual, Meta-cognitive
5	BP303T.5	To Understand the cell culture technology and its applications in pharmaceutical industries.	PO1, PO2, PO11	Remember, Understand, Evaluate	Conceptual, Meta-cognitive
6	BP303T.6	To Describe the cell culture technology and its applications in pharmaceutical industries	PO1, PO11	Remember, Understand	Conceptual, Procedural
7	BP303T.7	To Understand the concept of sterility and laminar air flow pattern	PO1, PO11	Remember, Understand	Conceptual, Practical Constraints
8	BP303T.8	To understand the different techniques of sterilization	PO1, PO4, PO11	Understand	Conceptual, Practical Constraints

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : Pharmaceutical Engineering (BP304T)(Theory | Regular)

Course Code : BP304T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP304T.1	Gain knowledge about various unit operations used in Pharmaceutical industries	PO1, PO3, PO4, PO11	Remember, Understand, Apply	Factual, Conceptual
2	BP304T.2	Procure knowledge about the basics of various material handling techniques in pharmaceutical industry	PO1, PO2, PO11	Remember, Understand, Apply, Analyse	Conceptual, Procedural
3	BP304T.3	Understand the significance of plant lay out design for optimum use of resources and gain the knowledge of various materials used for pharmaceutical plant construction.	PO1, PO11	Remember, Understand	Conceptual, Procedural
4	BP304T.4	Understand the various types of corrosion and the preventive methods that can be adopted for corrosion control in Pharmaceutical industries.	PO1, PO11	Remember, Understand, Apply	Factual, Conceptual
5	BP304T.5	Appreciate various preventive methods used for corrosion control in pharmaceutical industry.	PO1, PO11	Remember, Understand, Apply	Factual, Procedural
6	BP304T.6	Analyze fundamentals of centrifuge for particle separation as well as mixer for particle mixing in pharmacy practice	PO1, PO2, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : PHARMACEUTICAL ORGANIC CHEMISTRY II (BP305P)(Practical | Regular)

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP305P.1	Learn different techniques like recrystallization and steam distillation	PO1, PO10, PO11	Understand, Apply	Conceptual
2	BP305P.2	Separate the given organic binary mixture	PO1, PO11	Understand, Apply, Analyse	Conceptual
3	BP305P.3	Understand saponification value and its determination of different oil samples.	PO1, PO7, PO9, PO10, PO11	Understand, Apply	Conceptual
4	BP305P.4	Understand how to prepare small organic compound.	PO1, PO11	Understand, Apply	Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune
B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : PHYSICAL PHARMACEUTICS - I (BP306P)(Practical | Regular)

Course Code : BP306P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP306P.1	Analyze the physicochemical properties such as solubility, pH, refractive index, partition coefficient, PKa values etc. experimentally.	PO1, PO3, PO4, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints, Factual
2	BP306P.2	Study the effect of electrolyte on upper consolute temperature in phase diagram.	PO1, PO3, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints, Factual
3	BP306P.3	Demonstrate the various adsorption isotherms by experimentally.	PO1, PO11	Remember, Understand, Apply, Analyse, Create	Factual, Conceptual, Procedural, Practical Constraints, Factual
4	BP306P.4	Determine the surface tension, critical micellar concentration, HLB value of various surfactants.	PO1, PO3, PO11	Remember, Understand, Apply, Analyse, Evaluate, Create	Factual, Conceptual, Practical Constraints, Factual
5	BP306P.5	Complexation, Stability Constant, Donor-Acceptor ratio	PO1, PO3, PO11	Remember, Understand, Apply, Evaluate	Factual, Conceptual, Procedural, Practical Constraints





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : PHARMACEUTICAL MICROBIOLOGY (BP307P)(Practical | Regular)

Course Code : BP307P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP307P.1	Know the principle, construction and working of equipments and skill to handle microscope for observation of microbes	PO1, PO4, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural
2	BP307P.2	Prepare and sterilize nutrient broth, nutrient agar, slants, stabs and plates and aseptic transfer of culture techniques	PO1, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural
3	BP307P.3	Practice aseptic procedures for inoculation and examine sterility testing of pharmaceuticals	PO1, PO11	Remember, Understand, Evaluate	Conceptual, Procedural, Practical Constraints
4	BP307P.4	Practice different methods of sterilization and isolate pure culture of microorganism	PO1, PO11	Remember, Understand, Apply	Conceptual, Procedural
5	BP307P.5	Adapt the technique involved to see motility of bacteria i.e. hanging drop technique	PO1, PO11	Remember, Understand, Apply	Conceptual, Procedural
6	BP307P.6	Develop skill to execute morphology of bacteria by staining and determine quality of water by Most probable number test (bacteriological analysis)	PO1, PO11	Understand, Apply, Analyse	Procedural
7	BP307P.7	Differentiate Gram negative intestinal bacteria by performing IMVIC test	PO1, PO11	Understand, Analyse	Procedural
8	BP307P.8	Learn standardization of pharmaceutical products microbiologically	PO1, PO9, PO11	Understand, Apply	Procedural

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : PHARMACEUTICAL ENGINEERING (BP308P)(Practical | Regular)

Course Code : BP308P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP308P.1	Study various pharmaceutical machines and the equipment's used in pharmaceutical industry.	PO1, PO9, PO10, PO11	Remember, Understand, Apply, Analyse, Evaluate	Conceptual, Procedural
2	BP308P.2	Perform various processes used in pharmaceutical manufacturing process	PO1, PO4, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Fundamental Design Principles, Practical Constraints
3	BP308P.3	Develop rigorous experimental and analytical skills for extraction and drying of sample in laboratory	PO1, PO10, PO11	Remember, Understand, Apply, Analyse	Conceptual, Procedural, Practical Constraints
4	BP308P.4	Study various unit operations and process used in pharmaceutical industry and the effect of factors influencing them.	PO1, PO2, PO4, PO10, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - SEM 3

Subject : COMMUNICATION SKILL(Theory | Elective)

Course Code : BP105T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP105T.1	Knowledge of basic aspects & soft skills for effective communication.	PO6, PO8, PO11	Remember, Understand, Apply	Procedural, Meta-cognitive
2	BP105T.2	Distinguish the elements of communication & communication style & its application for effectively manage the team as a team player.	PO8, PO11	Understand, Apply, Analyse, Evaluate, Create	Conceptual, Meta-cognitive, Criteria & Specifications, Practical Constraints
3	BP105T.3	Understand the basic listening skills & its importance in pharmacy practice.	PO8, PO9, PO11	Remember, Understand, Apply, Analyse, Evaluate, Create	Factual, Conceptual, Procedural
4	BP105T.4	Acquire the knowledge of technical writing skill	PO8, PO11	Understand, Apply	Conceptual, Procedural, Meta-cognitive
5	BP105T.5	Develop the interview skills & group discussion skills.	PO5, PO8, PO11	Remember, Understand, Apply, Create	Factual, Procedural, Meta-cognitive, Practical Constraints

S.T.B.



