

**FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28)**

**COURSE CURRICULUM**

**PART A: INTRODUCTION**

<b>Program: Certificate Course</b>		<b>Semester- I Sem</b>	<b>Session: 2024-25</b>
<b>1</b>	<b>Course Code</b>	<b>AEC 01</b>	
<b>2</b>	<b>Course Title</b>	<b>Environmental Studies</b>	
<b>3</b>	<b>Course Type</b>	<b>Ability Enhancement Course (AEC)</b>	
<b>4</b>	<b>Prerequisite (If Any)</b>	<b>As per requirement</b>	
<b>5</b>	<b>Course Outcome (CO)</b>	<b>At the end of this course, students will be able to –</b> <b>CO 01:</b> relate the basic concept of the environment <b>CO 02:</b> explain environmental alterations <b>CO 03:</b> develop skills in environmental measurement <b>CO 04:</b> examine correction measures of the environment	
<b>6</b>	<b>Credit Value</b>	<b>02 C</b>	<b>01 Credit = 15 Hrs. Teaching-Learning</b>
<b>7</b>	<b>Total Marks</b>	<b>Max. Marks: 50</b>	<b>Minimum Pass marks: 20</b>

**PART: B CONTENT OF THE COURSE**

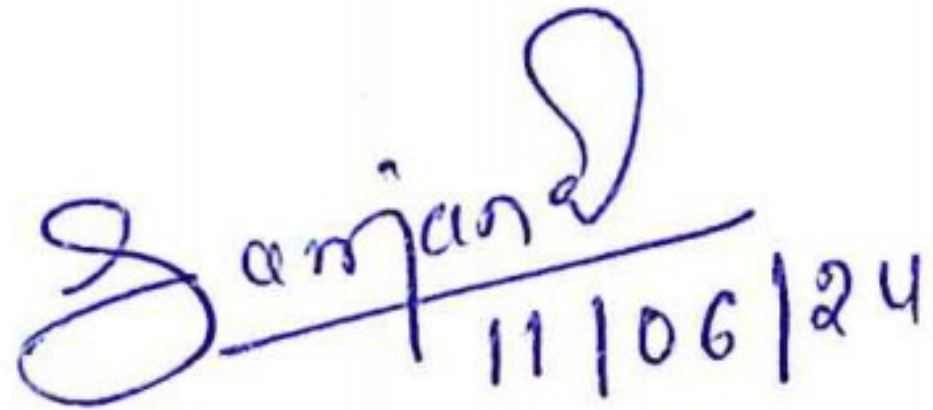
<b>Total No. of Teaching-Learning Periods: 30Hours/ 30Periods</b>		
<b>UNIT</b>	<b>TOPIC (Course Contents)</b>	<b>No. of Hours</b>
<b>I</b>	<b>Basic Composition:</b> 1. Abiotic and Biotic components of the environment 2. Biodiversity—Concept, types, and measures about its protection 3. Basic concept of Bio-Geo Chemical Cycle 4. Energy Flow in an ecosystem	<b>07</b>
<b>II</b>	<b>Alterations in Environment:</b> 1. Concept and components of the pond ecosystem 2. Air pollution and measures for its control 3. Water pollution and measures for its control 4. Global warming, Climate change, and possible measures	<b>07</b>
<b>III</b>	<b>Measurements of Environmental Components</b> 1. Soil composition and methods of its analysis 2. Water analysis methods for DO, BOD, COD 3. Water analysis methods for pH, TDS, Turbidity, Salinity, and Alkalinity 4. Information about environmental factors—PM-10, PM-2.5, NO <sub>2</sub> , O <sub>3</sub>	<b>08</b>
<b>IV</b>	<b>Application Measures</b> 1. Useful microbes to control water pollution 2. Useful microbes to control soil pollution 3. Concept of Biodegradation 4. Concept of Phytoremediation	<b>08</b>
<b>Key Words</b>	<b>Ecosystem, Pollution, Climate Change, Biodegradation</b>	

