

GUJARAT TECHNOLOGICAL UNIVERSITY

ENVIRONMENTAL MANAGEMENT (18) PREVENTIVE ENVIRONMENTAL MANAGEMENT SUBJECT CODE: 2741802 M.E. 4TH SEMESTER

Type of course: Applied science and management

Prerequisite: Knowledge of environmental laws and policies

Rationale:

Knowledge of preventive practices is essential to avoid the treatment and curative strategies.

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	Introduction <ul style="list-style-type: none">The environment in the context of 21st centuryPresent status of India's Environment	04	10
2	Indian Environmental Policy : Frame work and Implementation <ul style="list-style-type: none">Current environmental laws in India	06	14
3	Preventive Environmental Management Tools <ul style="list-style-type: none">Environmental AuditEnvironmental Impact AssessmentLife Cycle AnalysisInventorization and Environmental Management system	12	28
4	Preventive Environmental Management Initiatives <ul style="list-style-type: none">Cleaner ProductionGreen chemistry and cleaner technologiesGreen choices in process IndustriesRedesigning of unit operations and unit processesRecycle and Reuse of waste waterEco-industrial networkCDM as preventive Environmental management initiative	18	43
5	Relationship between industry and environment	02	05

Reference Books:

- (1) Preventive Environmental Management: An Indian Perspective by Dr. Shyam R. Asolekar & Dr. R. Gopichandran

- (2) Cleaner Production Strategies : Developing preventive Environmental Management by Tim Jackson published by Lewis publishers.
- (3) Practical guide to Environmental Management 9th edition by Frank B Friedman

Course Outcome:

After learning the course the students should be able:

1. Gain knowledge of environmental policy of India and current environmental laws.
2. Understand and apply the different preventive tools like environmental audit, EIA and Life Cycle Assessment.
3. Undertake and implement preventive environmental initiatives like Cleaner production, Green chemistry, Recycle and reuse of wastewater.

List of Tutorials:

- (1) Assignments on the questions related to Current environmental laws, Indian Environmental policy, Environmental audit, EIA, Life Cycle Analysis, Cleaner Production, Recycle and reuse of wastewater.
- (2) Case studies on the Environmental Management Issues

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.