J. Sohumal



RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
COLLEGE OF PHARMACY (B.Pharm.)

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CO-PO Attainment Report
(Sem - 4)
(A.Y. 2022-2023)



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Pharmaceutical Organic Chemistry III (BP401T)(Theory | Regular)

Course Code : BP401T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP401T.1	Understand the methods of preparation and properties of organic compounds.	PO1, PO11	Understand	Not present
2	BP401T.2	Explain the stereochemical aspects of organic compounds and stereo chemical reactions.	PO1, PO11	Understand	Conceptual
3	BP401T.3	Know the medicinal uses and other applications of organic compounds	PO1	Remember, Understand, Apply	Conceptual
4	BP401T.4	Understand the reactions and mechanism of name reactions.	PO1	Remember, Understand, Apply	Conceptual

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Medicinal Chemistry I (BP402T)(Theory | Regular)

Course Code : BP402T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP402T.1	Understand the chemistry of drugs with respect to their pharmacological activity.	PO1, PO4, PO11	Remember, Understand	Factual, Conceptual
2	BP402T.2	Understand the drug metabolic pathways, adverse effect and therapeutic value of Drugs.	PO1, PO4, PO11	Remember, Understand	Factual, Conceptual
3	BP402T.3	Know the Structural Activity Relationship (SAR) of different class of drugs.	PO1, PO4, PO11	Remember, Understand	Factual, Conceptual
4	BP402T.4	Write the chemical synthesis of some drugs.	PO1, PO4, PO11	Remember, Understand	Factual, Conceptual, Fundamental Design Principles, Practical Constraints, Factual
5	BP402T.5	Understand the History and development of medicinal chemistry	PO1, PO11	Remember, Understand	Factual, Conceptual
6	BP402T.6	Explain physicochemical properties and pharmacokinetics affecting drug action.	PO1, PO6, PO11	Remember, Understand	Factual, Conceptual
7	BP402T.7	Classify certain therapeutic agents and outline the synthetic route for the selective medicinal compounds of sympathetic, parasympathetic and Central nervous system.	PO1, PO11	Remember, Understand	Factual, Conceptual
8	BP402T.8	Explain the structural activity relationship of certain therapeutic agents with their uses, adverse effects and recent developments.	PO1, PO4, PO6, PO11	Remember, Understand	Factual, Conceptual





**Rajmata Jijau Shikshan Prasarak Mandal's College of
Pharmacy, Dudulgaon, Pune**
B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Physical Pharmaceutics II (BP403T)(Theory | Regular)

Course Code : (BP403T)

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP403T.1	Understand various physicochemical properties of drug & excipient molecules in designing the dosage form	PO1	Remember, Understand, Apply, Create	Conceptual, Fundamental Design Principles, Practical Constraints
2	BP403T.2	Describe the flow behavior of fluids and the concept of thixotropy in pharmaceutical formulations	PO1, PO3	Remember, Understand, Apply, Evaluate, Create	Criteria & Specifications, Practical Constraints
3	BP403T.3	Distinguish the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations	PO1, PO3	Remember, Understand, Apply, Evaluate, Create	Factual, Procedural, Fundamental Design Principles, Practical Constraints
4	BP403T.4	Understand the fundamentals of chemical kinetics and stability of the drugs under accelerated conditions.	PO1, PO2, PO3, PO10	Remember, Understand, Apply, Evaluate	Conceptual, Fundamental Design Principles, Criteria & Specifications, Practical Constraints
5	BP403T.5	Know the behavior and mechanism of drugs and excipients in the formulation development and evaluation of dosage forms.	PO1, PO2	Apply, Evaluate	Factual, Procedural, Practical Constraints
6	BP403T.6	Determine the concept of micromeritics along with methods & its applications.	PO1, PO3	Analyse, Evaluate	Criteria & Specifications





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Pharmacology I (BP404T)(Theory | Regular)

Course Code : BP404T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP404T.1	Know basics of Pharmacology like history, scope and general principles.	PO1, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
2	BP404T.2	Explain the mechanism of drug action at organ system/sub cellular/ macromolecular levels	PO1, PO6, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Fundamental Design Principles
3	BP404T.3	Know basics of Peripheral nervous system and pharmacology of drugs acting on PNS.	PO1, PO7, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
4	BP404T.4	Know basics of Central nervous system and pharmacology of drugs acting on CNS.	PO1, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
5	BP404T.5	Know the basics pharmacology of drugs acting on CNS and action of drugs in treatment of diseases.	PO1, PO6, PO7, PO8, PO9, PO11	Remember, Understand, Apply, Evaluate	Factual, Conceptual, Procedural, Criteria & Specifications

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Pharmacognosy and Phytochemistry I (BP405T)(Theory | Regular)

Course Code : BP405T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP405T.1	know the techniques in the cultivation and production of crude drugs	PO1	Remember, Understand	Factual, Conceptual, Fundamental Design Principles
2	BP405T.2	know the crude drugs, their uses and chemical nature	PO1	Remember, Understand	Factual, Conceptual
3	BP405T.3	know the evaluation techniques for the herbal drugs	PO1, PO3, PO4	Understand, Apply, Analyse, Evaluate	Procedural, Meta-cognitive, Practical Constraints
4	BP405T.4	carry out the microscopic and morphological evaluation of crude drugs	PO1, PO2, PO3, PO4	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Fundamental Design Principles, Practical Constraints
5	BP405T.5	Understand the concept of plant tissue culture and its applications in pharmacognosy	PO1, PO3	Remember, Understand, Analyse, Create	Factual, Conceptual, Procedural, Fundamental Design Principles, Criteria & Specifications
6	BP405T.6	Understand the classification of crude drugs, its sources and scope of Pharmacognosy	PO1	Remember, Understand	Factual, Conceptual



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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Medicinal Chemistry I (BP406P)(Practical I Regular)

Course Code : BP406P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP406P.1	Study the different purification techniques including Recrystallization, TLC.	PO1	Remember, Apply, Analyse	Conceptual, Procedural, Practical Constraints
2	BP406P.2	Prepare small organic compounds / drugs / drug intermediates.	PO1	Remember, Apply, Analyse	Conceptual, Procedural, Practical Constraints
3	BP406P.3	Perform purification of synthesized compounds by Column chromatography.	PO1	Remember, Apply, Analyse	Conceptual, Procedural, Practical Constraints
4	BP406P.4	Determine the Partition coefficient and Ionisation constants.	PO1	Remember, Apply, Analyse	Conceptual, Procedural, Practical Constraints





