ATME College of Engineering

DEPARTMENT OF CIVIL ENGINEERING

COURSE MODULE

Faculty Name**: NAMITHA A P**			Academic Year: **2024-25**				
Department: **Civil Engineering**							
Course Code	Course Title	Core/Elective	Prerequisite	Contact Hours			Total Hrs/ Sessions
				L	T	P	
BESK508	**ENVIRONMENTAL STUDIES**	**Core**	**Engineering Physics And Engineering Chemistry Basics.**	**2**	**-**	**-**	**30**

Course Learning Objectives:

1. To create the environmental awareness among the students. To gain the knowledge on different types of pollution in the environment.
2. To analyze an overall impact of specific issues and develop environmental management plan.

Topics Covered as per Syllabus

MODULE – 1

ECOSYSTEM AND SUSTAINABILITY Ecosystems (Structure and Function): Forest, Desert, Wetlands, River, Oceanic and Lake. Sustainability: 17 SDGs-History, targets, implementation, Capacity Development. **6 Hours**

MODULE - 2

NATURAL RESOURCE MANAGEMENT Advances in Energy Systems (Merits, Demerits, Global Status and Applications): Hydrogen, Solar, OTEC, Tidal and Wind. Natural Resource Management (Concept and case-studies): Disaster Management, Sustainable Mining - case studies and Carbon Trading. **6 Hours**

MODULE -3

ENVIRONMENTAL POLLUTION & WASTE MANAGEMENT Environmental Pollution (Sources, Impacts, Corrective and Preventive measures, Relevant Environmental Acts, Case-studies): Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution. Waste Management: Bio-medical Wastes; Solid waste; Hazardous wastes; E-wastes; Industrial and Municipal Sludge **6 Hours**

MODULE -4

GLOBAL ENVIRONMENTAL ISSUES Global Environmental Concerns (Concept, policies and case-studies): Ground water depletion/recharging, Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water; Resettlement and rehabilitation of people, Environmental Toxicology **6 Hours**

MODULE -5:

ENVIRONMENTAL LEGISLATION Environmental Legislation : Water Act 1974, Air Act 1981, Environmental Protection Act 1984, Solid Waste Management Rules-2016, E- Waste management Rule - 2022, Biomedical Waste management- 2016. **6 Hours**

List of Text Books:

1. Environmental Studies Benny Joseph Tata Mc Graw – Hill. 2nd Edition, 2012
2. Environmental Studies S M Prakash Pristine Publishing House ,Mangalore 3rd Edition, 2018
3. Environmental Studies –From Crisis to Cure R Rajagopalan Oxford Publisher 2005

Reference Books:

1. Principals of Environmental Science and Engineerin, Raman Sivakumar Cengage learning, Singapur. 2nd Edition, 2005
2. Environmental Science –working with the Earth G.Tyler Miller Jr. Thomson Brooks /Cole, 11th Edition, 2006
3. Text Book of Environmental and Ecology Pratiba Sing, Anoop Singh& Piyush Malaviya Acme Learning Pvt. Ltd. New Delhi. 1 Edition
4. Benny Joseph, Environmental studies, Tata Mcgraw-Hill 2nd edition 2009
5. M.Ayi Reddy Textbook of environmental science and Technology, BS publications 2007
6. Dr. B.S Chauhan, Environmental studies, university of science press 1st edition

List of URLs, Text Books, Notes, Multimedia Content, etc

https://www.smartzworld.com/notes/environmental-studies-notes-pdf-vtu/

Course Outcomes

At the end of the course, the student will be able to

1. Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
2. Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment as legislation.
3. Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

The Correlation of Course Outcomes (CO's) and Program Outcomes (PO's)

Subject Code: BESK508	**TITLE: ENVIRONMENTAL STUDIES**	**Faculty Name: Namitha AP**

List of Course Outcomes	Program Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12
CO-1	-	-	-	-	-	-	3	1	-	-	-	2
CO-2	-	-	-	-	-	-	2	2	-	-	-	3
CO-3	-	-	-	-	-	-	1	-	-	-	-	2

Note: 3 = Strong Contribution 2 = Average Contribution 1 = Weak Contribution - = No Contribution

The Correlation of Course Outcomes (CO's) and Program Specific Outcomes (PSO's)

List of Course Outcomes	Program Specific Outcomes	
	PSO1	PSO2
CO-1	-	3
CO-2	-	-
CO-3	-	2

Note: 3 = Strong Contribution 2 = Average Contribution 1 = Weak Contribution - = No Contribution