

		paths, including environmental managers, sustainability consultants, policy analysts, conservation scientists, and	
		environmental educators, among others, contributing to a	
		more sustainable and resilient future for society and the	
		planet.	
2	Vertical :	Open Elective	
3	Туре :	Theory	
4	Credit:	2 credits (1 credit = 15 Hours for Theory)	
5	Hours Allotted :	30 Hours	
6	Marks Allotted:	50 Marks	
7	Course Objectives: (List some of the course objectives)		
	1. To create awareness among the students about environmental sustainability.		
	<ul><li>2. To make awareness about the impact of pollution and climate change.</li><li>3. To understand the techniques and practices of environmental impact assessment.</li></ul>		
	4. To understand the environmental movements and environmental management in India.		
8	Course Outcomes: (List some of the course outcomes)		
	On successful completion of this course, students will be able to:		
		ollution and climate change and control measures.	
	2. Understand the concept of er environment.	nvironmental management and its need to save the	
		Methods for Sustainable Development.	
9			
5	Modules:- Per credit One module can be created		
	Module 1: Environmental Pollution (7 Hours)		
	1. Air Pollution: Causes, Effects, and Measures		
	2. Water Pollution: Causes, Effects, and Measures		
	3. Land Pollution: Causes, Effects, and Measures		
	Module 2: Environmental Issues and Movements (8 Hours)		
	1. Climate Change and Global v	varming	
	2. Ozone Depletion		
	3. Environmental Movements in India		
	Module 3: Environmental Management (7 Hours)		
	1. Waste: Sources, Types and Management		
	2. Environmental Management: Concept and Need		
	3. Environmental Impact Assessment		
	Modulo 4: Sustainable Dovelopment (8 Hours)		
	Module 4: Sustainable Development (8 Hours)		

	1. Sustainable Development: Concept, Need and Factors		
	2. Sustainable Development Goals		
	3. Eco-friendly Lifestyles and Practices		
10	Text Books:		
	<ol> <li>Bharucha Erach, 2004, Textbook for Environmental Studies, University Grant Commission, New Delhi (Available free on the web)</li> <li>Rajagopalan, R. (2011). Environmental Studies: From Crisis to Cure. India: Oxfore University Press.</li> </ol>		
	<ol> <li>धारपुरे विठ्ठल (२०१९) 'पर्यावरण शास्त्र' पिंपळापुरे अँड पाब्लीशर्स, नागपूर.</li> </ol>		
	4. देवरे, परमार, बुटाला (२०१३) 'पर्यावरण भूगोल' हिमालया पब्लिशिंग हाउस, मुंबई.		
	5. परमार, बोरसे व इतर (२०२२) 'पर्यावरण भूगोल' हिमालया पब्लिशिंग हाउस, मुंबई.		
11	Reference Books:		
	1. Ahluwalia, V. K. (2015). Environmental Pollution, and Health. The Energy and Resources Institute (TERI).		
	<ol> <li>Asolekar S, Gopichandran R. 2005, 'Preventive Environmental Management - an Indian perspective', CEE, Ahmedabad, Foundation Books Pvt Ltd, Daryaganj</li> </ol>		
	<ol> <li>Chambers N., Simons C., Wackernagel M., 2006, 'Sharing Nature's Interest - Ecological footprints as an indicator of sustainability'.</li> </ol>		
	4. IPCC (2014): Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA		
	5. Kanchi Kohli and Manju Menon (2021) Development of Environment Laws in India, Cambridge University Press.		
	6. Miller, G. T., & Spoolman, S. (2015) Environmental Science. Cengage Learning.		
	<ol> <li>OECD (2008): Climate Change Mitigation: "What do we do?" (Organisation and Economic Co-operation and Development).</li> </ol>		
	8. Pittock, Barrie (2009) Climate Change: The Science, Impacts and Solutions. 2nd Edition. Routledge.		
	9. Prabu P.C., Udayasooriyan C., Balasubramanian G, 2009, 'An introduction to Ecology and Environmental Science', Avinash Paperbacks, New Delhi.		
	10.Reddy K. P., Reddy D. N., 2003, 'Environmental Education', Neelkanth Publication Hyderabad.		
	11.Santra S.C., 2004, 'Environmental Science', New Central Book agency Pvt Ltd, Kolkata.		
	<ol> <li>Saxena H.M., 2000, 'Environmental Management', Rawat Publication, New Delhi, pp.</li> <li>Singh, R.B., Mal, Suraj, and Huggel, Christian (2018): Climate Change, Extreme Events and Disaster Risk Reduction, Springer, Switzerland, pages 309.</li> </ol>		
	14. Swarup R.S., Mishra S.N., Juahari V.P, 1992, 'Encyclopedia of Ecology, environment and pollution control - 20', Mittal publication, New Delhi		

	<ul> <li>15. Tiefenbacher, J (ed.) (2022), Environmental Management - Pollution, Habitat, Ecology, and Sustainability, Intech Open, London. 10.5772/</li> <li>16. Tiwari V., 2009, 'A textbook of Environmental studies', Himalaya Publications House, New Delhi</li> <li>17. Tomar A., 2007, 'Environmental Education', Kalpaz publication, New Delhi</li> <li>18. Uberoi N.K., 2007, 'Environmental Management', Excel Books, New Delhi</li> </ul>				
	19.Wright R., 2008, 'Environmental Science - Towards sustainable future', Eastern Economy Edition, Prentice Hall Inc, New Jersey, U.S.A				
	20.सुभाषचंद्र सारंग (१९९९) पर्यावरण भूगोल, विद्या प्रकाशन, नागपूर.				
	21.घोलप (२०००) 'पर्यावरण शास्त्र' निशिकांत प्रकाशन, पुणे				
12	Internal Continuous Assessment: 40%	External, Semester End Examination : 60% Individual Passing in Internal and External Examination			
13	<ul> <li>Continuous Evaluation through: Quizzes, Class Tests, presentations, projects, role play, creative writing, assignments etc.( at least 3)</li> <li>Internal Continuous Assessment of 20 Marks</li> <li>1. One Assignment/Project work/Case study /Presentation /Seminar /Field visit report/Book review etc. to be conducted in the given semester before the Semester end examination. (Marks – 10)</li> <li>2. One online/ offline class test (Marks – 5)</li> <li>3. Active participation in regular class instructional deliveries and fieldwork. &amp; Overall conduct as a responsible learner, mannerism and articulation and exhibit of leadership qualities in organizing environment-related activities (Marks – 5)</li> </ul>	<ul> <li>Semester-End Examination of 30 Marks</li> <li>1. This examination shall be of 1 Hour duration. Maximum marks 30.</li> <li>2. There shall be two questions each of 15 marks.</li> <li>3. All questions shall be compulsory with internal choice within the questions. (Each question will be of 15 marks with options.)</li> </ul>			
14	Format of Question Paper: for the final examination				
	Q. 1. Based on Module – 1 & 2 (15 Marks) Q. 2. Based on Module – 3 & 4 (15 Marks)				



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