



NIRMALA COLLEGE OF PHARMACY MUVATTUPUZHA

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FIRST CYCLE NAAC ACCREDITATION 2023

CRITERION 2



TEACHING- LEARNING AND EVALUATION

2.6.2 Attainment of POs and COs are evaluated

Submitted to



THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

2.6.2 Attainment of Student Performance and Learning Outcome

EVALUATION OF POs AND COs

2020-2021



2.6.2 Attainment of Student Performance and Learning Outcome

Course Outcomes (COs) and Program Outcomes (POs)

Establish the correlation between the courses and the Program Outcomes

(NBA defined Program Outcomes as mentioned in Annexure I)

Course Outcomes

Note: Number of Outcomes for a Course is expected to be around 6.

On successful completion of this Course, students will be able to:

BP101T : Theory-Human Anatomy and Physiology I	
Sl.NO	DESCRIPTION
BP101T.1	Explain the gross morphology, structure and functions of various organs of the human body
BP101T.2	Describe the various homeostatic mechanisms and their imbalances
BP101T.3	Identify the various tissues and organs of different systems of human body.
BP101T.4	To explain the physiology of special senses and nervous system.
BP101T.5	Appreciate coordinated working pattern of different organs of each system

BP102T: -Theory-Pharmaceutical Analysis I	
Sl.NO	DESCRIPTION
BP102T.1	Understand the basic concept of the various volumetric analysis and will have a firm foundation in the fundamentals and application of current chemical and scientific theories of Analytical Chemistry.
BP102T.2	Gain an understanding of common laboratory techniques and gravimetric analysis for quantitative analysis of pharmaceuticals.
BP102T.3	Understand the basic principles of electrochemical analysis of drugs.
BP102T.4	Skilled in preparation and standardization of various concentrations of analytical solutions



BP102T.5	Understand the concepts of errors, accuracy precision
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BP201T: 2019-2020 – Theory-Human Anatomy and Physiology II	
Sl.NO	DESCRIPTION
BP201T.1	Explain the gross morphology, structure and functions of various organs of the human body
BP201T.2	Describe the various homeostatic mechanisms and their imbalances
BP201T.3	Identify the various tissues and organs of different systems of human body.
BP201T.4	To explain the physiology of special senses and nervous system.
BP201T.5	Appreciate coordinated working pattern of different organs of each system

BP202T: 2019-2020-Theory-Pharmaceutical Organic Chemistry-I	
SNO	DESCRIPTION
BP202T.1	Understand fundamental principles of organic chemistry.
BP202T.2	Understand the nomenclature of alkanes, alkenes, alkynes, alkyl halides, aromatic compounds, carbonyl compounds, Alcohols, ethers, phenols, amines, acids and their various derivatives using systematic (IUPAC) nomenclature
BP202T.3	Depict and explain detailed chemical mechanisms for various chemical reactions.
BP202T.4	Predict the physical properties of organic chemicals based on their structures and their hazardous nature.
BP202T.5	Understand the synthesis of various organic compounds which may be intermediates of drugs



BP303 Microbiology theory

SNO	DESCRIPTION
BP303.1	Understand methods of identification, cultivation and preservation of various microorganisms
BP303.2	Importance of sterilization in microbiology and pharmaceutical industry

BP303.3	Learn sterility testing of pharmaceutical products.
BP303.4	Microbiological standardization of Pharmaceuticals
BP303.5	Understand the cell culture technology and its applications in pharmaceutical industries.

BP307 Microbiology practical

SNO	DESCRIPTION
BP307.1	To understand the growth factors and physical conditions for growth of microbes
BP307.2	To understand the motility, staining and biochemical characteristics of microorganisms
BP307.3	To understand and apply the principle of aseptic transfer
BP307.4	To be able to understand and apply sterility testing I. P., microbial sensitivity testing and assay of antibiotics
BP307.5	To understand sterilization techniques



BP301T, 2018-2019, THEORY, PHARMACEUTICAL ORGANIC CHEMISTRY-II	
SNO	DESCRIPTION
BP301T.1	Understand about aromaticity, resonance and reactions of aromatic compounds.
BP301T.2	Understand the reactivity of phenols and aromatic amines.
BP301T.3	Depict and explain the purity and quality of oils and fats.
BP301T.4	Describe the chemistry of polynuclear aromatic hydrocarbons in terms of molecular orbital theory, aromaticity and reactions.
BP301T.5	Understand the stability of cycloalkanes & its reactions.

BP305P, 2018-2019, PRACTICAL, PHARMACEUTICAL ORGANIC CHEMISTRY- II	
S NO	DESCRIPTION
BP305P.1	Able to do the purification of organic compounds & extracted products
BP305P.2	Able to analyze the purity & quality of fats & oils in manufacturing sector
BP305P.3	Students will be able to synthesise organic drugs or intermediate involving one-step reaction in conventional methods and to report their percentage yield.
BP305P.4	Students will be able to depict and explain detailed chemical mechanisms for all chemical reactions and reactions related to synthesis.
BP305P.5	Knows the proper procedures and regulations for safe handling and use of chemicals and can follow the proper procedures and regulations for safe handling when using chemicals.



BP405T : 2019-2020– Theory- Pharmacognosy & Phytochemistry I	
SL.NO	DESCRIPTION
BP 405 T.1	know the techniques in the cultivation and production of crude drugs
BP 405 T.2	know the crude drugs, their uses and chemical nature
BP 405 T.3	Know the evaluation techniques for the herbal drugs and
BP 405 T.4	carry out the microscopic and morphological evaluation of crude drugs
BP 405 T.5	Role of Pharmacognosy in allopathy and traditional systems of medicine

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BP406P : 2019-2020 Practical – Medicinal Chemistry I	
SNO	DESCRIPTION
BP406P.1	Carryout the synthesis of diverse medicinal compounds along with their characterizations.
BP406P.2	To know the principle and procedure to estimate the actual amount of drug present in pharmaceutical formulations
BP406P.3	Perform various operations in the laboratory like weighing, transferring, titrations, preparation of solutions, recording and interpretation of analytical results.
BP406P.4	Clearly communicate the results of scientific work in oral, written and in electronic formats.
BP406P.5	Get familiarize with various experiments to know the various physiochemical properties of the drugs



BP505T : 2019-2020 Theory– Pharmaceutical Jurisprudence	
SL.NO	DESCRIPTION
BP505T.1	To understand the functions of pharmacy councils of India.
BP505T.2	Understand the Pharmaceutical legislations and their implications in the development and marketing.
BP505T.3	Grasp knowledge on administration of various act in India
BP505T.4	Grasp knowledge on the regulatory authorities and agencies governing the import, manufacture and sale of pharmaceuticals.
BP505T.5	Understand the code of ethics during the pharmaceutical practice and the pharmacists oath.

BP506P : 2019-2020 Practical– Formulative Pharmacy	
SL.NO	DESCRIPTION
BP506P.1P	Attain basic understanding in the area of preformulation study, manufacturing, packaging and labeling of tablets.
BP506P.2P	Understand the requirements of parenteral product preparation, packaging and labeling .
BP506P.3P	Understand processes involved in the preparation and evaluation

	of syrups
BP506P.4P	Develop skill in the manufacturing and packaging of creams
BP506P.5P	Learn the evaluation studies of different formulations and packaging materials.
BP606T: 2019-2020-Theory-Pharmaceutical Quality Assurance	
SNO	DESCRIPTION
BP606T.1	Demonstrate the importance of quality in pharmaceutical products and importance of Good practices and regulatory affairs such as GMP, GLP
BP606T.2	understand the activities and responsibilities of QA & QC departments
BP606T.3	understand the scope of quality certifications such as ICH, ISO and NABL
BP606T.4	Explain about validation and Calibration and its importance in QA and QC
BP606T.5	Various aspects of Documentation in pharmaceutical Industry

	BP608P: 2019-2020-Practical-Pharmacology III
SLNO	DESCRIPTION
BP608.1	Understand about the basic instruments used in experimental pharmacology and their assembling and uses
BP608.2	Know about the commonly used laboratory animals and how to maintain them. They also learn about the routes of drug administration in experimental animals as well as how to collect blood from animals used proper methods.
BP608.3	Learn and understand the common experiments performed in laboratory rats, frogs, rabbits etc and the step by step procedures of conducting the experiments using computer softwares.
BP608.4	Integrate and utilize the knowledge gained in the theory course by applying it in the practical sessions using various experiments
BP608.5	Use basic formulas and methods in experimental pharmacology and perform dose calculation experiments.