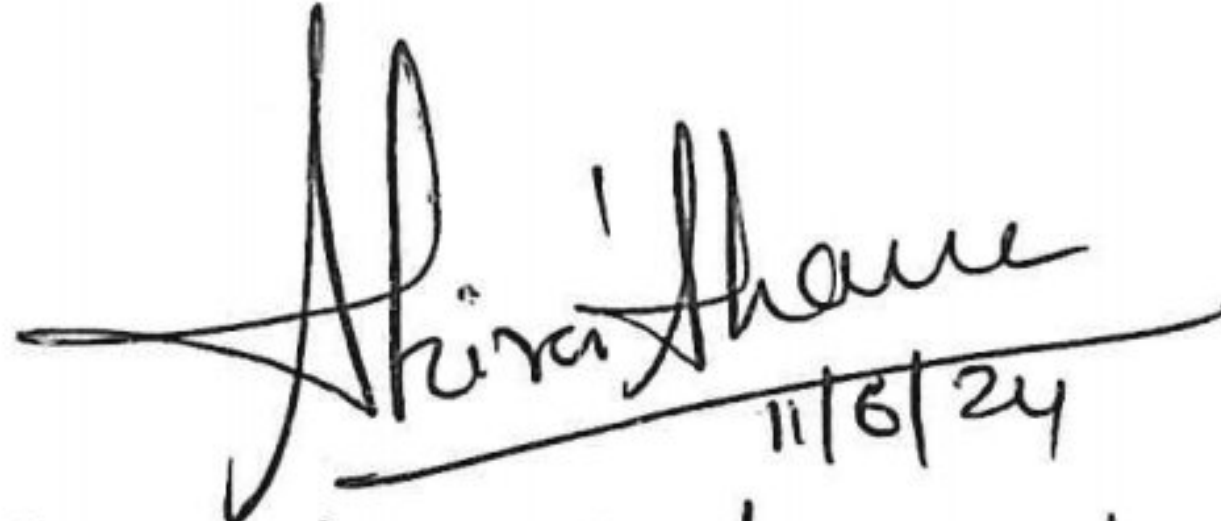
**Name and Signature of Convener and Members of CBOS**

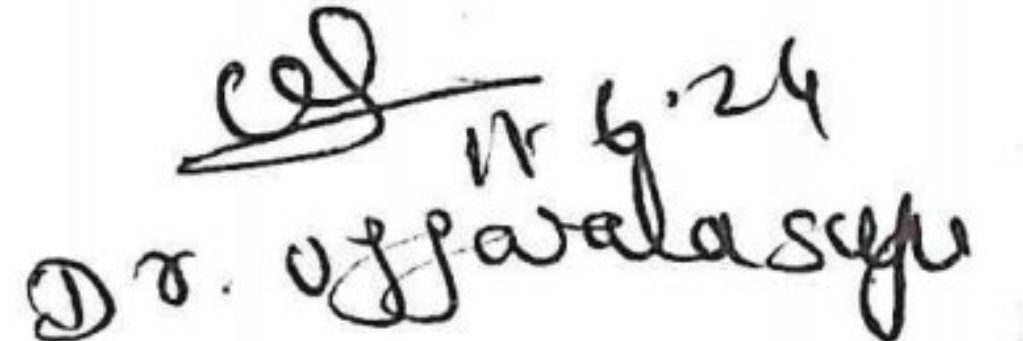
Dr. Ujjwalesuge  
 Dr. Shubha Diwan  
 Dr. Anuska K. Kung'u  
 Dr. Pramod Mishra  
 Dr. Neha Behar  
 Dr. Sanjana Bhagat  
 Dr. Anvita Panda  
 Dr. Shivani Sharma


<b>PART-C: Learning Resources</b>		
Text Books, Reference Books, and Others		
Text Books Recommended –		
1. Ecology and Environment, 8 <sup>th</sup> Edition, P.D.Sharma, Rastogi Publication, Meerut.		
2. Environmental Biology, 2 <sup>nd</sup> Edition, P.D.Sharma, Rastogi Publication, Meerut.		
3. Environmental Biology and Toxicology, 2 <sup>nd</sup> Edition, P.D.Sharma, Rastogi Publication, Meerut.		
4. Environmental Studies, 1 <sup>st</sup> Edition, S.V.S.Rana, Rastogi Publication, Meerut.		
5. Environmental Biotechnology, 1 <sup>st</sup> Edition, S. V. S. Rana, Rastogi Publication, Meerut.		
Online Resources–		
➤ e-Resources / e-books and e-learning portals		
Online Resources–		
➤ e-Resources / e-books and e-learning portals		
<b>PART -D: Assessment and Evaluation</b>		
Suggested Continuous Evaluation Methods:		
Maximum Marks:	50 Marks	
Continuous Internal Assessment (CIA):	15 Marks	
End Semester Exam (ESE):	35 Marks	
<b>Continuous Internal Assessment (CIA):</b> (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar + Attendance - 05 Total Marks - 15	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against 15 Marks
<b>End Semester Exam (ESE):</b>	Two sections – A & B Section A: Q1. Objective – 05 x1= 05 Mark; Q2. Short answer type- 5x2 =10 Marks Section B: Descriptive answer type qts., 1 out of 2 from each unit- 4x05 =20 Marks	