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Pharmacology I (BP408P)(Practical | Regular)

Course Code : BP408P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP408P.1	Understand the pharmacological actions of different categories of drugs	PO1, PO6, PO9, PO11	Remember, Understand, Apply, Analyse	Conceptual, Procedural, Meta-cognitive
2	BP408P.2	Observe the effect of drugs on animals by simulated experiments	PO1, PO6, PO9, PO11	Remember, Understand, Apply, Analyse	Factual, Conceptual, Procedural, Meta-cognitive
3	BP408P.3	Appreciate correlation of pharmacology with other bio medical sciences	PO1, PO6, PO9, PO11	Remember, Understand, Apply, Analyse	Conceptual, Procedural, Meta-cognitive, Fundamental Design Principles
4	BP408P.4	Get knowledge about pharmacology lab, eg. animals, instruments, animal handling skills etc...	PO1	Remember, Understand, Apply	Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Second Year - Sem 4

Subject : Pharmacognosy and Phytochemistry I (BP409P)(Practical | Regular)

Course Code : BP409P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP409P.1	Analyze unorganized crude drug by chemical tests	PO1, PO3	Apply, Analyse, Evaluate, Create	Practical Constraints
2	BP409P.2	Evaluate and identify crude drug by microscopical study	PO1, PO3	Understand, Apply, Analyse	Practical Constraints
3	BP409P.3	Evaluate crude drugs by physicochemical parameter	PO1, PO3	Evaluate, Create	Practical Constraints
4	BP409P.4	Explain use of equipment's in Pharmacognosy lab	PO1, PO3, PO4	Analyse, Evaluate, Create	Practical Constraints
5	BP409P.5	Compare, interpret, and calculate the results	PO1, PO3, PO4	Apply, Analyse, Evaluate	Procedural, Practical Constraints



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RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
COLLEGE OF PHARMACY (B.Pharm.)

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CO-PO Attainment Report
(Sem - 5)
(A.Y. 2022-2023)



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Medicinal Chemistry II (BP501T)(Theory I Regular)

Course Code : BP501T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP501T.1	Understand the chemistry of drugs with respect to their pharmacological activity	PO1	Remember, Understand	Conceptual
2	BP501T.2	Know the Structural Activity Relationship of different class of drugs	PO1, PO3	Remember, Understand	Conceptual
3	BP501T.3	Study the chemical synthesis of selected drugs	PO1, PO3	Remember, Understand	Conceptual
4	BP501T.4	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs	PO1	Remember, Understand	Conceptual



Course Outcome

Year : Third Year - SEM 5

Subject : Industrial Pharmacy - I (BP502T)(Theory | Regular)

Course Code : BP502T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP502T.1	Describe the physicochemical properties...	PO1, PO3, PO9	Remember, Understand, Analyse	Conceptual, Criteria & Specifications, Practical Constraints
2	BP502T.2	Interpret formulation data and subseque...	PO1, PO4	Apply, Analyse	Conceptual, Procedural, Practical Constraints
3	BP502T.3	Prepare quality pharmaceutical formulat...	PO1, PO3, PO9	Understand, Apply, Evaluate	Procedural, Fundamental Design Principles, Practical Constraints
4	BP502T.4	Explain the concept and importance of e...	PO1, PO9, PO11	Remember, Understand, Apply, Analyse	Procedural, Criteria & Specifications
5	BP502T.5	Describe the principles of sterile prep...	PO1, PO4	Remember, Apply, Create	Procedural, Fundamental Design Principles
6	BP502T.6	Develop cosmetic preparations with desi...	PO1, PO9	Remember, Apply	Practical Constraints
7	BP502T.7	Develop aerosol formulations and unders...	PO1, PO4, PO9	Understand, Apply	Conceptual, Meta-cognitive
8	BP502T.8	Understand the importance of pharmaceut...	PO9, PO10	Remember, Apply	Conceptual, Practical Constraints

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Pharmacology II (BP503T)(Theory | Regular)

Course Code : BP503T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP503T.1	Analyze the mechanism of drugs acting on cardiovascular system	PO1, PO2, PO3, PO4, PO9	Remember, Understand	Factual, Conceptual
2	BP503T.2	Express in depth knowledge about pharmacology and pharmacotherapy of drugs used in against autacoids	PO1, PO2, PO4, PO6, PO9	Remember, Understand	Factual, Conceptual
3	BP503T.3	Summarize the detail classification, mechanism of action, pharmacokinetics, therapeutic uses, adverse effects drug interactions of drugs acting on cardiovascular drugs and endocrine system	PO1, PO2, PO3, PO6, PO9	Remember, Apply, Analyse	Factual, Conceptual, Procedural
4	BP503T.4	Summarize the detail mechanism of Principles, applications and types of bioassay	PO1, PO2, PO3	Remember, Understand	Factual, Conceptual, Procedural
5	BP503T.5	Study of Principles, applications and types of bioassay	PO1, PO2, PO3, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural

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B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Pharmacognosy and Phytochemistry II (BP504T)(Theory | Regular)

Course Code : BP504T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP504T.1	Highlight applicability and understand the relevance and significance of pharmacognosy and phytochemistry to pharmaceutical sciences	PO1, PO6, PO7	Understand	Conceptual
2	BP504T.2	Clarify principles of modern extraction techniques & explain how these can be applied in characterization and identification of the herbal drug and phytoconstituents..	PO1, PO3	Understand, Apply, Analyse, Evaluate, Create	Conceptual, Procedural, Fundamental Design Principles, Practical Constraints
3	BP504T.3	Explain correct use of various equipment in pharmacognosy laboratory.	PO1, PO2, PO6, PO11	Understand, Apply, Analyse, Evaluate, Create	Conceptual, Procedural, Practical Constraints, Factual
4	BP504T.4	Understand the principle & applications of chromatographic & non-chromatographic separation methods	PO1, PO2, PO11	Remember, Understand, Apply, Analyse, Evaluate, Create	Conceptual, Procedural, Practical Constraints, Factual
5	BP504T.5	Understand the metabolic pathway in formation of secondary metabolites and application of bio genetic Study.	PO1, PO8, PO11	Remember, Understand	Factual, Conceptual
6	BP504T.6	Know the different classes of secondary metabolites with their composition, chemistry and chemical classes, biological source, method of extraction, uses and application.	PO1, PO2, PO11	Remember, Understand	Factual, Conceptual, Procedural, Fundamental Design Principles, Practical Constraints

