



### DEPARTMENT OF CIVIL ENGINEERING

# COURSE MODULE

Faculty Nam	e: NAMITHA A P	Academic Year: 2024-25						
Department: Civil Engineering								
Course Code	Course Title	Core/Elective	Prerequisite	Contact Hours			Total Hrs/ Sessions	
BESK508	ENVIRONMENTAL STUDIES AND E- WASTE	Core	Engineering Physics And Engineering Chemistry Basics.	1			15	
<ul> <li>Course Learning Objectives:         <ol> <li>To create the environmental awareness among the students. To gain the knowledge on different types of pollution in the environment.</li> <li>To analyze an overall impact of specific issues and develop environmental management plan.</li> </ol> </li> </ul>								
Topics Covered as per Syllabus								
Ecosystem and Sustainability: Ecosystem: Structure of Ecosystem, Types: Forest, Desert, Wetlands, Riverine, Oceanic ecosystems. Sustainability: 17SDG targets and possible actions3 HoursMODULE - 2 Natural resources and Energy: Natural Resources: Water resources – Availability & Quality aspects, Water borne diseases & water induced diseases, Fluoride problem in drinking water. Energy: Different types of energy, Conventional sources & Non -Conventional sources of Energy, Solar energy, Wind Energy, Hydrogen as an alternative energy3 Hours								
MODULE -3         Environmental Pollution: Environmental Pollution: Water Pollution, Noise pollution, Air pollution (Sources, Impacts, Preventive measures and Public Health Aspects         MODULE -4								
Waste management: Waste management: Solid Waste Management , types and sources, functional elements of SWM, Biomedical Waste Management - Sources, Characteristics Environmental Legislation: Solid Waste Management Rules, 2016, Biomedical Waste Management Rules, 2016.3 Hours								
<b>MODULE -5:</b> E - Waste Management E- waste; composition and generation. Global context in e- waste; E-waste pollutants, E waste hazardous properties, Effects of pollutant (E- waste) on human health and surrounding environment, demosting a waste diagonal. Pagia principles of E waste management. Component of E waste management E								

domestic e-waste disposal, Basic principles of E waste management, Component of E waste management. Ewaste (Management and Handling) Rules, 2011; and E-Waste (Management) Rules, 2022 - Salient Features and its implications. **3 Hours** 





#### DEPARTMENT OF CIVIL ENGINEERING

#### List of Text Books:

- 1. Environmental Studies Benny Joseph Tata Mc Graw Hill. 2<sup>nd</sup>Edition, 2012
- 2. Environmental Studies S M Prakash Pristine Publishing House, Mangalore 3rdEdition, 2018 3. Environmental Studies – From Crisis to Cure R Raiagopalan Oxford Publisher 2005

#### **Reference Books:**

- Principals of Environmental Science and Engineerin, Raman Sivakumar Cengage learning, Singapur. 2<sup>nd</sup>Edition, 2005 1.
- Environmental Science working with the Earth G.Tyler Miller Jr. Thomson Brooks /Cole, 11thEdition, 2.

2006

- 3. Text Book of Environm e, ntal and Ecology Pratiba Sing, Anoop Singh& Piyush Malaviya Acme Learning Pvt, Ltd. New Delhi. 1 Edition Benny Joseph, Environmental studies, Tata Mcgraw-Hill 2nd edition 2009 M.Ayi Reddy Textbook of environmental science and Technology, BS publications 2007 Dr. B.S Chauhan, Environmental studies, university of science press 1st edition
- 4. 5. 6.

#### 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

- Understand the principles of ecology and environmental issues that apply to air, land, and water issues on 1. a global scale,
- Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or 2. 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 AND E-WASTE				Fa	Faculty Name: Namitha AP				
List of		Program Outcomes											
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	POS	POQ	PO	PO	PO	
Outcomes	101	102	105	104	105	100	10/	100	109	10	11	12	
CO-1	1	-	-	-	-	-	3	2	-	1	1	2	
CO-2	1	1	1	1	-	1	2	2	-	-	1	3	
CO-3	1	1	1	1	-	1	1	1	-	-	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	Program Specific Outcomes						
Course Outcomes	PSO1	PSO2					
CO-1	-	3					
CO-2	-	2					
CO-3	-	2					

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





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