BP705 Instrumental Methods of Analysis P		
Sl.No	CO Code	Course Outcome
1	BP705.1	Illustrate the practical applications of instruments used in pharmaceutical research activities.
2	BP705.2	Design the analytical methods and evaluate the drug substance and formulation as per pharmacopoeia guidelines.
3	BP705.3	Utilize the theoretical skill in interpreting the qualitative and quantitative data in an effective way.
4	BP705.4	Apply the knowledge and subject specific skill to progress in academic as well as industrial research field
5	BP705.5	Utilize various analytical method for accessing the purity of formulations

SNO	Cosmetic Science–Theory DESCRIPTION
BP 801 T. 1	Gain knowledge about the basics of Research and apply this knowledge in their own research
BP 801 T. 2	Learn about different types of data and their analysis
BP 801 T. 3	Know the different computer softwares in statistics
BP 801 T. 4	To study the different epidemiologic study designs and the basic concepts of clinical trials.



CO-PO matrices of courses**THEORY: HUMAN ANATOMY AND PHYSIOLOGY**

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP101T.1	3	1	--	3	1	3	3	1	3	--	3
BP101T.2	3	1	1	3	1	2	-	3	3	1	3
BP101T.3	3	--	--	3	--	3	3	1	3	--	3
BP101T.4	3	--	--	3	--	3	3	1	3	--	3
BP101T.5	3	1	1	2	--	3	3	3	3	--	3
BP101(Average)	3	1	1	2.8	1	2.8	3	1.8	3	1	3

THEORY: PHARMACEUTICAL ANALYSIS

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP102T.1	3	2	2	1	2	3	-	2	1	1	3
BP102T.2	3	2	3	-	2	3	1	3	2	-	2
BP102T.3	3	3	3	3	2	2	2	2	1	-	3
BP102T.4	3	3	2	3	1	1	2	2	-	-	1
BP102T.5	3	2	-	-	2	2	1	2	2	-	2
BP102T	3	2.4	2.5	2.3	1.8	2.2	1.5	2.2	1.5	1	2.2



(Average)											
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THEORY: HUMAN ANATOMY AND PHYSIOLOGY

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP201T.1	3	1	--	3	1	3	3	1	3	--	3
BP201T.2	3	1	1	3	1	2	1	3	3	1	3
BP201T.3	3	--	--	3	--	3	3	1	3	--	3
BP201T.4	3	--	--	3	--	3	3	1	3	--	3
BP201T.5	3	1	1	2	--	3	3	3	3	--	3
BP201(Average)	3	1	1	2.8	1	2.8	2.6	1.8	3	1	3

THEORY: PATHOPHYSIOLOGY

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP 204T.1	3	3	3	3	2	2	-	3	3	3	2
BP 204T.2	3	3	2	3	2	2	-	3	----	----	2
BP 204T.3	3	3	3	3	2	2	1	3	3	--	--
BP 204T.4	3	2	2	3	2	2	1	3	3	3	2
BP 204T.5	3	3	3	3	2	2	1	3	3	----	---
Average	3	2.8	2.6	3	2	2	1	3	3	3	2



BP301T, 2018-2019, THEORY, PHARMACEUTICAL ORGANIC CHEMISTRY-II											
SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP301T.1	3	1	2	1	1	1	1	-	1	1	2

BP301T.2	3	1	2	1	-	-	-	1	1	1	2
BP301T.3	3	2	3	3	1	-	-	1	1	3	3
BP301T.4	3	2	2	2	1	1	-	2	1	2	3
BP301T.5	2	1	2	2	1	1	1	1	2	1	2
BP301T (Average)	2.8	1.4	2.2	1.8	0.8	0.6	0.4	1	1.2	1.6	2.4

BP301T, 2018-2019, THEORY, microbiology											
SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP303.1	3	2	2	1	1	2	1	2	2	2	1
BP303.2	3	2	2	1	1	2	1	2	2	1	1
BP303.3	3	2	2	1	1	2	1	2	2	1	1
BP303.4	3	2	2	1	1	2	2	2	2	2	1
BP303.5	3	2	2	1	1	2	1	2	2	1	1
BP301(Average)	3	2	2	1	1	2	1.2	2	2	1.4	1



SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP505T.1	3	3	1	1	2	3	3	2	3	3	3
BP505T.2	3	3	1	1	2	3	3	2	3	3	3
BP505T.3	3	3	1	1	3	3	3	2	2	3	3
BP505T.4	3	3	1	1	3	3	3	2	3	3	3
BP505T.5	3	2	1	1	3	3	3	2	3	3	3
BP505T (Average)	3	2.8	1	1	2	3	3	2	2	3	3

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP506P.1P	3	2	2	3	1	3	2	2	2	1	2
BP506P.2P	3	2	2	2	1	3	2	2	2	1	2
BP506P.3P	3	2	1	-	1	2	2	1	2	1	2
BP506P.4P	3	2	2	-	1	2	2	1	1	1	2
BP506P.5P	3	2	2	3	1	3	2	1	2	1	2
BP506P	3	2	1.7	2	1	2.6	2	1.4	1.5	1	2



COURSE: Pharmaceutical Quality Assurance											
COURSE CODE: BP606T											
SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP606T.1	3	3	3	1	3	3	3	3	3	3	3
BP606T.2	3	2	2	1	2	3	2	2	2	2	3
BP606T.3	3	3	3		1	2	3	1	3	2	3
BP606T.4	3	2	3	1	1	2	2	1	2	1	3
BP606T.5	3	3	3	1	2	2	2	3	1	1	2
BP606T (Average)	3	2.6	2.8	1.25	1.6	2.4	2.4	2.2	2.2	1.8	2.8

BP608 P- Pharmacology III Practical											
SLNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP608.1	3	1	1	2	-	1	-	1	1	-	2
BP608.2	3	2	2	2	1	2	3	2	1	2	3
BP608.3	3	2	2	2	1	2	2	2	2	2	2
BP608.4	3	2	2	2	1	2	2	2	1	1	2
BP608.5	3	3	3	2	-	2	1	2	2	-	3
BP608 (Average)	3	2	2	2	1	1.8	2	1.8	1.4	1.6	2.4



Advanced Instrumentation Techniques

SI NO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP 811- ET.1	3	3	3	3	1	2	1	1	-	-	3
BP 811- ET.2	3	1	2	3	1	2	1	2	1	-	3
BP 811- ET.3	3	3	3	3	2	3	1	1	1	1	3
BP 811- ET.4	3	3	3	3	2	3	-	2	-	-	3
BP 811- ET.5	3	2	2	1	3	2	3	2	2	2	2
(Average)	3	2.4	2.6	2.6	1.8	2.4	1.5	1.6	1.3	1.5	2.8



Cosmetic science THEORY

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP 801.T.1	1	3	2	1	2	2	3	3	3	1	3
BP 801.T.2	-	2	3	2	-	-	-	2	2	-	2
BP 801.T.3	-	2	3	3	-	2	-	2	2	-	2

BP 801.T.4	2	3	3	1	2	2	3	3	3	2	3
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Table 3.1.2

Note: Correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

If there is no correlation, put '-'

