

Name of Faculty	:	Faculty of Engineering & Technology
Name of Program	:	Master of Technology (M. Tech)
Course Code	:	1MEE03
Course Title	:	Environmental Impact Assessment
Type of Course	:	Programme Elective - I (PE)
Year of Introduction	:	2023-24

Prerequisite	:	Sustainable Development, environmental studies, environmental statement etc
Course Objective	:	The purpose of EIA is to identify potential environmental impacts from proposals, such as projects and programs, and to propose means to avoid or reduce the significant impacts.
Course Outcomes	:	At the end of this course, students will be able to:
	CO1	To Introduce in depth about Impact assessments on environment & Prepare portions of environmental documents through administrative and legal Requirements and standards of professional practice
	CO2	Fully participate in interdisciplinary environmental report preparation teams
	CO3	Critically review an EIA document for completeness and adequacy.
	CO4	Analyze proposed development project plans for possible environmental effects and prepare appropriate initial studies.
	CO5	Utilize EIA documents for policy development, project planning or for legal or political action planning.

Teaching and Examination Scheme

Teaching Scheme (Contact Hours)			Credits	Examination Marks				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	SEE	CIA	SEE	CIA	
3	2	0	4	70	30	30	20	150

Legends: L-Lecture; T-Tutorial/Teacher Guided Theory Practice; P - Practical, C - Credit, SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

Unit No.	Topics	Teaching Hours	Weightage	Mapping with CO
1	Introduction and Basic Concept of EIA: Concept of Sustainable Development, Evolution of EIA, concepts, Screening, Scoping, Base line studies, Mitigation, General Structure of EIA, EIS, Limitation of EIA, Environmental Risk Assessment	6	15%	CO1
2	Methodologies and strategies: Impact prediction techniques, Adhoc Method, Checklist, Matrix, Network methods, Cost benefit Analysis, Public participation, Public hearing procedure,	12	28%	CO1 CO2
3	Practical Consideration and Case studies: Economic development and environmental degradation, environmental impacts of typical industries, power plant, larger projects, present scenario of various government resolution on selecting the location of industries, case studies related to infrastructure, mining, thermal power plant, hydroelectric, nuclear power Plant.	12	30%	CO2 CO3 CO5
4	EIA Notification by MOEF(Govt. of India): Provision in the EIA notification, categorization of Industries for seeking environmental clearance from concern authorities, Procedure for environmental clearance, Procedure for conducting EIA Report, Rapid and Comprehensive EIA.	6	15%	CO1 CO5
5	Environmental Management: Environmental Management Plan, Post Environmental monitoring, Life cycle assessment, ISO-14000	6	12%	CO1 CO5

Suggested Distribution of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyse	Evaluate	Create
Weightage	10	20	30	20	15	5

NOTE: This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Suggested List of Experiments/Tutorials

Sr. No.	Name of Experiment/Tutorial	Teaching Hours
1	Delphi technique for assigning significance to Environmental Attributes.	4
2	Adhoc Method of EIA	4
3	Matrices Method of EIA	4
4	Network Method of EIA	4
5	Overlays Method of EIA	4
6	Visit to a Project site/ Office of EIA expert	4
7	A report of EIA is to be prepared by a student on the project of his specialization	4

Suggested Learning Websites

Sr. No.	Name of Website
1	http://eia.unu.edu/course/index.html%3Fpage_id=173.html
2	http://elearning.vtu.ac.in/

Reference Books

Sr. No.	Name of Reference Books
1	Environmental Impact Assessment: By Larry Canter, Mc Graw Hill Pub
2	Handbook of EIA by John Ray and Rau Whooten
3	Environmental Impact Analysis - a Decision Making Tool: By R K Jain, L. V. Urban and G.S. Stacey Publishers: van Nostrand reinhold New York
4	Handbook of Environment Impact Assessment: By Judith Prett
5	Theory and Practice of Environmental Impact assessment: By Abbasi and Ramesh
6	Environmental Impact Assessment: By Shrivastava Environmental Impact Assessment and Statement. John E. Heer, Joseph Hoggerty