



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering (Minor/Honours Degree Syllabus)

Subject Code : 116AB01

Subject Name : Environmental Impact Assessment

WEF Academic Year :	2022-23
Semester :	6
Category of the Course :	Compulsory

Prerequisite : A good understanding about environmental science is required.

Rationale : The main objective of this subject is to gather knowledge about the environmental impact assessment, different assessment techniques along with the evaluation of case studies.

Course Scheme :

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR		Theory		Practical		
			ESE (E)	PA(M)	ESE (V)	PA (I)		
3	0	2	4	70	0	30	0	100

Course Content:

Sr. No.	Course Content	No. of Hours	% of Weightage
1	Introduction to EIA: Environmental Impact Assessment (EIA) - Environmental Impact Statement - Environmental Risk assessment - Legal and Regulatory aspects in India - Types and limitations of EIA - Terms of reference in EIA - Issues in EIA- National - social and cultural.	10	21
2	Assessment Techniques In EIA: Components - screening - setting - analysis - Prediction of impacts - mitigation. Matrices - Networks - Checklists - Importance assessment techniques - Cost benefit analysis - methods for prediction and assessment of impacts - air - water - soil - noise - biological - cultural - social - economic environments.	12	27
3	Evaluation of EIA: Standards and guidelines for evaluation, Public participation in environmental decision making trends in EIA practice and evaluation criteria - capacity building for quality assurance. Expert system in EIA - use of regulations.	12	27
4	Evaluation of EIA Case studies: Document planning - collection and organization of relevant information - use of visual display materials team writing - reminder checklist. Environmental monitoring - guidelines - policies - planning of monitoring programmes. Environmental management plan.	11	25



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Reference Books:

1. Ramachandra T.V., Management of Municipal Solid Waste, Commonwealth of Learning, Canada and Indian Institute of Science, Bangalore, 2006.
2. Ramachandra T.V., Soil and Groundwater Pollution from Agricultural Activities, Commonwealth of Learning, Canada and Indian Institute of Science, Bangalore, 2006.
3. Vijay Kulkarni and Ramachandra T.V., Environmental Management, Commonwealth of Learning, Canada and Indian Institute of Science, Bangalore, 2006.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	To understand Environmental Impact Assessment, Environmental Risk assessment -Legal and Regulatory aspects in India.	UN
02	To classify assessment techniques in EIA.	AN
03	To evaluate Standards and guidelines for evaluation through public participation, evaluation criteria and capacity building for quality assurance.	EL
04	To compare EIA through case studies including policies, planning of monitoring programs and case studies of EIA of developmental projects.	EL

*RM: Remember, UN: Understand, AP: Apply, AN: Analyze, EL: Evaluate, CR: Create

List of Experiments: (Minimum 6 experiments need to be performed)

1. To study about the Environmental Impact Assessment.
2. To prepare checklist on environmental monitoring.
3. To evaluate the parameters for air quality monitoring.
4. To evaluate the parameters for soil quality monitoring.
5. To develop case studies of EIA developmental projects.
6. To evaluate the B.O.D parameter.
7. To monitor the noise quality parameters.
8. To provide Hands-on training on environmental audit (Partial field work)
(A group activity where student can frame an audit team and perform audit).

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