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Pharmaceutical Jurisprudence (BP505T)(Theory | Regular)

Course Code : BP505T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP505T.1	The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals.	PO1, PO7, PO11	Understand	Procedural
2	BP505T.2	Various Indian pharmaceutical Acts and Laws	PO1, PO7, PO11	Understand, Analyse	Conceptual
3	BP505T.3	The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals	PO1, PO7, PO11	Remember, Understand	Criteria & Specifications
4	BP505T.4	The code of ethics during the pharmaceutical practice.	PO1, PO7, PO11	Apply	Procedural

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B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Industrial Pharmacy-I (BP506P)(Practical | Regular)

Course Code : BP506P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP506P.2	Understand and evaluate the concept of preformulation and develop the stable and efficient dosage forms	PO1, PO3	Understand, Apply, Analyse	Conceptual, Procedural
2	BP506P.1	Prepare and evaluate different solid dosage forms such as tablets capsules, pellets etc.	PO9	Remember, Apply, Evaluate	Procedural, Practical Constraints
3	BP506P.3	Prepare and develop biphasic liquid formulations with all its evaluation parameters	PO1, PO4	Understand, Apply	Procedural, Practical Constraints
4	BP506P.4	Practice the aseptic technique while preparing parenteral formulations.	PO1, PO9	Remember, Understand, Apply	Procedural, Practical Constraints
5	BP506P.5	Practice the preparation and development of ophthalmic formulations.	PO1	Create	Procedural, Practical Constraints
6	BP506P.6	Understand importance of pharmaceutical packaging and able to perform the various tests of packaging containers. (evaluation tests for glass containers)	PO1	Apply, Evaluate	Conceptual, Procedural, Practical Constraints

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
7	BP506P.7	Know the preparation & evaluation parameters for cosmetic preparations.	PO1, PO2	Understand, Evaluate, Create	Procedural, Meta-cognitive, Criteria & Specifications, Practical Constraints

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B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Pharmacology - II (BP507P)(Practical | Regular)

Course Code : BP507P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP507P.1	Demonstrate isolation of different organs/tissues from the laboratory animals by simulated experiments	PO1, PO2, PO6, PO9	Understand, Apply, Analyse	Conceptual, Procedural, Meta-cognitive
2	BP507P.2	Demonstrate the various receptor actions using isolated tissue preparation	PO2, PO4, PO6	Understand, Apply, Analyse, Evaluate	Conceptual, Procedural, Meta-cognitive
3	BP507P.3	Understand the mechanism of drug action and its relevance in the treatment of different diseases	PO1, PO3, PO11	Understand, Apply, Analyse	Conceptual, Procedural, Meta-cognitive
4	BP507P.4	Elaborate correlation of pharmacology with related medical sciences	PO3, PO4, PO8	Remember, Understand, Apply	Conceptual, Procedural, Meta-cognitive
5	BP507P.5	Understand in-vitro pharmacology and different physiological salt solutions.	PO1, PO2, PO3, PO6	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive

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B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - SEM 5

Subject : Pharmacognosy and Phytochemistry II (BP508P)(Practical | Regular)

Course Code : BP508P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP508P1	Explain correct use of various equipments in Pharmacognosy laboratory	PO1, PO2, PO3, PO4	Understand, Apply	Conceptual, Procedural, Practical Constraints
2	BP508P2	Handle simple and compound microscope technically in a correct way	PO1, PO2, PO3, PO4	Understand, Apply, Evaluate	Conceptual, Procedural, Practical Constraints
3	BP508P3	Demonstrate skill of plant material sectioning, staining, mounting & focusing.	PO1, PO2, PO3, PO4	Remember, Understand, Apply	Procedural, Practical Constraints
4	BP508P4	Draw morphological & microscopical diagrams & able to label component.	PO1, PO2, PO3, PO4	Apply, Create	Practical Constraints
5	BP508P5	Understand the different cellular structures in powder characteristics of plant organ.	PO1, PO2, PO3, PO4	Understand, Apply	Conceptual, Procedural, Practical Constraints
6	BP508P6	Understand the isolation process, role of solvent and identification of different secondary metabolites.	PO1, PO2, PO3, PO4	Remember, Understand, Analyse, Evaluate	Conceptual, Procedural, Practical Constraints
7	BP508P7	Understand the use of chromatography in identification of plant material, extracts and isolated compounds.	PO1, PO2, PO3	Understand	Procedural, Practical Constraints
8	BP508P8	Understand the organized and unorganized drug and develop skill to identify it by chemical tests.	PO1, PO2, PO3, PO4	Understand, Analyse, Evaluate	Conceptual, Practical Constraints

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RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
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CO-PO Attainment Report
(Sem - 6)
(A.Y. 2022-2023)



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Medicinal Chemistry III (BP601T)(Theory | Regular)

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP601T.1	Know the general aspects of design, history, nomenclature, MOA, therapeutic uses, and recent developments of drugs.	PO1, PO11	Remember, Understand	Factual
2	BP601T.2	Understand variety of drug classes and some pharmacological properties.	PO1, PO11	Remember, Understand, Apply	Factual, Conceptual, Criteria & Specifications
3	BP601T.3	Know the importance of SAR of drugs.	PO1, PO11	Remember, Understand, Apply, Analyse	Conceptual, Fundamental Design Principles, Criteria & Specifications
4	BP601T.4	Understand the chemistry of drugs with respect to their biological activity	PO1, PO11	Understand	Conceptual
5	BP601T.5	Understand the importance of drug design and different techniques of drug design.	PO1, PO4 PO11	Remember, Understand	Conceptual, Criteria & Specifications
6	BP601T.6	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs	PO1, PO11	Understand	Factual, Conceptual
7	BP601T.7	Understand synthesis of some important class of drugs.	PO1, PO11	Understand, Apply, Analyse, Create	Conceptual, Procedural, Fundamental Design Principles
8	BP601T.8	Acquire knowledge on thrust areas for further research.	PO1, PO11	Apply, Create	Conceptual, Fundamental Design Principles, Practical Constraints, Factual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Pharmacology III (BP602T)(Theory | Regular)