Course-PO matrix of courses for all four years of study



No	course code	subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
1	BP101T	Human anatomy and physiology I	3	1	1	2.8	1	2.8	3	1.8	3	1	3
2	BP102T	Pharmaceutical analysis I	3	3	2.8	2.3	2.4	2.4	2.5	2.8	2.2	3	2.6
3	BP103T	Pharmaceutics I	3	2.6	2	1.8	1.8	3	2	2	1	1	2.2
4	BP104T	Pharmaceutical inorganic chemistry	2.6	2	2	1.5	1.8	1.7	2	1.4	1.5	2.2	2
5	BP105T	Communication skills	1	2.6	2.8	2	2.6	2.2	2	3	2.8	1.7	2
6	BP107P	Human anatomy and physiology I practical	3	1.6	1.8	1.8	1	2	1.6	1.8	1	1.8	2
7	BP108P	Pharmaceutical analysis I practical	3	3	2.8	2.4	2.3	2.6	2.6	2.8	2.8	2.5	3
8	BP109P	Pharmaceutics I practical	3	2.6	3	2.6	2.8	3	2.2	3	2.6	1.2	2.6
9	BP110P	Pharmaceutical inorganic chemistry practical	2	2.2	2	2.2	2	2.4	1.8	2	1.8	2.4	1.8
10	BP111P	Communication skills practical	1	2.2	2	2.6	2.4	2.8	2.2	3	3	2.2	1.8
11	BP201T	Human anatomy and physiology II	3	1	1	2.8	1	2.8	2.6	1.8	3	1	3
12	BP202T	Pharmaceutical organic chemistry I	3	1	2	2	1	2	1	2.4	1.8	1.8	3

13	BP203T	Biochemistry	3	2.5	2.8	3	3	2.4	3	-	2.4	3	3
14	BP204T	Pathophysiology	3	2.8	2.6	3	2	2	1	3	3	3	2
15	BP205T	Computer applications in pharmacy	2.4	2.4	2.6	3	2	3	2.5	1.6	2	-	3
16	BP206T	Environmental sciences	3	3	3	2	3	3	3	3	3	3	3
17	BP207P	Human anatomy and physiology II practical	3	3	2.5	3	1.7	2	2.8	2	2	1	3
18	BP208P	Pharmaceutical organic chemistry I practical	3	2.4	2.8	2	1	1.2	1.2	1.6	2	1.8	3
19	BP209P	Biochemistry practical	2	2.2	2	2.2	2	2.4	1.8	2	1.8	2.4	1.8
20	BP210P	Computer applications in pharmacy practical	2	-	-	-	-	-	2	1	-	-	1.6
21	BP301T	Pharmaceutical organic chemistry II	2.8	1.4	2.2	1.8	0.8	0.6	0.4	1	1.2	1.6	2.4
22	BP302T	Physical Pharmaceutics I	3	2.6	2.6	2.5	2	2.4	-	2	1.6	-	2.8
23	BP303T	Pharmaceutical microbiology	3	2	2	1	1	2	1.2	2	2	1.4	1
24	BP304T	Pharmaceutical engineering	2.4	1.2	1.2	2.6	1.2	2	0.4	1.8	0.6	0.4	1.4
25	BP305P	Pharmaceutical organic chemistry II practical	3	2.6	2.8	2.4	1.2	1.8	1.6	2	2.4	2.2	3
26	BP306P	Physical Pharmaceutics I practical	3	3	3	1	2	3	-	3	1.4	-	3
27	BP307P	Pharmaceutical microbiology practical	3	2	1.8	1	1.2	1.8	1.2	2	1.6	1.8	2
28	BP308P	Pharmaceutical engineering practical	3	2.4	3	3	2.2	1.8	-	1.8	0.6	1.2	3
29	BP401T	Pharmaceutical organic chemistry III	3	2	3	2.8	1.6	1.4	1.2	1.4	1.8	2.4	3
30	BP402T	Medicinal chemistry I	3	2.2	2.6	2	1.2	1.8	1	2	2	1.6	2.8
31	BP403T	Physical pharmaceutics II	3	2.6	2.6	2.5	2	2.4	3	2	1.6	-	2.8
32	BP404T	Pharmacology I	3	1.6	1.8	1.8	1.3	1.8	1.8	1.6	2	1.2	2.8
33	BP405T	Pharmacognosy and phytochemistry I	3	2.4	2.6	1.4	1.4	2.4	1.8	1.8	2.2	2.8	2.6



34	BP406P	Medicinal chemistry I Practical	2.8	3	2.4	1.4	2	2.6	1.8	2.4	2	1.3	3
35	BP407P	Physical pharmaceutics II Practical	3	3	3	1	2	3	2	3	1.4	-	3
36	BP408P	Pharmacology I practical	3	2	2	2	1	1.8	2	1.8	1.4	1.6	2.4
37	BP409P	Pharmacognosy and phytochemistry I practical	2.4	2.8	2.8	1.6	2.2	2.6	2.4	2.6	2.8	2.8	2.8
38	BP 501T	Medicinal Chemistry II	3	2	2.6	1.8	1	2.2	1	2	2	1.6	3
39	BP 502T	Formulative pharmacy	2.8	1.8	2	2.5	2	2.3	2	1.25	2	1	1.6
40	BP 503T	Pharmacology	3	1.2	1	3	1	3	2.5	1.4	2.2	1	3
41	BP 504T	Pharmacognosy	3	3	3	2	3	3	3	3	3	3	3
42	BP 505T	Jurisprudence	3	2.8	1	1	2	3	3	2	2	3	3
43	BP 506P	Formulative pharmacy Practicals	3	2	1.7	2	1	2.6	2	1.4	1.5	1	2
44	BP 507P	Pharmacology practicals	3	2	2	2	1	1.8	2	1.8	1.4	1	2.4
45	BP 508P	Pharmacognosy practicals	3	3	3	2	3	3	3	3	3	3	3
46	BP 601T	Medicinal chemistry III	3	2	2.6	1.8	1	2.2	1	2	2	1.6	3
47	BP 602T	Pharmacology III	3	1.2	1.6	2.6	1	2.4	3	2.6	2.6	1	3
48	BP 603T	Herbal drug technology	3	3	3	2	3	3	3	3	3	3	3
49	BP 604T	Biopharmaceutics	3	3	3	2.8	3	3	2	3	2.8	2.2	3
50	BP 605T	Biotechnology	3	2	2	2.5	1	2	1.75	2	1.75	2	2.5
51	BP 606T	Quality assurance	3	2.6	2.8	1.25	1.6	2.4	2.4	2.2	2.2	1.8	2.8
52	BP 607P	Medicinal chemistry III	2.8	3	2.4	1.4	2	2.6	1.8	2.4	2	1.3	3
53	BP 608 P	Pharmacology III	3	2	2	2	1	1.8	2	1.8	1.4	1.6	2.4
54	BP 609 P	Herbal drug technology	3	3	3	2	3	3	3	3	3	3	3
55	BP701T	Instrumental Methods of Analysis	3	2.4	2.6	3	1.8	2.4	1.5	1.4	1.5	1.5	2.8
56	BP702T	Industrial Pharmacy	3	2.4	2.8	1	1.6	2.4	2.4	2.4	1.2	2.2	2.8
57	BP703T	Pharmacy Practice	3	2	2.6	2.6	2	2.6	2.4	2.6	2.6	1.6	2
58	BP704T	Novel Drug Delivery System	3	3	3	-	2	3	3	3	1.4	2.6	3



