AC – Item No. – As Per NEP 2020

Aníversíty of Mumbaí



Syllabus for Basket of VES

 Board of Studies in Value Education

 UG First Year Programme

 Semester
 II

 Title of Paper
 Credits 2

 I) Environmental Management & Sustainable Development -II
 From the Academic Year

 From the Academic Year
 2024-25

Name of the Course: Environmental Management & Sustainable Development -II

Sr. No.	Heading	Particulars
1	Description the course : Including but Not limited to :	This introductory course explores the interconnectedness of our environment and the challenges it faces. Designed for students from all faculties, it equips you with a foundational understanding of:
		 Ecosystems and biodiversity: Explore the intricate web of life on Earth and the importance of species diversity. Human impact: Analyse how human activities affect natural resources, climate, and pollution. Sustainability: Discover principles for living in harmony with the environment and meeting our needs without compromising future generations. Regardless of major, environmental awareness is crucial. This course empowers learner to: Become an informed citizen: Make responsible choices and advocate for environmental protection. Understand complex environmental issues: Gain a holistic view of challenges like climate change and pollution. Explore solutions and career paths: Discover potential careers in environmental management, conservation, or
2	Vertical :	Open Elective
3	Type :	Theory / Practical
4	Credit:	2 credits / (1 credit = 15 Hours for Theory or 30 Hours of Practical work in a semester)
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: 1. To create and disseminate local, regional and global scale 2. To introduce about ecos	knowledge to the students about environmental problems at e. ystems, biodiversity and to make aware for the need of

	conservation.
	3. To sensitize students towards environmental concerns, issues, and impacts of human
	population.
	4. To prepare students for successful career in environmental departments, research
	institutes, industries, consultancy, and NGOs, etc.
	Course Outcomes:
	1. Use principles of Environmental Science for explaining sustainable development and its
	related ethical concerns
	2. Display scientific perspective for issues confronting our present day environment.
0	3 Analyze the national and global environmental issues relating air, water, soil, and land
0	
	use, biodiversity, and pollution.
	4. Explain the Role of an individual in relation to human population and environmental
	pollution.
	5. Recognize the importance of collective efforts for environmental sustainability as
	reflected in various treaties, conventions and laws
9	Modules:-
	Unit I: Environmental Pollution and Health (8 lectures)
	Understanding pollution: Production processes and generation of wastes; Assimilative
	capacity of the environment; Definition of pollution; Point sources and non-point sources of pollution
	Air pollution: Sources of air pollution: Primary and secondary pollutants: Criteria pollutants-
	carbon monoxide, lead, nitrogen oxides, ground-level ozone, particulate matter and Sulphur
	dioxide; Other important air pollutants- Volatile Organic compounds (VOCs), Peroxyacetyl
	Nitrate (PAN), Polycyclic aromatic hydrocarbons (PAHs) and Persistent organic pollutants
	(POPs); Indoor air pollution; Adverse health impacts of air pollutants; National Ambient Air
	Quality Standards.
	water pollution: Sources of water pollution; River, lake and marine pollution, groundwater pollution; water quality parameters and standards; adverse health impacts of water pollution
	on human and aquatic life.
	Soil pollution and solid waste: Soil pollutants and their sources; Solid and hazardous waste;
	Impact on human health.
	Noise pollution: Definition of noise; Unit of measurement of noise pollution; Sources of
	noise pollution; Noise standards; adverse impacts of noise on human health.
	I hermal and Radioactive pollution: Sources and impact on human health and ecosystems.
	Unit II: Environmental Management (7 lectures)
	Article 51A (g) and other derived environmental rights: Introduction to environmental
	legislations on the forest, wildlife and pollution control.
	Environmental management system: ISO 14001
	Life cycle analysis; Cost-benefit analysis
	Pollution control and management; Waste Management- Concept of 3R (Reduce, Recycle
	and Reuse) and sustainability; Ecolabeling /Ecomark scheme. Introduction to Millennium
	Development Goals, Sustainable Development Goals, & Mission Life.

nternational Environmental Agreements: Stockholm Conference on Human nt,1972, Ramsar Convention on Wetlands, 1971, Montreal Protocol, 1987, Basel (1989) Earth Summit at Rio de Janeiro 1992, Kyoto Protocol, 1997, Earth				
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ohannesburg, 2002.				
ndian Environmental Legislations: The Wild Life (Protection) Act, 1972; The vention and Control of Pollution) Act, 1974; The Forest (Conservation) Act				
Air (Prevention and Control of Pollution) Act, 1974, The Polest (Conservation) Act, Air (Prevention and Control of Pollution) Act, 1981; The Environment Act, 1986; The Biological Diversity Act, 2002				
Unit IV: Case Studies and Field Survey (7 lectures)				
The students are expected to be engaged in some of the following or similar identifi				
• Discussion on one national and one international case study related to environment and sustainable development.				
d visits to identify local/regional environmental issues, make observations uding data collection and prepare a brief report.				
student one tree initiative.				
umentation of campus biodiversity.				
agement, and sewage treatment.				
uwalia, V. K. (2015). Environmental Pollution, and Health. The Energy and				
ources Institute (TERI).				
tral Pollution Control Board Web page for various pollution standards.				
ters, G. M., & Ela, W. P. (2008). Introduction to environmental engineering and				
nce (No. 60457). Englewood Cliffs, NJ: Prentice Hall.				
grated Environmental Management, A transdisciplinary Approach. CRC Press.				
tledge.				
odore, M. K. and Theodore, Louis (2021) Introduction to Environmental agement, 2nd Edition. CRC Press.				
hard A. Marcantonio, Marc Lame (2022). Environmental Management: Concepts Practical Skills. Cambridge University Press.				
EP (2007) Multilateral Environmental Agreement Negotiator's Handbook, versity of Joensuu, ISBN 978-952-458-992-5				
istry of Environment, Forest and Climate Change (2019) A Handbook on rnational Environment Conventions & Programmes. <u>https://moef.gov.in/wp-</u>				
istry of Environment, Forest and Climate Change (2019) A Handbook on rnational Environment Conventions & Programmes. <u>https://moef.gov.in/wp-</u>				
<u>ent/uploads/2020/02/convention-V-16-CURVE-web.pdf</u> a Code – Digital repository of all Central and State Acts: s://www.indiacode.nic.in/				
versity Grants Commission, D.O.No.F. 14-5/2015(CPP-II) dated 2 nd August1				

10				
12	Internal Continuous Assessment: 40%	Semester End Examination : 60%		
13	Continuous Evaluation through:			
	Quizzes, Class Tests, presentation, project,			
	role play, creative writing, Field Visits,			
	Case Studies, assignments, One Student			
	one tree initiative etc. (at least 4)			
14	Format of Question Paper: for the final examination			
	For OE: External - 30 Marks (2 Credits)			
	Internal - 20 Marks			
	Question Paper Format for 30 Marks			
	Format of Question Paper: 30 Marks per paper Semester End Theory Examination:			
	 Duration - These examinations shall be of one hour and 30 minutes duration. Theory question paper pattern: There shall be 04 questions each of 10 marks out of which students will attempt ANY 			
	THREE			

Signature: Prof. Kavita Laghate Chairman of Board of Studies in Value Education