

GOVERNMENT POLYTECHNIC, PUNE
(An Autonomous Institute of Govt. of Maharashtra)

Name of programme	:	CE/ EE/ET/ME/MT/CM/IT/DDGM
Programme Code	:	01/02/03/04/05/08//16/17/18/19/21/22/23/24/15
Name of course	:	Environmental Science
Course code	:	AU481

Teaching Scheme:

	Hours/Week	Total Hours
Theory	--	--
Term work / Practical	2	32

Evaluation Scheme:

	Progressive Assessment	Semester End Examination			
		Theory	Practical	Oral	Term Work
Duration	--	--	--	--	--
Marks	--	--	--	--	50

Course Content :

Sr. No	Topic/Subtopic	Hours	Marks
1.	Introduction 1.1 Need of the study of environmental science, definition scope and importance of environmental studies. 1.2 Environment & its component need of public awareness, effect of human activities on technological environment. 1.3 Depleting Nature of environmental sources such as soil, water, minerals & forests. Need of conserving natural resources preserving the environment.	04	
2.	Sustainable Development: 2.1 Concept of sustainable development. 2.2 Social, Economical & Environmental aspect of sustainable development. 2.3 Control measure: 3 R (Reuse, Recovery, and Recycle). Appropriate Technology, Environmental education.	04	

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3	<p>Environmental Pollution:</p> <p>3.1 Introduction.</p> <p>3.2 Water Pollution: Sources of water pollution- Sewage, Industrial waste, Agriculture chemicals, Thermal & radioactive waste, Heavy metals. Effects of water pollution. Control of water pollution.</p> <p>3.3 Air pollution: Introduction, sources of air pollution, types of air pollution, effects of air pollution, control measures of air pollution.</p> <p>3.4 Concept of Global Warming, Ozone Layer Depletion, Acid rain, Greenhouse effects.</p> <p>3.5 Noise Pollution: Definition, Classification of noise pollution, effects of noise pollution, control of noise pollution.</p> <p>3.6 Land Pollution: Causes, effects and remedies.</p> <p>3.7 E-Pollution: Definition, Causes and effects and remedies measures.</p> <p>3.8 Introduction to solid waste management.</p> <p>3.9 Water Conservation: Rainwater harvesting, Watershed Management</p>	16	
4	<p>Renewable sources of Energy:</p> <p>Biomass, Biogas, Solar Energy, Nuclear Power, Hydropower, Wind Energy, Ocean (Tidal Energy), Geothermal Energy.</p>	04	
5	<p>Environmental Legislation:</p> <p>5.1 Introduction</p> <p>5.2 Ministry of Environment and Forest. (MOEF) Organizational Structure of MOEF.</p> <p>5.3. Functions & Powers of Control Pollution Control Board.</p> <p>5.4 Functions & Powers of State Pollution Control Board.</p> <p>5.5 Environment Protection Act.</p>	04	

Assignments:

1. Study of air quality of Pune city.
2. Study of noise pollution in Pune city.
3. Study of solid waste management of Pune city.
4. Study of E-waste management of Pune city.

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5. Study of Environmental Status Report of Pune city prepared by Pune Municipal Corporation.



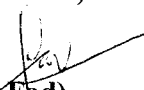


Text Books:

Sr. No	Author	Title	Publication
1	S.P. Nisture, D. A. Joshi, G.S.Chhawsaria	Basic Civil and Environmental Engineering	Pearson
2	Anindita Basak, D.L. Manjunath	Basics of Environmental Studies	Pearson
3	L.D. Danny Harvey	Global Warming The Hard Science	Pearson
4	Benny Joseph	Environmental Studies	TataMcGraw Hill
5	Godfrey Boyle	Renewable Energy	Oxford Publications
6	R. Rajagopalan	Environmental studies	Oxford University Press

Websites:

1. <http://www.mpcb.gov.in/>
2. <http://www.cpcb.nic.in/>
3. <http://www.envfor.nic.in/>
4. <http://www.neeri.res.in/>

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