

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING & TECHNOLOGY									
Programme	Diploma Engineering				Branch	Civil Engineering			
Semester	V				Version	1.0.0.0			
Effective from Academic Year			2020-21		Effective for the batch Admitted in			July 2018	
Subject code	1CI2507		Subject Name		ENVIRONMENT ENGINEERING				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	1	0	4	Theory	40	60	100
Hours	3	0	2	0	5	Practical	30	20	50

Pre-requisites:

The students have to know about basics of Environmental Study.

Course Learning Outcomes:

The theory should be taught and practical should be carried out in such a manner that students are able to acquire required learning out comes in cognitive, psychomotor and affective domain to demonstrate following course outcomes.:

CO1. We study about environment engineering is very essential for engineers as it guide for sustainable development. Use of water, air and other resources must be available as required for human kind and polluted component must be disposed off in nature by giving proper treatment. So the natural flora and fauna will not get affected by sewage disposal.

CO2. We also attention solid waste, Noise, Air pollution, land pollution also wants etc.

CO3. This course focuses on students' acquisition of knowledge, skills & practices in environmental engineering and pollution control.

CO4. The knowledge and application of such aspects is essential in developing a good technician who should be conversant with environmental problems and their solutions. Conduct different laboratory tests for determining engineering properties /parameters of a soil.

The practical should be carried out in such a manner that students are able to acquire different learning out comes from covered course.

Course Content

Name of UNIT	Unit Content	Unit Learning Outcomes	Marks	Hr
UNIT – 1 STUDY OF ENVIRONMENTAL ENGINEERING	1.1 History 1.2 Study of Importance of Environmental engineering, Components of Environment 1.3 Elaborate Ecology – Ecosystem, Ecological “Pyramid” biomass, Energy concept of Numbers 1.4 Explain bio and geochemical cycles and Biodiversity.	1a Built knowledge about environmental engineering. 1b Appreciate component of environment and explain about ecology and ecosystem.	10	8
UNIT – 2 ENVIRONMENTAL POLLUTION EFFECTS	2.1 Explain Acid Rain, Explain Ozone layer and depletion. 2.2 Describe Green House with effects.	2a Knowledge about different environmental pollutions.	9	7
UNIT – 3 AIR AND NOISE POLLUTION	3.1 Sources of air pollution, pollutants & Air quality Index with values. 3.2 Describe adverse effects of air pollution, State measures	3a Explains sources and effects of air pollution. 3b Gives control measurements	14	10

	to control air pollution, State sources of noise pollution. 3.3 Explain adverse effects of noise pollution. 3.4 Explain measurements to control noise pollution.	to prevent air pollution. 3c Explains sources and effects of noise pollution. 3d Gives control measurements to prevent noise pollution.		
UNIT – 4 DETAIL STUDY OF WATER POLLUTION	4.1 State sources of pollution. 4.2 Describe adverse effects of water pollution. 4.3 Explain treatment to control water pollution. 4.4 Measure pollutants, Explain for sampling (characteristics of chemical Physical, biological).	4a Explains sources and effects of water pollution. 4b Gives treatment to control water pollution. 4c Explains different characteristics of sampling.	14	10
UNIT – 5 LAND, RADIO- ACTIVE AND THERMAL POLLUTION	5.1 Causes of land pollution, Measurements to prevent land pollution and radio-active pollution. 5.2 Explain measurements for radio-active pollution, Explain Effects of Radioactive pollution. 5.3 Explain sources of thermal pollution, Effects of thermal pollution, and Solution to overcome the problem.	5a Explains causes of land pollution 5b And gives prevention to control land pollution 5c Gives a sources and effects of radioactive pollution and thermal pollution. 5d And gives prevention to control different types of land pollutions.	8	6
UNIT – 6 ASSESSMENT OF ENVIRONMENT IMPACT	6.1 Describe Environmental Impact Assessment (EIA). 6.2 Describe the process/method of environmental assessment, Explain the format of EIA. 6.3 Explain the quality of environmental impact assessment.	6a Gives Knowledge about Environmental Impact Assessment (EIA).	5	4
		Total	60	45

List of Practical

No.	Unit	Name of Practical
1	II	Determine pH value of water sample
2	III	Determine Turbidity of water sample
3	III	Determine B.O.D. of domestic wastewater sample
4	III	Determine C.O.D. of industrial wastewater sample
5	III	Determine total dissolved solids in water sample

List of Instruments / Equipment / Trainer Board

1	Spectrophotometer
2	Water Analysis Kit
3	B.O.D. Incubator
4	Reflux apparatus
5	Sample treatment plants

List of Visits	
No.	Name of Visits
1	Industry having air-pollution control measures adopted.
2	Nearby GPCB laboratory
3	Industry where stake-sampling can be carried out
4	Visit Chemical industry and write a report mentioning the impact on nature of that particular industry

List of Text Books			
No	Title of Books	Authors	Publication
1	Water Pollution	B. K. Sharma	Standard Book House
2	Water pollution & Disposal of Waste Water on Land	U.N.Mahida	Standard Publishers

List of Reference Books			
No	Title of Reference Books	Authors	Publication
1	Environmental Noise Pollution-Causes, and Control	Dr.Vijendra Mahandian	Standard Publishers

Link of Learning Web Resource	
1	http://www.environment.com
2	http://www.environment.trodat.net
3	http://www.environmental_pollution.com