59	BP705P	Instrumental Methods of Analysis P	3	2.6	2.2	2.8	1.6	2	1	1.8	0.8	0.8	2.8
60	BP706PS	Practice school	3	2.6	2.6	2.2	1.4	1.8	1	1.2	2	1.8	2.4
61	BP801T	Biostatistics and Research Methodology –Theory	0.6	2	2.2	1.4	0.8	1.2	1.2	2	2	0.6	2
62	BP802T	Social and Preventive	3	2.6	2	2.2	1.6	3	1	3	3	2.5	2
63	BP804ET	Pharmaceutical Regulatory Science	3	2.4	2.8	1	1.6	2.4	2.4	2.4	1.2	2.2	2.8
64	BP805ET	Pharmacovigilance–Theory	3	2.6	1.2	2.2	1.6	2.4	0.4	3	3	1	2
65	BP806ET	Quality Control and Standardizations of Herbals– Theory	3	2.8	2	1.8	2.8	3	3	3	3	3	3
66	BP807ET	Computer Aided Drug Design	2.2	1.8	1.2	1.8	1.8	1.8	2	1.8	2	2.2	2.2
67	BP808ET	Cell and Molecular Biology	3	1	1	2.2	1	1	2	1	1	1	3
68	BP809ET	Cosmetic Science–Theory	1.8	2	2	0.6	-	0.8	0.4	0.8	1	0.6	1.4
69	BP810ET	Experimental Pharmacology–Theory	3	2	1.5	3	1.3	2.8	3	1.8	3	1	2.8
70	BP811ET	Advanced Instrumentation techniques	2.7	2.3	2.7	3.0	2.0	2.7	3.0	1.0	2.0	1.0	2.3
71	BP812PW	Project Work	3	2	3	2.2	2.2	2.6	2	3	3	1	3

Table 3.1.3*

Note: Correlation levels 1, 2 or 3, as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

If there is no correlation, put ‘-’

□ It may be noted that contents of Table 3.1.2 must be consistent with information available in Table 3.1.3 for all the courses.

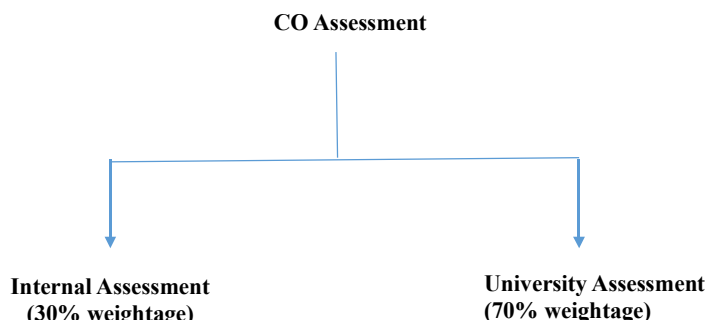
Attainment of Course Outcomes

Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based

The assessment processes mentioned here is for the Academic Year 2017-2018.

(i)CO Assessment Rubrics:





Course Outcome is evaluated based on the performance of students in internal assessments and in university examinations of a course. Internal assessment contributes 30% and university assessment contributes 70% to the total attainment of a CO.

(ii)CO Assessment Tools:

The various assessment tools used to evaluate COs and the frequency with which the assessment processes are carried out are listed in Table 3.2.1.

Table 3.2.1 Direct Assessment Tools

DIRECT ASSESSMENT TOOLS		
Course Type	Assessment Tools	Minimum Frequency
Theory	Continuous assessment	Continuous
	Sessional exams	twice per course
	University Exam	twice per course
Practical	Daily Performance & viva	Every lab session
	Sessional Lab exam	Once per course
	University Exam	Once per course



Project	Phase I	Review	Once per course
	Phase II	Presentation	Once per course
		Evaluation by Guide	Continuous evaluation



Internal assessment: Continuous mode

The marks allocated for Continuous mode of Internal Assessment shall be awarded as per the scheme given below

Scheme for awarding internal assessment: Continuous mode

Theory		
Criteria	Maximum Marks	
Attendance	4	2
Academic activities (Average of any 3 activities e.g. quiz, assignment, open book test, field work, group discussion and seminar)	3	1.5
Student – Teacher interaction	3	1.5
Total	10	5
Practical		
Attendance	2	
Based on Practical Records, Regular viva voce, etc.	3	
Total	5	



Guidelines for the allotment of marks for attendance

Percentage of Attendance	Theory	Practical
95 – 100	4	2
90 – 94	3	1.5
85 – 89	2	1
80 – 84	1	0.5
Less than 80	0	0

Sessional Exams

Two Sessional exams shall be conducted for each theory / practical course as per the schedule fixed by the college(s). The scheme of question paper for theory and practical Sessional examinations is given below. The average marks of two Sessional exams shall be computed for internal assessment. Sessional exam shall be conducted for 30 marks for theory and shall be computed for 15 marks. Similarly Sessional exam for practical shall be conducted for 40 marks and shall be computed for 10 marks.

Promotion and award of grades

A student shall be declared PASS and eligible for getting grade in a course of B.Pharm. program if he/she secures at least 50% marks in that particular course. For example, to be declared as PASS and to get grade, the student has to secure a minimum of 50 marks for the total of 100 and has to secure a minimum of 25 marks for the total 50 in end semester practical examination.

Carry forward of marks

In case a student fails to secure the minimum 50% in any Theory or Practical course, then he/she shall reappear for the end semester examination of that course. However, his/her marks of the Internal Assessment shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.

Improvement of internal assessment

A student shall have the opportunity to improve his/her performance only once in the Sessional exam component of the internal assessment. The re-conduct of the Sessional exam shall be completed before the commencement of next end semester theory examinations.

End semester examination

The End Semester Examinations for each theory and practical course through semesters I to VIII shall be conducted by the university except for subjects for which examinations shall be conducted by the subject experts at college level and the marks/grades shall be awarded



Record the attainment of Course Outcomes of all courses with respect to set attainment levels

Program shall have set Course Outcome attainment levels for all courses. The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the course outcomes of a course in addition to the performance in the University examination.

(i) Attainment Levels:

Table 3.2.2 (a) Attainment Levels of Cos

Academic year	CO ATTAINMENT		
	Level	Internal exams	University exams
2020-2021	Level 1	50% of students scoring 64% and more than 64% marks in internal assessment.	50% of students scoring 60% and more than 60% marks in university examination.
	Level 2	60% of students scoring 64% and more than 64% marks in internal	60% of students scoring 60% and more than 60% marks in university



		assessment.	examination.
	Level 3	70% of students scoring 64% and more than 64% marks in internal assessment.	70% of students scoring 60% and more than 60% marks in university examination.

Measuring CO attainment through University examinations:

S. No	Subject code	Subject Name	% of students attained 60%	Attainment
				Through University Examinations
1	BP101T	Human anatomy and physiology I	43.4	0
2	BP102T	Pharmaceutical analysis I	57	1
3	BP103T	Pharmaceutics I	62.2	2
4	BP104T	Pharmaceutical inorganic chemistry	66.7	2
5	BP105T	Communication skills	93	3
6	BP107P	Human anatomy and physiology I practical	52.5	1
7	BP108P	Pharmaceutical analysis I practical	100	3
8	BP109P	Pharmaceutics I practical	100	3
9	BP110P	Pharmaceutical inorganic chemistry practical	100	3
10	BP111P	Communication skills practical	100	3
11	BP201T	Human anatomy and physiology II	39.1	0
12	BP202T	Pharmaceutical organic chemistry I	63	2
13	BP203T	Biochemistry	63	2



14	BP204T	Pathophysiology	89	3
15	BP205T	Computer applications in pharmacy	83.7	3
16	BP206T	Environmental sciences	100	3
17	BP207P	Human anatomy and physiology II practical	100	3
18	BP208P	Pharmaceutical organic chemistry I practical	97	3
19	BP209P	Biochemistry practical	100	3
20	BP210P	Computer applications in pharmacy practical	75.8	3
21	BP301T	Pharmaceutical organic chemistry II	56	1
22	BP302T	Physical Pharmaceutics I	63	2
23	BP303T	Pharmaceutical microbiology	63	2
24	BP304T	Pharmaceutical engineering	100	3
25	BP305P	Pharmaceutical organic chemistry II practical	100	3
26	BP306P	Physical Pharmaceutics I practical	100	3
27	BP307P	Pharmaceutical microbiology practical	100	3
28	BP308P	Pharmaceutical engineering practical	100	3
29	BP401T	Pharmaceutical organic chemistry III	66.6	2
30	BP402T	Medicinal chemistry I	66.6	2
31	BP403T	Physical pharmaceutics II	56.6	1
32	BP404T	Pharmacology I	83.8	3
33	BP405T	Pharmacognosy and phytochemistry I	75	3
34	BP406P	Medicinal chemistry I Practical	97	3
35	BP407P	Physical pharmaceutics II Practical	93	3
36	BP408P	Pharmacology I practical	90	3
37	BP409P	Pharmacognosy and phytochemistry I practical	100	3
38	BP 501T	Medicinal Chemistry II	76.2	3
39	BP 502T	Formulative pharmacy	66.7	2
40	BP 503T	Pharmacology	54	1
41	BP 504T	Pharmacognosy	61	2