Course Code : BP602T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP602T1	Explain the mechanism of drug action and its relevance in the treatment of different infectious diseases	PO1, PO3, PO4, PO9	Remember, Understand	Factual, Conceptual
2	BP602T2	Illustrate the principles of toxicology	PO1, PO3, PO9	Remember, Understand	Factual, Conceptual
3	BP602T3	Discuss treatment of various poisonings	PO1, PO4, PO10, PO11	Remember, Apply	Factual, Conceptual
4	BP602T4	Analyse correlation of pharmacology with related medical sciences.	PO1, PO4, PO9	Remember, Understand	Factual, Conceptual
5	BP602T5	Explain the fundamental knowledge on various aspects (classification, mechanism of action, therapeutic effects, clinical uses, side effects and contraindications) of drugs acting on respiratory and gastrointestinal system, infectious diseases, immuno-pharmacology	PO1, PO3, PO4, PO11	Remember, Understand	Factual, Conceptual

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Herbal Drug Technology (BP603T)(Theory | Regular)

Course Code : BP603T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP603T1	Understand the raw material as source of herbal drug from cultivation of herbal drug product.	PO1, PO10	Remember, Understand, Apply, Create	Conceptual
2	BP603T2	Know the different Indian systems of medicines.	PO1, PO3, PO6, PO7, PO9	Remember, Understand, Apply, Analyse	Conceptual, Procedural
3	BP603T3	Understand the concept of nutraceutical and know the benefits of nutraceuticals in different aliments and study the herb drug interaction.	PO1, PO3, PO8, PO9	Remember, Understand, Apply	Factual, Conceptual
4	BP603T4	Understand the concept of herbal cosmetic with herbal excipients and herbal formulations.	PO1, PO4, PO10, PO11	Remember, Understand, Analyse	Factual, Conceptual
5	BP603T5	Know the WHO and ICH Guidelines of evaluation of herbal drugs	PO1, PO3, PO4, PO11	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural
6	BP603T6	Know the patenting of herbal drug and GMP in herbal drug industry.	PO1, PO2, PO5, PO7	Remember, Understand, Apply, Create	Conceptual, Procedural, Criteria & Specifications, Factual

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Biopharmaceutics and Pharmacokinetics (BP604T)(Theory | Regular)

Course Code : BP604 T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP604T.1	Understand the basic concepts in biopharmaceutics and pharmacokinetics and their significance.	PO1	Remember, Understand	Conceptual, Fundamental Design Principles
2	BP604T.2	Apply the knowledge plasma drug concentration-time data to calculate the pharmacokinetic parameters to describe the kinetics of drug absorption, distribution, metabolism, excretion, elimination	PO1, PO3, PO9	Remember, Understand, Apply	Factual, Conceptual, Meta-cognitive
3	BP604T.3	Understand the concepts of bioavailability and bioequivalence of drug products and their significance. Able to evaluate factors influencing the drug availability that correspondingly influence drug treatment efficacy.	PO1, PO6, PO7, PO9	Analyse, Evaluate	Conceptual, Criteria & Specifications, Practical Constraints
4	BP604T.4	Understand and explain various pharmacokinetic models and its applications.	PO1, PO4	Understand, Apply, Evaluate, Create	Conceptual, Procedural, Meta-cognitive, Practical Constraints
5	BP604T.5	Estimate the Non-linear pharmacokinetics with special reference to its assessment	PO1, PO3, PO4	Remember, Understand, Analyse, Evaluate	Conceptual, Meta-cognitive, Practical Constraints



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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Pharmaceutical Biotechnology (BP605T)(Theory | Regular)

Course Code : BP605T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP605T.1	Understanding the importance of Immobilized enzymes in Pharmaceutical Industries	PO1, PO10, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural
2	BP605T.2	Genetic engineering applications in relation to production of pharmaceuticals	PO1, PO10, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural, Practical Constraints
3	BP605T.3	Importance of Monoclonal antibodies in Industries	PO1, PO10, PO11	Remember, Understand, Apply, Create	Factual, Conceptual, Procedural, Factual
4	BP605T.4	Appreciate the use of microorganisms in fermentation technology	PO1, PO10, PO11	Remember, Understand, Apply, Analyse	Factual, Conceptual, Procedural

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Quality Assurance (BP606T)(Theory | Regular)

Course Code : BP606T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP606T.1	Understand the importance of quality in pharmaceutical products	PO1, PO9, PO11	Remember, Understand, Apply	Conceptual, Procedural
2	BP606T.2	Understands the regulatory aspects of pharmaceuticals	PO1, PO11	Remember, Understand, Apply	Conceptual, Procedural, Meta-cognitive
3	BP606T.3	Learn the process involved in manufacturing of pharmaceuticals in different section/department and their activities	PO1	Understand, Apply	Conceptual, Procedural, Fundamental Design Principles
4	BP606T.4	Describe various documentation process and concept of calibration and validation	PO1, PO3	Understand, Apply, Analyse	Conceptual, Procedural, Criteria & Specifications
5	BP606T.5	Know the responsibilities of QA & QC departments	PO1, PO11	Understand, Apply	Factual, Procedural
6	BP606T.6	Understand the scope of quality certifications applicable to pharmaceutical industries	PO1, PO11	Understand, Apply	Conceptual, Procedural, Meta-cognitive, Criteria & Specifications

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Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Medicinal chemistry III (BP607P)(Practical | Regular)

Course Code : BP607P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP607P.1	Understand use of various equipments and safety measures while working in medicinal chemistry laboratory.	PO1, PO11	Understand	Factual, Conceptual, Practical Constraints
2	BP607P.2	Perform synthesis of medicinally important compounds/ drug intermediates.	PO1, PO11	Apply	Conceptual, Fundamental Design Principles, Practical Constraints
3	BP607P.3	Understand reaction scheme, mechanism and theory involved in synthesis of medicinally important organic compounds.	PO1, PO11	Understand	Conceptual
4	BP607P.4	Draw chemical structures and reactions by Chem draw software.	PO1, PO4, PO11	Remember, Apply	Factual, Fundamental Design Principles, Practical Constraints
5	BP607P.5	Explain the physicochemical properties of drugs using drug design software.	PO1, PO4, PO11	Understand	Factual, Conceptual





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Pharmacology III (BP608P)(Practical | Regular)

Course Code : 608P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP608P1	Learn dose calculations in pharmacological practical	PO1, PO3, PO4	Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Procedural, Practical Constraints, Factual
2	BP608P2	Determine the anti-ulcer and anti-allergic activity	PO1, PO4, PO5, PO11	Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Practical Constraints, Factual
3	BP608P3	Study the effects of the drug on gastrointestinal motility and saline purgative on frog intestine	PO1, PO3, PO4, PO11	Understand, Analyse, Evaluate	Conceptual, Procedural, Criteria & Specifications, Practical Constraints
4	BP608P4	Study the effect of agonist and antagonist	PO1, PO2, PO4, PO11	Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Practical Constraints
5	BP608P5	Write and learn applications of different biostatistical methods	PO1, PO2, PO3, PO4	Remember, Understand, Apply, Analyse, Evaluate	Factual, Conceptual, Criteria & Specifications, Practical Constraints





