FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28)
COURSE CURRICULUM

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

PART: B CONTENT OF THE COURSE		
Total No. of Teaching-Learning Periods: 30Hours/ 30Periods		
UNIT	**TOPIC (Course Contents)**	**No. of Hours**
I	**Basic Composition:** 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	07
II	**Alterations in Environment:** 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	07
III	**Measurements of Environmental Components** 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, NO2, O3	08
IV	**Application Measures** 1. Useful microbes to control water pollution 2. Useful microbes to control soil pollution 3. Concept of Biodegradation 4. Concept of Phytoremediation	08
Key Words	**Ecosystem, Pollution, Climate Change, Biodegradation**	

Name and Signature of Convener and Members of CBOS

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N Behar 11/6/24
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(Dr Amrita Panda)

PART–C: Learning Resources

Text Books, Reference Books, and Others

Text Books Recommended –

1. *Ecology and Environment, 8^{th} Edition, P.D.Sharma, Rastogi Publication, Meerut.*
2. *Environmental Biology, 2^{nd} Edition, P,D.Sharma, Rastogi Publication, Meerut.*
3. *Environmental Biology and Toxicology, 2^{nd} Edition, P.D.Sharma, Rastogi Publication, Meerut.*
4. *Environmental Studies, 1^{st} Edition, S.V.S.Rana, Rastogi Publication, Meerut.*
5. *Environmental Biotechnology, 1^{st} Edition, S. V. S. Rana, Rastogi Publication, Meerut.*

Online Resources–

- **e-Resources / e-books and e-learning portals**

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PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: **50 Marks**

Continuous Internal Assessment (CIA): **15 Marks**

End Semester Exam (ESE): **35 Marks**

Continuous Internal Assessment (CIA): (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
End Semester Exam (ESE):	**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.,**1out of 2** from each unit- **4x05 =20 Marks**	

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