42	BP 505T	Jurisprudence	73	3
43	BP 506P	Formulative pharmacy Practicals	97	3
44	BP 507P	Pharmacology practicals	100	3
45	BP 508P	Pharmacognosy practicals	95	3
46	BP 601T	Medicinal chemistry III	80.9	3
47	BP 602T	Pharmacology III	70	3
48	BP 603T	Herbal drug technology	91.8	3
49	BP 604T	Biopharmaceutics	70	3
50	BP 605T	Biotechnology	70	3
51	BP 606T	Quality assurance	60.3	2
52	BP 607P	Medicinal chemistry III	100	3
53	BP 608 P	Pharmacology III	95	3
54	BP 609 P	Herbal drug technology	100	3
55	BP701T	Instrumental Methods of Analysis	92.1	3
56	BP702T	Industrial Pharmacy	59	1
57	BP703T	Pharmacy Practice	76.2	3
58	BP704T	Novel Drug Delivery System	74	3
59	BP705P	Instrumental Methods of Analysis P	96.8	3
60	BP706PS	Practice school	100	3
61	BP801T	Biostatistics and Research Methodology –Theory	98	3
62	BP802T	Social and Preventive	96.8	3
63	BP804ET	Pharmaceutical Regulatory Science	67.3	2
64	BP805ET	Pharmacovigilance–Theory	78	3
65	BP806ET	Quality Control and Standardizations of Herbals– Theory	100	3
66	BP807ET	Computer Aided Drug Design	100	3
67	BP808ET	Cell and Molecular Biology	40	0
68	BP809ET	Cosmetic Science–Theory	82	3



69	BP810ET	Experimental Pharmacology–Theory	57.1	1
70	BP811ET	Advanced Instrumentation techniques	81.8	3
71	BP812PW	Project Work	100	3

Measuring CO attainment through Internal Assessments:

For calculation of CO attainment from internal examinations, all sessional examinations are taken into account. The overall CO attainment from three sessional examinations are calculated by taking the average of individual co attainment from each sessional examination.

S. No	Subject code	Subject Name	% of students attained 64%	Attainment
				through internal exams
1	BP101T	Human anatomy and physiology I	95	3
2	BP102T	Pharmaceutical analysis I	98	3
3	BP103T	Pharmaceutics I	95.5	3
4	BP104T	Pharmaceutical inorganic chemistry	97	3
5	BP105T	Communication skills	98	3
6	BP107P	Human anatomy and physiology I practical	95	3
7	BP108P	Pharmaceutical analysis I practical	78	3
8	BP109P	Pharmaceutics I practical	100	3
9	BP110P	Pharmaceutical inorganic chemistry practical	100	3



10	BP111P	Communication skills practical	100	3
11	BP201T	Human anatomy and physiology II	85.7	3
12	BP202T	Pharmaceutical organic chemistry I	75.5	3
13	BP203T	Biochemistry	70.4	3
14	BP204T	Pathophysiology	85.7	3
15	BP205T	Computer applications in pharmacy	83.7	3
16	BP206T	Environmental sciences	96.9	3
17	BP207P	Human anatomy and physiology II practical	96.9	3
18	BP208P	Pharmaceutical organic chemistry I practical	96.9	3
19	BP209P	Biochemistry practical	96.9	3
20	BP210P	Computer applications in pharmacy practical	100	3
21	BP301T	Pharmaceutical organic chemistry II	75.81	3
22	BP302T	Physical Pharmaceutics I	82	3
23	BP303T	Pharmaceutical microbiology	92	3
24	BP304T	Pharmaceutical engineering	82	3
25	BP305P	Pharmaceutical organic chemistry II practical	91.5	3
26	BP306P	Physical Pharmaceutics I practical	100	3
27	BP307P	Pharmaceutical microbiology practical	94	3
28	BP308P	Pharmaceutical engineering practical	74	3
29	BP401T	Pharmaceutical organic chemistry III	80	3
30	BP402T	Medicinal chemistry I	85	3
31	BP403T	Physical pharmaceutics II	93.3	3
32	BP404T	Pharmacology I	85	3
33	BP405T	Pharmacognosy and phytochemistry I	85	3
34	BP406P	Medicinal chemistry I Practical	94	3
35	BP407P	Physical pharmaceutics II Practical	100	3
36	BP408P	Pharmacology I practical	100	3
37	BP409P	Pharmacognosy and phytochemistry I practical	100	3



38	BP 501T	Medicinal Chemistry II	100	3
39	BP 502T	Formulative pharmacy	88.9	3
40	BP 503T	Pharmacology	100	3
41	BP 504T	Pharmacognosy	90	3
42	BP 505T	Jurisprudence	100	3
43	BP 506P	Formulative pharmacy Practicals	98.4	3
44	BP 507P	Pharmacology practicals	90	3
45	BP 508P	Pharmacognosy practicals	90	3
46	BP 601T	Medicinal chemistry III	84.1	3
47	BP 602T	Pharmacology III	90.4	3
48	BP 603T	Herbal drug technology	83.5	3
49	BP 604T	Biopharmaceutics	63.4	2
50	BP 605T	Biotechnology	87.3	3
51	BP 606T	Quality assurance	98.4	3
52	BP 607P	Medicinal chemistry III	100	3
53	BP 608 P	Pharmacology III	98.4	3
54	BP 609 P	Herbal drug technology	100	3
55	BP701T	Instrumental Methods of Analysis	96.8	3
56	BP702T	Industrial Pharmacy	100	3
57	BP703T	Pharmacy Practice	90.5	3
58	BP704T	Novel Drug Delivery System	87	3
59	BP705P	Instrumental Methods of Analysis P	100	3
60	BP706PS	Practice school	100	3
61	BP801T	Biostatistics and Research Methodology –Theory	97	3
62	BP802T	Social and Preventive	100	3
63	BP804ET	Pharmaceutical Regulatory Science	100	3
64	BP805ET	Pharmacovigilance–Theory	100	3



65	BP806ET	Quality Control and Standardizations of Herbals– Theory	100	3
66	BP807ET	Computer Aided Drug Design	100	3
67	BP808ET	Cell and Molecular Biology	100	3
68	BP809ET	Cosmetic Science–Theory	100	3
69	BP810ET	Experimental Pharmacology–Theory	92.8	3
70	BP811ET	Advanced Instrumentation techniques	100	3
71	BP812PW	Project Work	100	3

Course Outcome Attainment:

S. No	Subject code	Subject name	30% of internal	70% of External	SUM of 70%+30%
1	BP101T	Human anatomy and physiology I	0.9	0	0.9
2	BP102T	Pharmaceutical analysis I	0.9	0.7	1.6
3	BP103T	Pharmaceutics I	0.9	1.4	2.3
4	BP104T	Pharmaceutical inorganic chemistry	0.9	1.4	2.3
5	BP105T	Communication skills	0.9	2.1	3
6	BP107P	Human anatomy and physiology I practical	0.9	0.7	1.6
7	BP108P	Pharmaceutical analysis I practical	0.9	2.1	3
8	BP109P	Pharmaceutics I practical	0.9	2.1	3
9	BP110P	Pharmaceutical inorganic chemistry practical	0.9	2.1	3
10	BP111P	Communication skills practical	0.9	2.1	3
11	BP201T	Human anatomy and physiology II	0.9	0	0.9
12	BP202T	Pharmaceutical organic chemistry I	0.9	1.4	2.3
13	BP203T	Biochemistry	0.9	1.4	2.3
14	BP204T	Pathophysiology	0.9	2.1	3