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Third Year - Sem 6

Subject : Herbal Drug Technology (BP609P)(Practical | Regular)

Course Code : BP609P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP609P1	Understand the concept of preliminary phytochemical screening with ability of performing different identification test.	PO1, PO2, PO3, PO4, PO11	Remember, Understand, Apply, Analyse, Evaluate	Conceptual, Procedural, Practical Constraints
2	BP609P2	Determine the alcohol content and evaluate the excipients in different herbal preparations.	PO1, PO2, PO3, PO4, PO6	Remember, Understand, Apply, Analyse, Evaluate	Conceptual, Procedural, Practical Constraints
3	BP609P3	Preparation and standardization of extract and different herbal dosage forms..	PO1, PO2, PO4, PO9, PO10, PO11	Understand, Apply, Analyse, Evaluate, Create	Factual, Conceptual, Procedural, Practical Constraints
4	BP609P4	Study the monograph of analysis of herbal drugs from recent pharmacopoeias.	PO1, PO2, PO4, PO7, PO8, PO11	Remember, Understand, Apply, Analyse, Evaluate	Conceptual, Procedural, Criteria & Specifications, Practical Constraints
5	BP609P5	Determine the different chemical constituents in crude drug.	PO1, PO2, PO4, PO11	Remember, Apply, Analyse, Evaluate	Conceptual, Procedural, Practical Constraints
6	BP609P6	Determine the excipients of natural origing by chemical tests	PO1, PO3	Remember, Understand, Analyse, Evaluate	Practical Constraints

S.P.M.

J. S. Humal





RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
COLLEGE OF PHARMACY (B.Pharm.)

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Hon. Shri. Ajit D. Gavhane
Treasurer

Dr. Kishor S. Jain
Principal

CO-PO Attainment Report
(Sem - 7)
(A.Y. 2022-2023)



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 7

Subject : Instrumental Methods of Analysis (BP701T)(Theory | Regular)

Course Code : BP701T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP701T1	Understand and explain the principle of analytical techniques.	PO1, PO11	Remember, Understand	Conceptual
2	BP701T2	Understand and explain the instrumentation of analytical techniques.	PO1, PO11	Remember, Understand	Procedural
3	BP701T3	Understand and explain the applications of analytical techniques.	PO1, PO11	Remember, Understand	Procedural
4	BP701T4	To interpret the given IR spectrum.	PO1	Remember, Understand, Apply	Conceptual, Procedural

7/11





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 7

Subject : Industrial Pharmacy-II (BP702T)(Theory | Regular)

Course Code : BP702T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP702T.1	Know the process of pilot plant and scale up of pharmaceutical dosage forms.	PO1	Understand	Conceptual, Procedural
2	BP702T.2	Understand the process of technology transfer from lab scale to commercial batch.	PO1, PO6	Remember, Understand	Procedural
3	BP702T.3	Know different Laws and Acts that regulate pharmaceutical industry.	PO1, PO7	Remember, Apply	Procedural, Criteria & Specifications
4	BP702T.4	Understand the approval process and regulatory requirements for drug products.	PO1, PO2, PO7	Understand, Apply	Procedural, Criteria & Specifications
5	BP702T.5	Know about pharmaceutical product development and product movement from laboratory to market.	PO1, PO2, PO9	Understand, Apply	Procedural, Criteria & Specifications



Signature
Mr. A. B. Kumbhar



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 7

Subject : Pharmacy Practice (BP703T)(Theory | Regular)

Course Code : BP703T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP703T.1	Understand various drug distribution methods in a hospital and pharmaceutical care services.	PO1, PO9, PO11	Analyse	Factual, Procedural
2	BP703T.2	Understand the pharmacy stores management and inventory control.	PO1, PO2, PO9, PO11	Create	Conceptual, Procedural
3	BP703T.3	Examine drug therapy of patient through medication chart review and clinical review.	PO1, PO2, PO9, PO11	Understand	Factual
4	BP703T.4	Prepare medication history interview and counsel the patients.	PO1, PO8, PO9, PO11	Understand	Meta-cognitive
5	BP703T.5	Determine drug related problems and adverse drug reactions.	PO1, PO8, PO9, PO11	Evaluate	Conceptual
6	BP703T.6	Interpret selected laboratory results of specific disease states. (as monitoring parameters in therapeutics)	PO1, PO9, PO11	Understand	Conceptual
7	BP703T.7	Know pharmaceutical care services	PO1, PO9, PO11	Create	Procedural
8	BP703T.8	Do patient counseling in community pharmacy AND Appreciate the concept of Rational drug therapy.	PO1, PO8, PO9, PO11	Evaluate, Create	Conceptual, Procedural



Shakila



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 7

Subject : Novel Drug Delivery System (BP704T)(Theory | Regular)

Course Code : BP704T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP704T.1	Understand various approaches for development of novel drug delivery systems.	PO1, PO3	Understand, Apply, Create	Conceptual, Procedural, Practical Constraints
2	BP704T.2	Understand the criteria for selection of drugs and polymers for the development of novel drug delivery systems	PO1, PO4	Remember, Understand, Apply, Create	Conceptual, Procedural, Meta-cognitive, Fundamental Design Principles
3	BP704T.3	Understand the formulation and evaluation of transdermal, Mucosal, Ocular, Nasopulmonary, Gastroretentive and Intrauterine drug delivery systems.	PO1, PO4	Understand, Apply, Create	Conceptual, Procedural, Meta-cognitive, Practical Constraints
4	BP704T.4	Able to explain the concept & approaches of targeted drug delivery system including microencapsulation and implantable drug delivery systems.	PO1, PO3, PO4	Remember, Understand, Apply, Create	Conceptual, Meta-cognitive, Practical Constraints

Jijau

राजमाता





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 7

Subject : BP705P Instrumental Methods of Analysis(Practical | Regular)

Course Code : BP705P

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP705P.1	To understand the different types of instrumental analytical techniques available for quality control of APIs & formulations.	PO1, PO4, PO11	Remember, Understand, Apply	Conceptual, Procedural
2	BP705P.2	Quantification of API by using various instrumental methods of analysis.	PO1, PO4, PO11	Remember, Understand, Apply, Evaluate	Procedural
3	BP705P.3	Determination of functional group in the compound by using IR spectroscopy.	PO1	Understand, Apply, Analyse	Conceptual, Procedural
4	BP705P.4	Qualitative analysis by analytical techniques	PO1	Remember, Understand, Apply, Analyse	Conceptual, Procedural



