INSTITUTE	**DIPLOMA STUDIES**
PROGRAM	**DIPLOMA ENGINEERING (MECHANICAL ENGINEERING)**
SEMESTER	**1**
COURSE TITLE	**ENVIRONMENT CONSERVATION & DISASTER MANAGEMENT**
COURSE CODE	**09AU0102**
COURSE CREDITS	**0**

Objective:

1 To solve various engineering problems to produce eco-friendly products
2 To familiarize the students with strategies for addressing various environmental issues
3 To familiarize the students with various renewable energy sources and their applications
4 Be better prepared to recover from natural and manmade disasters

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

1 Understand the ecosystem and its terminology and solve various engineering problems by applying ecosystem knowledge to produce eco–friendly products
2 Understand the various types of pollutions and their remedial measures
3 Understand different renewable energy resources and their applications
4 Understand the role of an engineer concerning climate change and disaster management

Pre-requisite of course:BASIC LIFE SCIENCE

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	0	0	0	0	0	0

Contents : Unit	Topics	Contact Hours
1	**Introduction of Environmental Science** Definition of environment, ecosystem, food chain, and food web, he necessity of environmental science, Importance of environment and scope	4
2	**Types of pollution with their causes, effects and remedial measures** Air pollution, water pollution, noise pollution, and soil pollution, Global environment problems with their causes, effects & remedies: climate change	8

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Contents : Unit	Topics	Contact Hours
3	**Renewable Sources of Energy** Solar energy: basics of solar energy and its importance, Wind energy: need, limitations and future scope, Recent trends of renewable sources of energy	6
4	**Disaster Management** Concepts and definition of disaster, Disaster management cycle, ole of an engineer in disaster management Rescue techniques during a disaster, Natural disasters: earthquake, cyclone, flood, tsunami, drought, and landslides, Manmade disaster: fire, civil war, technological disasters	10
Total Hours		**28**

Textbook :

1 Environment Engineering and Disaster Management, Sanjay K., Laxmi Publications, 2018

References:

1 Environmental Science, Environmental Science, Y. K. Singh, New Age International (P) Ltd., 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**
30.00	40.00	30.00			

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, brainstorming, MOOCs etc.

2 The internal evaluation will be done on the basis of continuous evaluation of students in the class-room.

3 Department level examination will be conducted at the end of semester for evaluation of performance of students.

4 Students will use supplementary resources such as online videos, videos, e- courses etc.

Supplementary Resources:

1 https://www.eco-prayer.org/

2 https://www.teriin.org/

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Supplementary Resources:

3 https://cpcb.nic.in/

4 https://www.isro.gov.in/

5 https://ndma.gov.in/en/

6 http://www.indiaenvironmentportal.org.in/