15	BP205T	Computer applications in pharmacy	0.9	2.1	3
16	BP206T	Environmental sciences	0.9	2.1	3
17	BP207P	Human anatomy and physiology II practical	0.9	2.1	3
18	BP208P	Pharmaceutical organic chemistry I practical	0.9	2.1	3
19	BP209P	Biochemistry practical	0.9	2.1	3
20	BP210P	Computer applications in pharmacy practical	0.9	2.1	3
21	BP301T	Pharmaceutical organic chemistry II	0.9	0.7	1.6
22	BP302T	Physical Pharmaceutics I	0.9	1.4	2.3
23	BP303T	Pharmaceutical microbiology	0.9	1.4	2.3
24	BP304T	Pharmaceutical engineering	0.9	2.1	3
25	BP305P	Pharmaceutical organic chemistry II practical	0.9	2.1	3
26	BP306P	Physical Pharmaceutics I practical	0.9	2.1	3
27	BP307P	Pharmaceutical microbiology practical	0.9	2.1	3
28	BP308P	Pharmaceutical engineering practical	0.9	2.1	3
29	BP401T	Pharmaceutical organic chemistry III	0.9	1.4	2.3
30	BP402T	Medicinal chemistry I	0.9	1.4	2.3
31	BP403T	Physical pharmaceutics II	0.9	0.7	1.6
32	BP404T	Pharmacology I	0.9	2.1	3
33	BP405T	Pharmacognosy and phytochemistry I	0.9	2.1	3
34	BP406P	Medicinal chemistry I Practical	0.9	2.1	3
35	BP407P	Physical pharmaceutics II Practical	0.9	2.1	3
36	BP408P	Pharmacology I practical	0.9	2.1	3
37	BP409P	Pharmacognosy and phytochemistry I practical	0.9	2.1	3
38	BP 501T	Medicinal Chemistry II	0.9	2.1	3
39	BP 502T	Formulative pharmacy	0.9	1.4	2.3
40	BP 503T	Pharmacology	0.9	0.7	1.6
41	BP 504T	Pharmacognosy	0.9	1.4	2.3
42	BP 505T	Jurisprudence	0.9	2.1	3



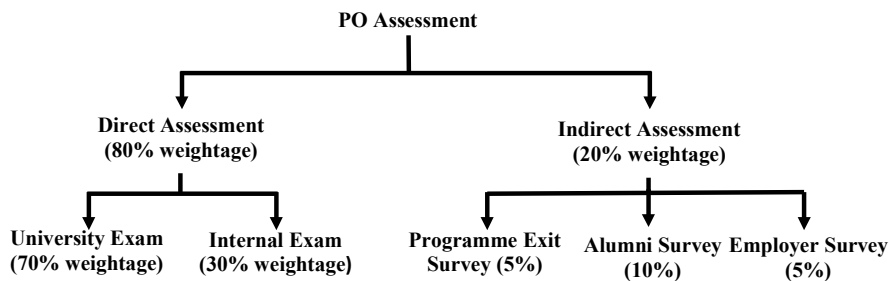
43	BP 506P	Formulative pharmacy Practicals	0.9	2.1	3
44	BP 507P	Pharmacology practicals	0.9	2.1	3
45	BP 508P	Pharmacognosy practicals	0.9	2.1	3
46	BP 601T	Medicinal chemistry III	0.9	2.1	3
47	BP 602T	Pharmacology III	0.9	2.1	3
48	BP 603T	Herbal drug technology	0.9	2.1	3
49	BP 604T	Biopharmaceutics	0.9	2.1	3
50	BP 605T	Biotechnology	0.9	2.1	3
51	BP 606T	Quality assurance	0.9	1.4	2.3
52	BP 607P	Medicinal chemistry III	0.9	2.1	3
53	BP 608 P	Pharmacology III	0.9	2.1	3
54	BP 609 P	Herbal drug technology	0.9	2.1	3
55	BP701T	Instrumental Methods of Analysis	0.9	2.1	3
56	BP702T	Industrial Pharmacy	0.9	0.7	1.6
57	BP703T	Pharmacy Practice	0.9	2.1	3
58	BP704T	Novel Drug Delivery System	0.9	2.1	3
59	BP705P	Instrumental Methods of Analysis P	0.9	2.1	3
60	BP706PS	Practice school	0.9	2.1	3
61	BP801T	Biostatistics and Research Methodology –Theory	0.9	2.1	3
62	BP802T	Social and Preventive	0.9	2.1	3
63	BP804ET	Pharmaceutical Regulatory Science	0.9	1.4	2.3
64	BP805ET	Pharmacovigilance–Theory	0.9	2.1	3
65	BP806ET	Quality Control and Standardizations of Herbals– Theory	0.9	2.1	3
66	BP807ET	Computer Aided Drug Design	0.9	2.1	3
67	BP808ET	Cell and Molecular Biology	0.9	0	0.9
68	BP809ET	Cosmetic Science–Theory	0.9	2.1	3



69	BP810ET	Experimental Pharmacology–Theory	0.9	0.7	1.6
70	BP811ET	Advanced Instrumentation techniques	0.9	2.1	3
71	BP812PW	Project Work	0.9	2.1	3

Attainment of Program Outcomes

Describe assessment tools and processes used for assessing the attainment of each PO



(I) PO Assessment Rubrics:

PO assessment is done by giving 80% weightage to direct assessment and 20% weightage to indirect assessment. Direct assessment is based on CO attainment through examinations, where 70% weightage is given to attainment through university exam and 30% weightage is given to attainment through internal examinations. Indirect assessment is done through Graduate exit survey, Alumni feedback survey and Employer feedback survey giving percentage weightage of 5%, 10% and 5% respectively.

(II) PO Assessment Tools:



The various direct and indirect assessment tools used to evaluate POs and the frequency with which the assessment processes are carried out are listed in Table 3.3.1 and 3.3.2

Table 3.3.1 Direct Assessment Tools

DIRECT ASSESSMENT TOOLS			
Course Type	Assessment Tools	Minimum Frequency	
Theory	Continuous assessment	Continuous	
	Sessional exams	Twice per course	
	University Exam	Once per course	
Practical	Daily Performance & viva	Every lab session	
	Sessional Lab exam	Twice per course	
	University Exam	Once per course	
Project	Phase I	Review	Once per course
	Phase II	Presentation	Once per course
		Evaluation by Guide	Continuous evaluation



Table3.3.2 Indirect Assessment Tools:

I CALCULATION OF POs BASED ON STUDENTS EXIT SURVEY

➤ ACADEMIC YEAR: 2020-2021

RELATION OF POS WITH QUESTIONNAIRE AND PO ATTAINMENT SCORES

Sl.No.	Program Outcomes	Questions involved	PO attainment
1	PO1	1	2.27
2	PO2	2	2.17
3	PO3	3	2.03
4	PO4	4	2.04
5	PO5	5	2.02
6	PO6	6	2.04
7	PO7	7	2.52
8	PO8	8	2.28
9	PO9	9	2.29
10	PO10	10	2.19
11	PO11	11	2.16





II) EMPLOYER/TRAINING SURVEY:

One of the best measures whether the program outcomes are achieved is to analyse the opinion of the employer/trainer about the competency and professionalism exhibited by the graduates in their professional field. For this the employers/trainers are requested to fill up the questionnaire. The knowledge, attitude, skills, professionalism, competency, abilities and other attributes can be evaluated by the response of employers. Moreover, the questions are related to the program outcomes. The feedback is taken after one year of their joining date.

QUESTIONNAIRE FORMAT

EMPLOYERS/TRAINING FEEDBACK FORM

NOTE: Please tick as appropriate for the following questions with respect to BPharm graduate program.

Sl. No	Question/Parameter for evaluation	Excellent	Very good	Good	Fair	Poor
1	How competent are graduates in the application of the basic pharmaceutical sciences and its concepts?					
2	How do you rate the graduate's fundamental pharmacy related knowledge?					