7/11



RAJMATA JIJAU SHIKSHAN PRASARAK MANDAL'S
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Dr. Kishor S. Jain
Principal

CO-PO Attainment Report
(Sem - 8)
(A.Y. 2022-2023)





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 8

Subject : Biostatistics and Research Methodology (BP801T)(Theory | Regular)

Course Code : BP108T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP801T.1	Understand the importance and concept of Statistics, Biostatistics, Measures of central tendency, Measures of dispersion and Correlation with pharmaceutical examples	PO1, PO3, PO7	Understand, Apply	Factual, Conceptual, Fundamental Design Principles
2	BP801T.2	Describe the concept and principal about Regression ,Probability ,Parametric test with pharmaceutical examples.	PO1, PO2, PO4, PO6, PO7, PO9	Understand, Analyse, Evaluate	Factual, Procedural, Criteria & Specifications
3	BP801T.3	Understand the importance of Parametric ,Non Parametric tests ,Research Need for research, Need for design of Experiments, Graphs ,Designing the methodology with Pharmaceutical Examples.	PO1, PO3, PO7, PO9	Analyse, Create	Factual, Conceptual, Criteria & Specifications
4	BP801T.4	Understand the importance of factorial design ,Regression modeling, Introduction to Practical components of Industrial and Clinical Trials Problems with pharmaceutical examples	PO1, PO3, PO4	Remember, Understand, Analyse	Factual, Procedural, Fundamental Design Principles
5	BP801T.5	Understand the concept and knowledge regarding Design and Analysis of experiments ,Factorial Design ,Response Surface methodology with pharmaceutical examples	PO1, PO3, PO7	Understand, Apply, Evaluate	Factual, Fundamental Design Principles, Criteria & Specifications





**Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy,
Dudulgaon, Pune**

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 8

Subject : Pharmacovigilance (BP805ET)(Theory | Elective)

Course Code : BP805ET

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP805ET.1	Understand the importance of drug safety monitoring.	PO1, PO6, PO9, PO11	Remember	Factual, Conceptual
2	BP805ET.2	Study the History, development, National and international scenario of pharmacovigilance & comprehend dictionaries, coding and terminologies used in pharmacovigilance.	PO1, PO6, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual
3	BP805ET.3	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	PO1, PO6, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual, Procedural
4	BP805ET1	Explain the role of national agencies and international bodies in medicines regulation	PO1, PO2	Remember, Understand	Factual, Conceptual
5	BP805ET2	Outline the classification of adverse events / adverse drug reactions.	PO2, PO3	Understand, Apply	Conceptual, Procedural
6	BP805ET3	Discuss drug and disease classification, drug dictionaries and coding and Information resources in pharmacovigilance	PO4, PO6	Remember, Understand	Factual, Conceptual
7	BP805ET4	Explain the fundamental knowledge on vaccine safety surveillance, pharmacovigilance methods and communication in pharmacovigilance	PO2, PO3	Understand, Apply	Factual, Conceptual
8	BP805ET5	Discuss the place of the International Conference on Harmonisation (ICH) in medicines regulation	PO1, PO2	Remember, Understand	Factual, Conceptual
9	BP805ET6	Describe the genetics related ADR, drug safety evaluation in special population and schedule Y	PO1, PO2	Remember, Understand	Factual, Conceptual

H. Jayawar



AE

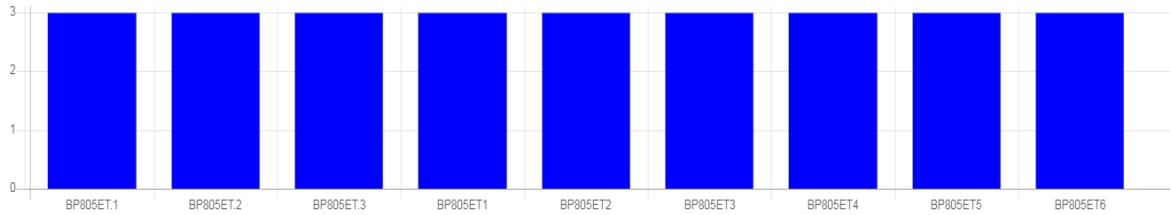


Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

Pharmacovigilance (BP805ET) - Theory (2022-23) [Saroja Adepawar]

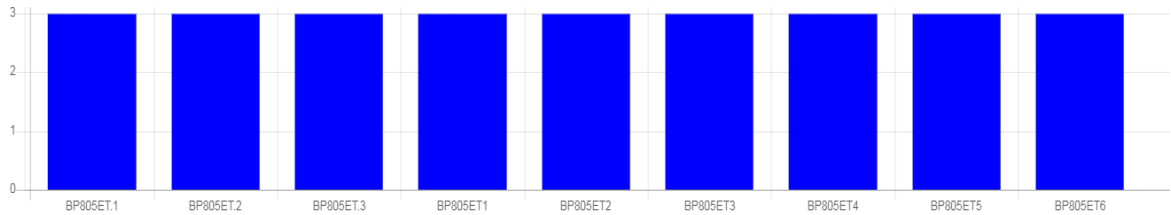
Internal Assessment

Title	Type	% Weightage	BP805ET.1	BP805ET.2	BP805ET.3	BP805ET1	BP805ET2	BP805ET3	BP805ET4	BP805ET5	BP805ET6
Internal Marks	Internal	25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent course outcome weightage			25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Attainment as per percent weightage			0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Final attainment			3	3	3	3	3	3	3	3	3



External Assessment

Title	Type	% Weightage	BP805ET.1	BP805ET.2	BP805ET.3	BP805ET1	BP805ET2	BP805ET3	BP805ET4	BP805ET5	BP805ET6
External Marks	External	75	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Percent course outcome weightage			75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00	75.00
Attainment as per percent weightage			2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Final attainment			3	3	3	3	3	3	3	3	3



Direct Total Attainment

Course Outcome	Internal	External
BP805ET.1	3.00	3.00
BP805ET.2	3.00	3.00
BP805ET.3	3.00	3.00
BP805ET1	3.00	3.00
BP805ET2	3.00	3.00
BP805ET3	3.00	3.00
BP805ET4	3.00	3.00
BP805ET5	3.00	3.00
BP805ET6	3.00	3.00
Average	3.00	3.00
Weightage	25	75
Direct Total Attainment	0.75	2.25
Final Direct Course Attainment	3.00	

