ATME College of Engineering

DEPARTMENT OF CIVIL ENGINEERING

Course Modules of the Subject Taught for the Session Aug–Dec 2025-26 (Odd Semester)Course Syllabus with CO's

Faculty Name: **NAMITHA AP**			AcademicYear:**2025-26**				
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 environmental and sustainability awareness among the students.
2. To gain knowledge on different types of pollution in the environment, waste management and Environmental legislation.

Topics Covered as per Syllabus

MODULE–1

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

3Hours

MODULE-2NATURALRESOURCEMANAGEMENT

Advances in Energy Systems (Merits, Demerits, Global Status and Applications): Hydrogen, Solar, OTEC, Tidal and Wind.

NaturalResourceManagement(Conceptandcase-studies):DisasterManagement,SustainableMining-case studies and Carbon Trading.

3Hours

MODULE-3ENVIRONMENTALPOLLUTION&WASTEMANAGEMENT

EnvironmentalPollution(Sources,Impacts,CorrectiveandPreventivemeasures,RelevantEnvironmental Acts, Case-studies): Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution.

Waste Management: Bio-medicalWastes; Solid waste; Hazardouswastes; E-wastes; IndustrialandMunicipal Sludge. **3 Hours**

MODULE-4GLOBALENVIRONMENTALISSUES

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; Resettlementand rehabilitation of people, Environmental Toxicology. **3 Hours**

MODULE-5:ENVIRONMENTALLEGISLATION

.**EnvironmentalLegislation:**WaterAct1974,AirAct1981,EnvironmentalProtectionAct1984,SolidWaste Management Rules-2016, E- Waste management Rule - 2022, Biomedical Waste management- 2016.

3Hours

ListofText Books:

1. Environmentalstudies,BennyJoseph,TataMcGraw-Hill2ndedition 2012
2. Environmentalstudies,SMPrakash,pristinepublishinghouse,Mangalore3rdedition-2018.

ReferenceBooks:

1. BennyJoseph,Environmentalstudies,TataMcGraw-Hill 2ndedition 2009.
2. M.AyiReddyTextbookofenvironmentalscience andTechnology,BSpublications2007.
3. Dr.B.SChauhan,Environmentalstudies, universityofsciencepress1st edition.

ListofURLs,TextBooks,Notes,MultimediaContent,etc

https://sdgs.un.org/goals,https://archive.nptel.ac.in/courses/109/105/109105190/

Course Outcomes

At the end of thecourse,thestudentwillbeableto,

1. Understandtheprinciplesofecologyandenvironmentalissuesthatapplytoair,land,andwater issues on a global scale.
2. Developcriticalthinkingand/orobservationskills,andapplythemtotheanalysisofaproblemor question related to the environment as legislation.
3. Apply their ecological knowledge to illustrate and grasp the problem and describe the realities thatmanagers face when dealing with complex issues.

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

SubjectCode:BESK508	TITLE:ENVIRONMENTAL STUDIES	Faculty Name: NAMITHA AP

List of Course Outcomes	ProgramOutcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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=StrongContribution 2=AverageContribution 1=WeakContribution-=NoContribution

TheCorrelationofCourseOutcomes(CO's)andProgramSpecificOutcomes(PSO's)

List of Course Outcomes	ProgramSpecific Outcomes	
	PSO1	PSO2
CO-1	-	3
CO-2	-	2
CO-3	-	2

Note:3=StrongContribution 2=AverageContribution 1=WeakContribution-=NoContribution