



S. No.	Lecture No.	Unit No.	Topic	Sessional Outcome	Experiential Learning	Participative Learning	Problem Solving Methodologies	ICT Tools & E-Resources Utilization	Mapping with CO	Class Material (PPT Faculty+ Students)	Additional Material (Links/ Journals/ Articles/ NEWS)	Mode of Assessment	Status
1	L1	Unit-1	Multidisciplinary nature of environmental studies;	Memorize and Describe the concept of ecosystem, recognize that our planet			Group Presentation	https://www.youtube.com/watch?v	CO1	Youtube Video		Viva	
2	L2	Unit-1	components of environment:atmosphere,hydrosphere,	Apply theoretical frameworks to real world sustainability issues.		https://www.jagranjosh.com/general-knowledge/gk-	Group Presentation	https://www.youtube.com/watch?v	CO1 and CO5	Youtube Video	file:///C:/Users/deeps/Downloads/Article%20on%20Danviron		
3	L3	Unit-1	Climate Change, Global Warming	understand the impact that global warming could have upon the Earth	Role Play Scenario 2	https://www.infoplease.com/quizzes/science/global-	debate on Climate change is the biggest	https://www.youtube.com/watch?v	CO1 and CO2	PPT + Youtube video	https://www.youtube.com/watch?v=PqLMzKLYrZ4	Debate & Viva	
4	L4	Unit-1	Ozone Layer Depletion, Acid Rain, Green House Effect	explain the greenhouse effect and explain how greenhouse gases benefit and harm	Case Study- DuPont	Case Study- Chernobyl Nuclear Accident-1986	Class Activity: Puzzle, https://www.epa.gov/	https://www.youtube.com/watch?v	CO1 and CO2	PPT + Youtube video + Case study	https://www.hindustantimes.com/environment/hawaii-	Case study	
5	L5	Unit-1	Earth Summit, UNFCCC, Montreal and Kyoto Protocols	Define World Trade Organization and its purpose.			Group Presentation	https://www.youtube.com/watch?v	CO1	Youtube video	https://www.itad.org/system/files/publications/kyoto.pdf	Presentation and Viva	
6	L6	Unit-1	Convention on Biological Diversity, Ramsar Convention	Memorize the different conventions related to Environment			Group Presentation	https://www.youtube.com/watch?v	CO1	Youtube video		Viva	
7	L7	Unit-1	The chemical weapons convention, UNEP, CITES				Group Presentation		CO1				
8	L8	Unit-2	Ecosystem- Meaning, Structure and functions	Identify and explain the structure of an ecosystem		https://www.proprofs.com/quiz-	Group Presentation	https://www.youtube.com/watch?v	CO1 and CO2	PPT, Youtube Video	https://www.earthreminder.com/types-of-ecosystems/		
9	L9	Unit-2	Ecological pyramids and homeostasis	Understand the concept of ecology and homeostasis	Case Study - Ecosystem Project Aravalli		Group Presentation	https://www.youtube.com/watch?v	CO1 and CO2	Youtube video			
10	L10	Unit-2	Types of Ecosystems- Land Ecosystem	Demonstrate a scientific understanding of the physical and biological dynamics of	https://www.sciencedirect.com/science/article	https://www.proprofs.com/quiz-	Group Presentation	https://www.youtube.com/watch?v	CO1 and CO2	PPT + Youtube video	https://www.conserve-energy-future.com/desert-		
11	L11	Unit-2	Aquatic Ecosystem				Group Presentation	https://www.youtube.com/watch?v	CO1 and CO2	Youtube video	https://www.earthreminder.com/marine-ecosystem-		
12	L12	Unit-2	Importance and Threats to ecosystem with examples from India	Gain in-depth knowledge and understand the consequences of human actions on			Group Presentation	https://www.youtube.com/watch?v	CO1 and CO2	Youtube video			
13	L13	Unit-2	Ecosystem Services; Basics of ecosystem restoration				Group Presentation	https://www.youtube.com/watch?v	CO1 and CO2	Youtube video	https://www.frontiersin.org/articles/10.3389/fenv.2014.0008		
14	L14	Unit-2	Ecosystem preservation and conservation strategies					https://www.youtube.com/watch?v	CO1	Youtube video		Group Presentation	
15	L15	Unit-2	Renewable and non-renewable energy sources	Understand and recognize the importance of renewable and non-renewable sources				https://www.youtube.com/watch?v	CO1	Youtube video			
16	L16	Unit-2	Energy contents of coal, petroleum, natural gas and bio gas; growing energy	Recognize and memorize the energy contents of coal, petroleum, natural gas					CO1				
17	L17	Unit-3	Biodiversity- Meaning, Levels; India as a mega-diversity nation; bio diversity	understand the role and principles of operation of different types of protected		https://www.proprofs.com/quiz-	Debate on Animals should have rights like	https://www.youtube.com/watch?v	CO3	PPT + Youtube video	https://www.youtube.com/watch?v=GK_vR0HIZu4	Debate	
18	L18	Unit-3	Endemic and endangered species of India	Develop critical thinking for shaping strategies for environmental protection,		https://www.earthday.org/deforestation-and-		https://www.youtube.com/watch?v	CO3	Youtube video			
19	L19	Unit-3	Value of biodiversity with examples						CO3		https://www.unkef.org/global- insight/stories/why-		
20	L20	Unit-3	Threats to biodiversity, current mass extinction crisis			https://www.britannica.com/quiz/biodiversity-loss		https://www.youtube.com/watch?v	CO3	Youtube video			
21	L21	Unit-3	Field Work- Visit to biodiversity Park		Visit to the zoo and biodiversity park and				CO3				
22	L22	Unit-3	Biological conservation strategies; case study	Explore the complexity of biodiversity and biodiversity loss and the importance of		https://www.jagranjosh.com/general-knowledge/gk-		https://www.youtube.com/watch?v	CO1	PPT + Youtube video	https://www.youtube.com/watch?v=Hu5V5WjIptU	Group Discussion and Quiz	
23	L23	Unit-4	Air pollution- causes, effects and control, air quality standards	Analyse the sources of air Pollution, Describe the effects and control of air	Role Play Scenario 1	Quiz https://www.englishclub.co	GD on Should Environment polluters	https://www.youtube.com/watch?v	CO4	PPT + Youtube video			