Final Attainment

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
Final Attainment	2.17	1.40	1.00	2.00		1.75			1.33		1.33
Percentage	72.33	46.67	33.33	66.67		58.33			44.33		44.33

Saroja Adepawar





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

CO PO Desired Mapping Report

Year : Final Year - Sem 8

Subject : Biostatistics and Research Methodology (BP801T) - Theory

Faculty : Dhanshri kachare

Course Code : BP108T

Course Outcome Details

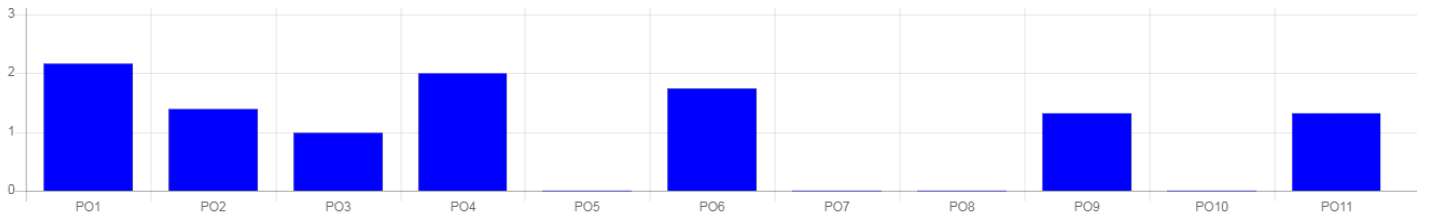
#	Course Outcome	Description
1	BP801T.1	Understand the importance and concept of Statistics, Biostatistics, Measures of central tendency, Measures of dispersion and Correlation with pharmaceutical examples
2	BP801T.2	Describe the concept and principal about Regression ,Probability ,Parametric test with pharmaceutical examples.
3	BP801T.3	Understand the importance of Parametric ,Non Parametric tests ,Research Need for research, Need for design of Experiments, Graphs ,Designing the methodology with Pharmaceutical Examples.
4	BP801T.4	Understand the importance of factorial design ,Regression modeling, Introduction to Practical components of Industrial and Clinical Trials Problems with pharmaceutical examples
5	BP801T.5	Understand the concept and knowledge regarding Design and Analysis of experiments ,Factorial Design ,Response Surface methodology with pharmaceutical examples

Desired Attainment Details

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP801T.1	2										
BP801T.2	3	3		3		3	3		3		
BP801T.3	3		3				3		3		
BP801T.4			1								
BP801T.5								2			
Average	2.67	3.00	2.00	3.00		3.00	3.00	2.00	3.00		

Desired Attainment Average : 2.71





Hedgawar





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 8

Subject : Computer Aided Drug Design (BP807ET)(Theory | Elective)

Course Code : BP807ET

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP807ET.1	Understand the design and discovery of lead molecules	PO1	Remember, Understand	Conceptual, Meta-cognitive
2	BP807ET.2	Classify the role of drug design tools for drug discovery process	PO1	Understand	Conceptual, Meta-cognitive
3	BP807ET.3	Understand and analyse concepts of QSAR and docking	PO1	Remember, Understand, Analyse	Conceptual, Meta-cognitive
4	BP807ET.4	Analyse and apply various strategies to develop new drug-like molecules.	PO1	Apply, Analyse	Conceptual, Meta-cognitive
5	BP807ET.5	Use various molecular modeling software to design new drug molecule	PO1	Apply	Conceptual, Meta-cognitive





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 8

Subject : Cosmetic Science (BP809ET)(Theory | Elective)

Course Code : BP809ET

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP809ET.1	Knowledge of various regulatory requirement for cosmetic and cosmeceutical products.	PO1, PO9	Remember, Understand	Factual, Criteria & Specifications
2	BP809ET.2	Understand the concepts of cosmetics; anatomy of skin v/s hair, general excipients used in cosmetics	PO2, PO7	Understand, Apply, Create	Procedural, Criteria & Specifications, Practical Constraints
3	BP809ET.3	Explain the principles and key building blocks of various skin care, hair care and oral care products etc	PO1, PO2, PO9	Apply, Analyse, Evaluate, Create	Factual, Procedural, Fundamental Design Principles, Criteria & Specifications
4	BP809ET.4	Discuss the cosmetic evaluation principles and cosmetic problems associate with skin, hair and oral cavity.	PO3, PO4	Apply, Analyse, Evaluate	Meta-cognitive, Criteria & Specifications
5	BP809ET.5	Explain the concept of cosmeceuticals, history, difference between cosmetics & cosmeceuticals& cosmeceuticals agents	PO1	Remember, Understand	Conceptual, Procedural



Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 8

Subject : Advanced Instrumentation Techniques (BP811ET)(Theory | Elective)

Course Code : BP811T

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP811ET 1	Understand and explain the principle of analytical techniques.	PO1	Remember, Understand	Conceptual
2	BP811ET 2	Understand and explain the instrumentation of analytical techniques.	PO1	Remember, Understand	Conceptual, Procedural
3	BP811ET 3	Understand and explain the applications of analytical techniques.	PO1	Remember, Understand	Conceptual, Procedural
4	BP811ET 4	To elucidate the structure of a compound by using UV, IR, NMR and Mass data.	PO1, PO4	Remember, Understand, Apply, Analyse	Procedural





Rajmata Jijau Shikshan Prasarak Mandal's College of Pharmacy, Dudulgaon, Pune

B. Pharmacy [2022-23]

Course Outcome

Year : Final Year - Sem 8

Subject : DIETARY SUPPLEMENTS AND NUTRACEUTICALS (BP 812 ET)(Theory | Elective)

Course Code : BP812ET

Sr. No.	CO Id	Course Outcome	PO/PSO	Cognitive Levels	Knowledge Categories
1	BP812ET1	Understand the need of supplements by the different group of people to maintain healthy life.	PO1, PO8	Remember, Understand, Apply	Conceptual
2	BP812ET2	Understand the outcome of deficiencies in dietary supplements	PO1, PO3	Remember, Understand, Apply	Factual, Conceptual
3	BP812ET3	Recognize the occurrence and characteristic features of phytochemicals as nutraceuticals	PO1, PO3, PO7, PO9	Remember, Understand, Apply	Factual, Conceptual, Procedural
4	BP812ET4	Understand the concept of free radicals and antioxidants	PO1, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual
5	BP812ET5	Acquaint with the regulatory and commercial aspects of dietary supplements including health claim.	PO1, PO9, PO11	Remember, Understand, Apply	Factual, Conceptual

SrB

J. S. Humal