3	How do you rate the graduate's knowledge in the various subjects of pharmaceutical sciences?					
4	How do you rate the graduate's ability to apply the principles learned from various pharmaceutical sciences?					
5	How do you rate the graduate's ability to analyse problems, interpret them and make use of his/her knowledge to solve them?					
6	How good is the graduate's ability in identifying and solving pharmaceutical problems?					
7	How can you rate the graduate's oral communication and presentation skills?					
8	How effective is the graduate's written communication skills? (Ability to write effectively).					
9	How do you rate the graduate's ability to function in teams?					
10	How do you rate the graduate's understanding of his/her ethical and professional responsibilities?					
11	How do you rate the graduate's understanding of the social and global issues that have to be considered while providing solutions to various problems?					
12	How do you rate the graduate's understanding of the need for and the ability to engage in life-long learning?					



13	How do you rate the structure of the curriculum in providing in-depth education in the area of pharmaceutical sciences?					
14	How well the university curriculum has prepared the graduates for their academic/professional career?					
15	Overall rating of the Institute (academic, cocurricular, extra-curricular activities)?					

PO'S	EMPLOYER SURVEY
PO1	2.1
PO2	1.79
PO3	1.8
PO4	1.82
PO5	2.49
PO6	2.28
PO7	2.08
PO8	2.42
PO9	1.98
PO10	2.01
PO11	1.96



III) ALUMNI SURVEY:

Alumni particularly those who have completed one year after graduation are able to respond whether the practiced curriculum have given orientation towards the emerging changes in the field. For calculation of Program Outcomes, feedback is taken from alumni

QUESTIONNAIRE FORMAT

ALUMNI FEEDBACK FORM

NOTE: Please tick as appropriate for the following questions with respect to B.Pharm graduate program.

Sl. No	Question/Parameter for evaluation	Excellent	Good	Fair	Poor
1	How competent are you in the application of the basic pharmaceutical sciences and its concepts?				
2	How do you rate your fundamental pharmacy related knowledge?				
3	How do you rate your knowledge in the various subjects of pharmaceutical sciences?				
4	How do you rate your ability to apply the principles learned from various pharmaceutical sciences?				
5	How do you rate your ability to analyze problems, interpret them and make use of your knowledge to solve them?				
6	How good is your ability in identifying, formulating and solving pharmaceutical problems?				
7	How can you rate your oral communication and presentation skills?				
8	How effective is your written communication skills?				



	(Ability to write effectively).				
9	How do you rate your ability to function in teams?				
10	How do you rate your understanding of your ethical and professional responsibilities?				
11	How do you rate your understanding of the social and global issues that have to be considered while providing solutions to various pharmaceutical problems?				
12	How do you rate your understanding of the need for and the ability to engage in life-long learning?				
13	How do you rate the structure of the curriculum in providing in-depth education in the area of pharmaceutical sciences?				
14	How well as the university curriculum prepared you for your academic/professional career?				
15	Overall rating of your college/institute (academic, co-curricular, extra-curricular activities)?				



Pos	ALUMNI SURVEY
PO1	1.98
PO2	2.01

PO3	1.98
PO4	1.82
PO5	2.45
PO6	2.2
PO7	2.32
PO8	2.2
PO9	1.95
PO10	1.98
PO11	2.32

ATTAINMENT OF PROGRAM OUTCOMES

FINAL RESULTS: INDIRECT ASSESSEMENT SURVEY (WEIGHTAGE WISE: 20 %)

PO'S	EMPLOYER SURVEY	5%(A)	ALUMINI SURVEY	10%(B)	PO EXIT SURVEY	5%(C)	20%(A+B+C)
PO1	2.1	0.105	1.98	0.198	2.27	0.1135	0.4165
PO2	1.79	0.0895	2.01	0.201	2.17	0.1085	0.399
PO3	1.8	0.09	1.98	0.198	2.03	0.1015	0.3895
PO4	1.82	0.091	1.82	0.182	2.04	0.102	0.375
PO5	2.49	0.1245	2.45	0.245	2.02	0.101	0.4705
PO6	2.28	0.114	2.2	0.22	2.04	0.102	0.436



PO7	2.08	0.104	2.32	0.232	2.52	0.126	0.462
PO8	2.42	0.121	2.2	0.22	2.28	0.114	0.455
PO9	1.98	0.099	1.95	0.195	2.29	0.1145	0.4085
PO10	2.01	0.1005	1.98	0.198	2.19	0.1095	0.408
PO11	1.96	0.098	2.32	0.232	2.16	0.108	0.438

RESULTS OF EVALUATION OF EACH PO FOR THE ACADMIC YEAR 2020-2021

Provide results of evaluation of each PO

PO DIRECT ASSESSMENT PROCESSES:

The CO attainment level calculation of university theory and practical examinations and internal practical examinations are mentioned in 3.2.2.



PO CALCULATION TEMPLATE

Model for Calculation of Final PO Attainment level eg:C105

Set or target CO-PO matrix average level (by teacher)

Subject code	Subject Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11
BP102T (Average)	PHARMA CEUTICA L ANALYSI S	3	2.4	2.5	2.3	1.8	2.2	1.5	2.2	1.5	1	2.2

CO Level Attained from Examination Result

Subject code	Subject Name	30% of internal	70% of External	SUM of 70%+30%
BP102T (Average)	PHARMACEUTICAL ANALYSIS	0.59	2.1	2.7



For calculating the attainment of individual POs the following equation is used

(Set PO level x CO level attained in result)/Maximum score level

For example, for calculation of PO6

- Set PO level for PO6 is 2.2
- CO level attained in exams result is 2.7
- Maximum score level which can be attained is 3

So the attainment of PO6= $(2.2 \times 2.7) / 3 = 1.98$

- Attainment of that PO in terms of % is $(1.98 \times 100) / 3 = 66$
- Gap for that PO is 100-66 ie, 34

no	Course code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
1	BP101T	Human anatomy and physiology I	0.9	0.3	0.3	0.84	0.3	0.84	0.9	0.54	0.9	0.3	0.9
2	BP102T	Pharmaceutical analysis I	1.6	1.6	1.5	1.2	1.3	1.3	1.3	1.5	1.2	1.6	1.4
3	BP103T	Pharmaceutics I	2.3	2	1.5	1.4	1.4	2.3	1.5	1.5	0.8	0.8	1.7



4	BP104T	Pharmaceutical inorganic chemistry	2	1.5	1.5	1.2	1.4	1.3	1.5	1.1	1.2	1.7	1.5
5	BP105T	Communication skills	1	2.6	2.8	2	2.6	2.2	2	3	2.8	1.7	2
	BP107P	Human anatomy and physiology I practical	3	1.6	1.8	1.8	1	2	1.6	1.8	1	1.8	2
7	BP108P	Pharmaceutical analysis I practical	3	3	2.8	2.4	2.3	2.6	2.6	2.8	2.8	2.5	3
8	BP109P	Pharmaceutics I practical	3	2.6	3	2.6	2.8	3	2.2	3	2.6	1.2	2.6



9	BP110P	Pharmaceutical inorganic chemistry practical	2	2.2	2	2.2	2	2.4	1.8	2	1.8	2.4	1.8
10	BP111P	Communication skills practical	1	2.2	2	2.6	2.4	2.8	2.2	3	3	2.2	1.8
11	BP201T	Human anatomy and physiology II	0.9	0.3	0.3	0.84	0.3	0.84	0.78	0.54	0.9	0.3	0.9
12	BP202T	Pharmaceutical organic chemistry I	2.3	0.8	1.5	1.5	0.8	1.5	0.8	1.8	1.4	1.4	2.3
13	BP203T	Biochemistry	2.3	1.9	2.1	2.3	2.3	1.8	2.3		1.8	2.3	2.3
14	BP204T	Pathophysiology	1.6	1.5	1.4	1.6	1.1	1.1	0.5	1.6	1.6	1.6	1.1



