

INSTITUTE	FACULTY OF AGRICULTURE
PROGRAM	BACHELOR OF SCIENCE (Hons.) AGRICULTURE
SEMESTER	5
COURSE TITLE	ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT
COURSE CODE	16AS0512
COURSE CREDITS	2

Objective:

- 1 To provide basic introduction of environment and its various components.
- 2 To impart knowledge about the need, various policies and methods to protect environment.

Course Outcomes: After completion of this course, student will be able to:

- 1 Students will identify the current environmental and social issues and the strategies to moderate them.
- 2 Students will be able to explore the causes, consequences and the management strategies of natural and anthropogenic disasters.
- 3 Students will be able to survey the impacts of various environmental issues to promote public awareness.
- 4 Students will be able to articulate the knowledge of environmental legislation for public awareness.

Pre-requisite of course: Students will learn about environment and disaster management.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
1	0	2	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	1 The multidisciplinary nature of environmental studies	1
2	2 Natural Resources	2
3	3 Ecosystems	2
4	4 Biodiversity and its conservation	2
5	5 Environmental Pollution	2

Contents : Unit	Topics	Contact Hours
6	6 Social issues and the Environment	1
7	7 Human Population and environment	2
8	8 Disaster management	1
Total Hours		13

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	1 Waste water sample collection, processing and preservation	2
2	2 Biogas production from organic wastes	2
3	3 Visit to wind mill/hydro power / solar power generation units	2
4	4 Study of simple ecosystems-pond, river, hill slopes - crop adaptation to different ecosystems	2
5	5 Biodiversity assessment in polluted and unpolluted system	2
6	6 Visit to river/forest/ grass land/ hill/ mountain to document environmental assets	2
7	7 Estimation of acidity and alkalinity in water samples	2
8	8 Estimation of water hardness	2
9	9 Case studies on environmental issues and human health: climate change	2
10	10 Visit to areas affected by natural disaster	2
Total Hours		20

Textbook :

- 1 NA, NA, NA, NA

References:

- 1 Environment Management, Environment Management, P. Sasi bhushana rav, Regal publication, 2007

References:

- 2 Environmental education, Environmental education, G. S. Bhalla & hema khanna, Deep & Deep publication pvt. ltd., 2007
- 3 Environmental pollution : causes, effect and control, Environmental pollution : causes, effect and control, S.S. Purohit & A. K. Agrwal, Agrobios, 2006

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
25.00	25.00	20.00	10.00	10.00	10.00

Instructional Method:

- 1 The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board may also use any of tools such as demonstration, role play, quiz, brain storming, MOOCs etc.
- 2 The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room.
- 3 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.
- 4 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.

Supplementary Resources:

- 1 https://www.google.co.in/books/edition/Environmental_and_Natural_Resource_Econo/6_5QDwAAQBAJ?hl=en&gbpv=1&dq=natural+resource+economics&pg=PP1&printsec=frontcover
- 2 <https://www.nes.ru/files/mae/academic%20program/2021-2022/NRE-MAE-v4.pdf>