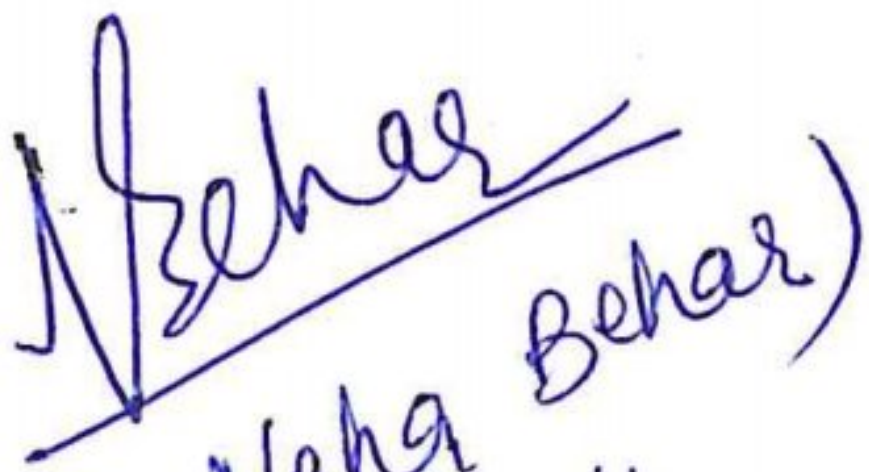
Name and Signature of Convener & Members of CBoS:

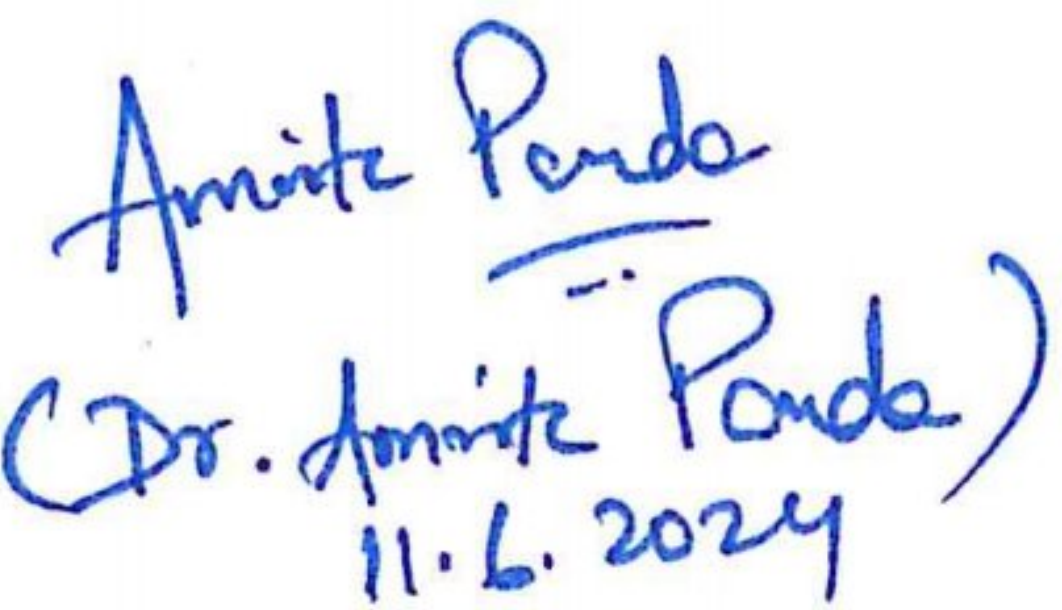
  
 (Dr. Sanjani Bheget) 11/06/24

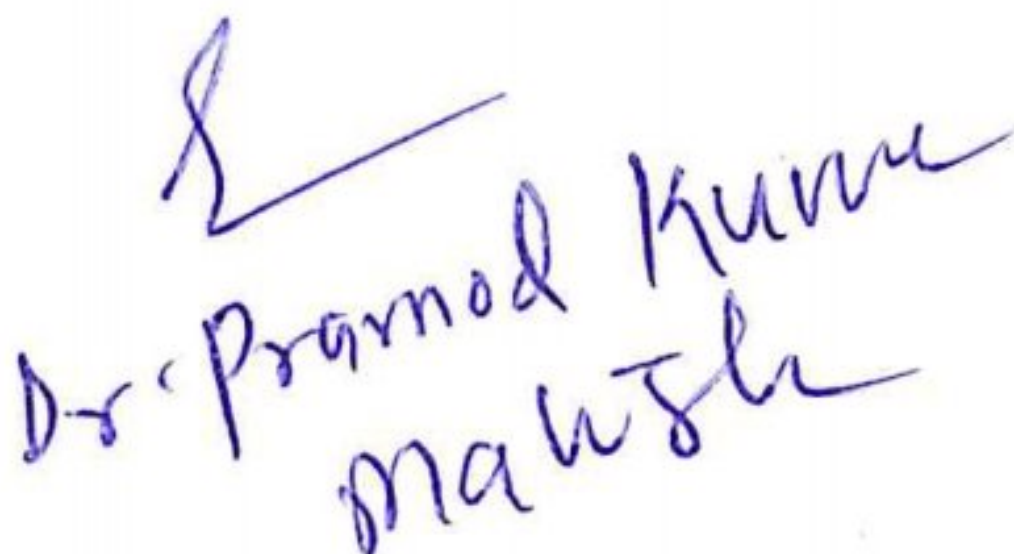
  
 (Dr. Shivani Sharma) 11/6/24

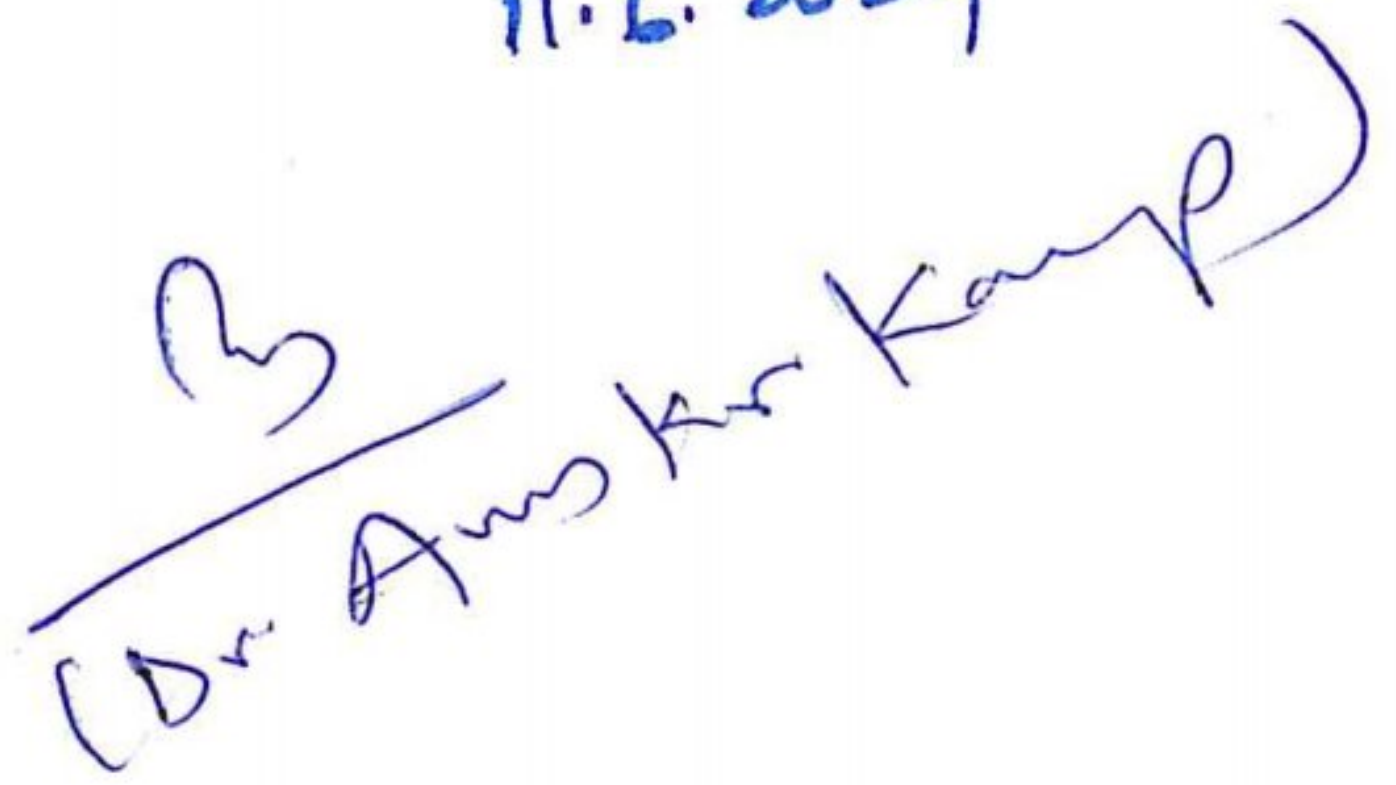
  
 Dr. Ujjwal Singh 11/6/24

  
 (Dr. Shubha Diwan) 11/06/24

  
 (Dr. Neha Behar) 11/6/24

  
 (Dr. Amita Pande) 11.6.2024

  
 Dr. Pramod Kumar Mahesh

  
 (Dr. Anurag Kaur)