15	BP205T	Computer applications in pharmacy	2.4	2.4	2.6	3	2	3	2.5	1.6	2	0	3
16	BP206T	Environmental sciences	3	3	3	2	3	3	3	3	3	3	3
17	BP207P	Human anatomy and physiology II practical	3	3	2.5	3	1.7	2	2.8	2	2	1	3
18	BP208P	Pharmaceutical organic chemistry I practical	3	2.4	2.8	2	1	1.2	1.2	1.6	2	1.8	3
19	BP209P	Biochemistry practical	2	2.2	2	2.2	2	2.4	1.8	2	1.8	2.4	1.8



20	BP210P	Computer applications in pharmacy practical	2	0	0	0	0	0	2	1	0	0	1.6
21	BP301T	Pharmaceutical organic chemistry II	2.8	1.4	2.2	1.8	0.8	0.6	0.4	1	1.2	1.6	2.4
22	BP302T	Physical Pharmaceutics I	1.6	1.4	1.4	1.3	1.1	1.3	0.0	1.1	0.9	0.0	1.5
23	BP303T	Pharmaceutical microbiology	2.3	1.5	1.5	0.8	0.8	1.5	0.9	1.5	1.5	1.1	0.8
24	BP304T	Pharmaceutical engineering	1.8	0.9	0.9	2.0	0.9	1.5	0.3	1.4	0.5	0.3	1.1



25	BP305P	Pharmaceutical organic chemistry II practical	3	2.6	2.8	2.4	1.2	1.8	1.6	2	2.4	2.2	3
26	BP306P	Physical Pharmaceutics I practical	3	3	3	1	2	3	0	3	1.4	0	3
27	BP307P	Microbiology P	3	2	1.8	1	1.2	1.8	1.2	2	1.6	1.8	2
28	BP308P	Pharmaceutical engineering practical	3	2.4	3	3	2.2	1.8	0	1.8	0.6	1.2	3
29	BP401T	Pharmaceutical organic chemistry III	2.3	1.5	2.3	2.1	1.2	1.1	0.9	1.1	1.4	1.8	2.3
30	BP402T	Medicinal chemistry I	2.3	1.7	2	1.5	0.9	1.4	0.8	1.5	1.5	1.2	2.1



31	BP403T	Physical pharmaceutics II	1.6	1.4	1.4	1.3	1.1	1.3	1.6	1.1	0.9	0	1.5
32	BP404T	Pharmacology I	3	1.6	1.8	1.8	1.3	1.8	1.8	1.6	2	1.2	2.8
33	BP405T	Pharmacognosy and phytochemistry I	2.4	2.8	2.8	1.6	2.2	2.6	2.4	2.6	2.8	2.8	2.8
34	BP406P	Medicinal chemistry I Practical	3	1.6	1.8	1.8	1.3	1.8	1.8	1.6	2	1.2	2.8
35	BP407P	Physical pharmaceutics II Practical	3	2.4	2.6	1.4	1.4	2.4	1.8	1.8	2.2	2.8	2.6
36	BP408P	Pharmacology I practical	2.8	3	2.4	1.4	2	2.6	1.8	2.4	2	1.3	3



37	BP409P	Pharmacognosy and phytochemistry I practical	3	3	3	1	2	3	2	3	1.4	0	3
38	BP 501T	Medicinal Chemistry II	3	2	2.6	1.8	1	2.2	1	2	2	1.6	3
39	BP 502T	Formulative pharmacy	2.1	1.4	1.5	1.9	1.5	1.8	1.5	1	1.5	0.8	1.2
40	BP 503T	Pharmacology	3	2	2	2	1	1.8	2	1.8	1.4	1.6	2.4
41	BP 504T	Pharmacognosy	2.3	2.3	2.3	1.5	2.3	2.3	2.3	2.3	2.3	3	3
42	BP 505T	Jurisprudence	3	2.8	1	1	2	3	3	2	2	3	3
43	BP 506P	Formulative Practicals pharmacy	3	2	1.7	2	1	2.6	2	1.4	1.5	1	2



44	BP 507P	Pharmacology practicals	3	2	2	2	1	1.8	2	1.8	1.4	1	2.4
45	BP 508P	Pharmacognosy practicals	3	3	3	2	3	3	3	3	3	3	3
46	BP 601T	Medicinal chemistry III	3	2	2.6	1.8	1	2.2	1	2	2	1.6	3
47	BP 602T	Pharmacology III	3	1.2	1.6	2.6	1	2.4	3	2.6	2.6	1	3
48	BP 609 P	Herbal drug technology	3	3	3	2	3	3	3	3	3	3	3
49	BP 604T	Biopharmaceutics	2.7	2.7	2.7	2.5	2.7	2.7	1.8	2.7	2.5	2	2.7
50	BP 605T	Biotechnology	3	2	2	2.5	1	2	1.8	2	1.8	2	2.5
51	BP 606T	Quality assurance	3	2.6	2.8	1.3	1.6	2.4	2.4	2.2	2.2	1.8	2.8



52	BP 607P	Medicinal chemistry III	2.8	3	2.4	1.4	2	2.6	1.8	2.4	2	1.3	3
53	BP 608 P	Pharmacology III	3	2	2	2	1	1.8	2	1.8	1.4	1.6	2.4
54	BP 609 P	Herbal drug technology	3	3	3	2	3	3	3	3	3	3	3
55	BP701T	Instrumental Methods of Analysis	3	2.4	2.6	2.6	1.8	2.4	1.5	1.6	1.3	1.5	2.8
56	BP702T	Industrial Pharmacy	1.6	1.3	1.5	0.5	0.9	1.3	1.3	1.3	0.6	1.2	1.5
57	BP703T	Pharmacy Practice	3	2	2.6	2.6	2	2.6	2.4	2.6	2.6	1.6	2
58	BP704T	Novel Drug Delivery System	3	3	3	0	2	3	3	3	1.4	2.6	3



59	BP705P	Instrumental Methods of Analysis P	3	2.6	2.2	2.8	1.6	2	1	1.8	0.8	0.8	2.8
60	BP706PS	Practice school	3	2.6	2.6	2.2	1.4	1.8	1	1.2	2	1.8	2.4
61	BP801T	Biostatistics and Research Methodology –Theory	0.6	2	2.2	1.4	0.8	1.2	1.2	2	2	0.6	2
62	BP802T	Social and Preventive	3	2.6	2	2.2	1.6	3	1	3	3	2.5	2
63	BP804ET	Pharmaceutical Regulatory Science	0.6	2	2.2	1.4	0.8	1.2	1.2	2	2	0.6	2



64	BP805ET	Pharmacovigilance–Theory	3	2.6	1.2	2.2	1.6	2.4	0.4	3	3	1	2
65	BP806ET	Quality Control and Standardizations of Herbals– Theory	3	2.8	2	1.8	2.8	3	3	3	3	3	3
66	BP807ET	Computer Aided Drug Design	1.7	1.4	0.9	1.4	1.4	1.4	1.5	1.4	1.5	1.7	1.7
67	BP808ET	Cell and Molecular Biology	0.9	0.3	0.3	0.66	0.3	0.3	0.6	0.3	0.3	0.3	0.9
68	BP809ET	Cosmetic Science–Theory	1.8	2	2	0.6	0	0.8	0.4	0.8	1	0.6	1.4



69	BP810ET	Experimental Pharmacology—Theory	1.6	1.1	0.8	1.6	0.7	1.5	1.6	1	1.6	0.5	1.5
70	BP811ET	Advanced Instrumentation techniques	2.7	2.3	2.7	3	2	2.7	3	1	2	1	2.3
71	BP812PW	Project Work	3	2	3	2.2	2.2	2.6	2	3	3	1	3
		DA	2.4	2	2.1	1.8	1.5	2	1.7	1.9	1.8	1.5	2.3
		80% OF DA	2	1.6	1.7	1.4	1.2	1.6	1.3	1.5	1.4	1.2	1.8
		20% OF IA	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4
		TOTAL PO ATTAINMENT	2.4	2	2	1.8	1.7	2	1.8	2	1.8	1.6	2.3