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24	L24	Unit-4	Water pollution- causes, effects and control, Water quality standards	Define key terms related to water pollution, explain the different types of	Case Study- Ganga Pollution Case	Case Study- Arsenic Pollution in Ground Water	Group Discussion on The Effect of Swachh	https://www.hindustantimes.com/e	CO4	PPT + Youtube video	https://www.youtube.com/watch?v=PqzMtKLYz4 and		
25	L25	Unit-4	Soil pollution and thermal pollution	Define key terms related to soil and thermal pollution. Demonstrate		Quiz https://study.com/academ		https://www.youtube.com/watch?v	CO4		https://donate.roundglassfoundation.org/campaign/zero-		
26	L26	Unit-4	Noise pollution; Nuclear hazards and human health risks	Define key terms related to noise pollution, explain the different nuclear	Campaign- Water & Energy Conservation by		Classroom discussion on noise pollution and	https://www.youtube.com/watch?v	CO4	Youtube video	https://education.nationalgeographic.org/resource/noise-		
27	L27	Unit-4	Solid waste management	Understand and explain different sources and types of waste disposal.		https://quizizz.com/admin/quiz/5c4d285acc2001ae		https://www.youtube.com/watch?v	CO4	Youtube video and student	https://www.epa.gov/hw/criteria-definition-solid-waste-and-	Viva	
28	L28	Unit-4	Control measures for various types of urban, Industrial waste, E-waste	Discuss and describe different methods of waste disposal.	Case Study- Supreme Court of India on Waste	https://blog.fixmestk.com/how-much-do-you-know/		https://read.amazon.in/sample/80	CO4	Youtube video, PPT and student	E-book, file:///C:/Users/deeps/Downloads		
29	L29	Unit-4	Environmental Impact Assessment	Plan and carry out environmental impact assessment study.		Case Study- Bulk Cement Terminal		https://www.youtube.com/watch?v	CO5	Youtube video and student	https://www.researchgate.net/publication/257728476_Glob		
30	L30	Unit-4	Environmental Management System	Describe the enhancement of environmental performance; fulfillment of									

Note : 1 Credit (Theory) =15 Hrs. in a Semester; 1 Credit (Practical) =30 Hrs. in a Semester.
Suggested Readings : (Latest Editions)

TEXTBOOKS:

TB1	Arjun Kumar Bhatia, Kanchan Bhatia, Harpreet Kaur, Environmental Studies, Tarunam's, Fifth Edition
TB2	M.M. Sulphrey, Introduction to Environment Management, PHI Learning, 2019
TB3	S.P. Mishra, S.N. Pandey, Essential Environmental Studies, Anc Books Pvt. Ltd. : Sixth Edition
TB4	

REFERENCES:

RB1	Arthana, D. K. (2006) Text Book of Environmental Studies 3. Chand Publishing.
RB2	Basu, M., Xavier, S. (2016). Fundamentals of Environmental Studies, Cambridge University Press, India
RB3	Bhattacha, E. (2015). Textbook of Environmental Studies for Undergraduate Courses, Universities Press
RB4	Mahapatra, R., Jeevan, S.S., Das, S. (Eds) (2017). Environment Reader for Universities, Centre for Science and Environment, New Delhi.

JOURNALS:

1.	Journal of Technical Writing and Communication
2.	Technical Communication Quarterly
3.	International Journal of Business Communication
4.	Journal of Business and Technical Communication
5.	Business and Professional Communication Quarterly
6.	Written Communication
7.	The English Journal
8.	Technical Communication Society for Technical Communication
9.	Journal of Second Language Writing
10.	Discourse and Communication

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