

## Programme Structure and Course Details of B. Pharm 2022-2026

### Course Specifications: Environmental Sciences (Theory)

Course Title	Environmental Sciences (Theory)
Course Code	BPC119
Course Type	Core Theory
Department	Pharmaceutics/ Pharmacology
Faculty	Pharmacy

#### 1. Course Summary

This course deals with the essential aspects of environmental sciences. This course facilitates students to appreciate the need for public awareness in pollution control. The course emphasizes on social issues associated with the environment and their impact on human health.

#### 2. Course Size and Credits:

Number of Credits	03
Credit Structure (Lecture: Tutorial: Practical)	3:0:0
Total Hours of Interaction	45
Number of Weeks in a Semester	15
Department Responsible	Pharmacology
Total Course Marks	75 <b>Component 1(IA): 25 Marks</b> 1A: Attendance: 4 Marks 1B: Assignment and interaction with student: 6 Marks 1C: Sessional Exam: 15 Marks <b>Component 2 (SEE):</b> Semester End Examination: 50 Marks
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

#### 3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- CO-1. Outline the natural resources
- CO-2. Develop interest in environment improvement
- CO-3. Construct awareness about ecosystems and their functions
- CO-4. Develop an attitude of concern towards environmental pollution
- CO-5. Formulate necessary measures for identifying and solving environmental issues


#### 4. Course Contents

Unit 1. The Multidisciplinary nature of environmental studies

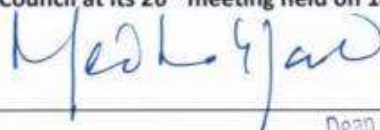
a. **Natural Resources**

Approved by the Academic Council at its 26<sup>th</sup> meeting held on 14 July 2022

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b. **Renewable and non-renewable resources:** Natural resources and associated problems

I. Forest resources

II. Water resources

III. Mineral resources

IV. Food resources

V. Energy resources

VI. Land resources

c. Role of an individual in conservation of natural resources.

10 hours

### Unit 2. **Ecosystems**

a. Concept of an ecosystem

b. Structure and function of an ecosystem.

c. Introduction, types, characteristic features, structure and function of the ecosystems:

I. Forest ecosystem

II. Grassland ecosystem

III. Desert ecosystem

IV. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

10 hours

**Unit 3. **Environmental Pollution:**** Air pollution; Water pollution; Soil pollution

10 hours

### 5. Course Map (CO-PO-PSO Map)

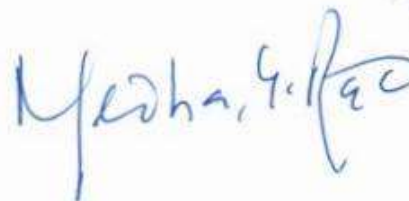
	Programme Outcomes (POs)											Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	-	-	-	-	1	-	1	1	-	2	3	--	--	3
CO-2	3	-	-	-	-	1	-	1	1	-	2	3	--	--	3
CO-3	3	-	-	-	-	1	-	1	1	-	2	3	--	--	3
CO-4	3	-	-	-	-	1	-	1	1	-	2	3	--	--	3
CO-5	3	-	-	-	-	1	-	1	1	-	2	3	--	--	3

3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution



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### 6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		40
Demonstrations		05
1. Demonstration using Videos	3	
2. Demonstration using Physical Models / Systems	2	
3. Demonstration on a Computer		
Tutorials		
Practical Work		
1. Course Laboratory	00	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		
1. Case Study Presentation	00	
2. Guest Lecture	00	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Written Examination		4
<b>Total Duration in Hours</b>		<b>49</b>

### 7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Pharm Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2 or SC3), COs are assessed as illustrated in the following Table.

  
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Focus of COs on each Component or Subcomponent of Evaluation				
	Component 1: CE (33% Weightage)			Component 2: SEE (67% Weightage)
Subcomponent ►	SC1	SC2	SC3	
Subcomponent Type ►	Attendance	Assignment and Student Interaction	Sessional Exam	Semester End Examination 50 Marks
Maximum Marks ►	4	6	15	
CO-1			X	X
CO-2			X	X
CO-3			X	X
CO-4		X	X	X
CO-5		X	X	X
The details of SC1, SC2, SC3 are presented in the Programme Specifications Document.				

## Component - 1: 25 marks

### 1A. Guidelines for the allotment of marks for attendance

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

**1B. Assignment and interaction with student:** Student is required to submit 1 word processed assignment which is set for 12 marks at the end of 14<sup>th</sup> week and the marks scored will be reduced to 3 marks and 3 marks for staff student interaction.

**1C. Sessional exam:** Two sessional exams (each for 30 marks) of 1hour duration will be conducted, one at the end of 6<sup>th</sup> week and the other at the end of the 12<sup>th</sup> week. The average of the 2 sessional marks reduced to 15 will be the marks scored in the Sessional Examination

## Component - 2: 50 marks


A 2-hour duration Semester End Examination will be conducted for maximum marks of 50. Both components will be evaluated by concerned course leader/s.

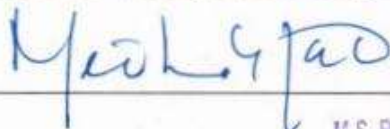
### Re-assessment

1. A student who fails to secure a minimum 50% in component-1 and 2 put together will be asked to register for Supplementary examination.
2. A student who has not satisfied the attendance requirement (not eligible for SEE) shall have to appear for Supplementary examination.
3. The maximum number of such opportunities are limited and as per the academic regulations governing this Programme.

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