

# GUJARAT TECHNOLOGICAL UNIVERSITY

## ENVIRONMENTAL ENGINEERING (17) ENVIRONMENTAL LEGISLATIONS & MANAGEMENT SUBJECT CODE: 2741701 M.E. 4<sup>TH</sup> SEMESTER

**Type of course:** Applied Science

**Prerequisite:** Knowledge of water and waste water fundamentals

**Rationale:**

To achieve control of Environmental pollution and its prevention and legal implication in case of its failure.

**Teaching and Examination Scheme:**

Teaching Scheme			Credits C	Examination Marks						Total Marks
L	T	P		Theory Marks		Practical Marks				
			ESE (E)	PA (M)	ESE (V)		PA (I)			
					ESE	OEP	PA	RP		
3	2#	0	4	70	30	30	0	10	10	150

**Content:**

Sr. No.	Content	Total Hrs	% Weightage
1	<b>Environmental Legislations:</b> Need for environmental legislation, National and state level legislation for prevention of air water and land pollution. Environmental Rules related Environmental Protection enacted in India Functions of water and air pollution control boards. Difficulties encountered in enforcing legislation, Environmental pollution monitoring	12	28
2	<b>Constitution of India and Environmental Protection:</b> Provisions made in the Indian Constitution for Environmental Protection. Duty of citizens Indian Penal Code on Environmental Protection	08	20
3	<b>Environmental Audit</b> Objectives, Concepts, Methodologies and benefits International Standards For Environmental management : ISO – 14000	06	12
4	<b>Energy conservation in building :</b> Energy efficient buildings, Green buildings, Intelligent Buildings, Various energy efficiency systems for buildings – LEEDS, GRIHA Rating system Energy conservation building code.	08	20
5	<b>Clean Development Mechanism (CDM)</b> CDM, methodology and procedures for CDM, Eligibility Criteria , UNFCC , Role of UNFCC and Government of India	08	20

**Reference Books:**

1. Pollution Control Acts, Rules and Notification Thereunder : Published by central pollution control

board 2004 onwards

2. Environmental Law and Policy In India by Armin Rosencranz, Shyam Diwan and Martha I Noble Tripathi publisher in association with The book review Literary Trust , New Delhi
3. Environmental Law by Bouwer - McGraw Hill
4. Indian Penal Code Ratanlal & Dhirajlal, 32nd edition, reprint 2014
5. The Indian Penal Code, 45 of 1860 (with New Amendments w.e.f. 3-2-2013) (Latest Bare Act): Universal Law Publishing Co.
6. ECBC code 2007 (Edition 2008 published by bureau of energy efficiency New Delhi)
7. Bureau of energy efficiency publications – Rating Systems.
8. TERI Publications rating systems – TERI Publications GRIHA Rating systems. LEEDS Publications.

**Course Outcome:**

After learning the course the students should be able:

1. Understand the provisions of constitutions of India related to environmental protection and duties of citizen thereof.
2. Understand the provisions of Acts related to prevention and control of water, air and land pollution and the role of pollution control boards in monitoring and control of pollution.
3. Understand basic concepts of energy conservation in building projects.

**List of Tutorials:**

1. Report on site visit to Green building Projects
2. Report of conduction of environmental audit
3. CDM and its concepts
4. Role of UNFCCC and Government of India in achieving CDM

**List of open source software / learning website:**

<http://www.vakilno1.com/>

**Review Presentation (RP):** The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester. The same list will be uploaded on GTU website during the first two weeks of the start of the semester. Every student or a group of students shall critically study 2 papers, integrate the details and make presentation in the last two weeks of the semester. The GTU marks entry portal will allow entry of marks only after uploading of the best 3 presentations. A unique id number will be generated only after uploading the presentations. Thereafter the entry of marks will be allowed. The best 3 presentations of each college will be uploaded on GTU website.