

(CE432) ENVIRONMENTAL IMPACT ASSESSMENT AND MANAGEMENT

Program : B.Tech
Year : IV
Sem : II
Int. Max Marks : 30
Ext. Max Marks : 70

Lecture : 4/Week
Tutorial : 1/Week
Practical : -
Credits : 4

COURSE OBJECTIVES:

Students will be able to

1. Recognize the basic concepts of environmental impact assessment.
2. Prediction assessment impacts on air and water environment.
3. Prediction assessment impacts on soil, noise and biological environment.
4. Develop cost benefit analysis for development activities in the projects.
5. Develop environmental management plan and analyze the case studies of different projects.

COURSE OUTCOMES:

Upon completion of this course, students will develop an ability to.....

1. Build a report on recent environmental concerns in India
2. Explain fundamentals of ecology and environment along with its management.
3. Explain strategic environmental assessment.
4. Discuss the evolution of environmental policies and laws.
5. Illustrate environmental pollution act, air act, water act etc.,.
6. Plan and carry out environmental impact assessment study.
7. Discuss environmental impact assessment as an environmental management tool.
8. List and compute the environmental clearance procedures in India.

Time Table:

Monday			Thursday	2	09:30 AM to 11:10 AM
Tuesday			Friday	2	11:10 AM to 12:50 PM
Wednesday			Saturday	1	11:10 AM to 12:00AM

LESSON PLAN

Name of the Faculty: A. Siva Krishna

Academic Year: 2015 - 2016

Course Number : CE432

Course Name : EIAM

Program : B. Tech.

Branch : CE

Year/Semester : IV/ II

Section : A

UNIT – I: Basic concept of environmental impact assessment

Learning Objectives: At the end of the unit, the students will be able to.....

- Define basic concept of environmental impact assessment.
- Explain elements of environmental impact assessment.
- Sketch the flow chart of environmental impact assessment.
- Classify the environmental parameters.
- Develop the environmental base map.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Basic concept of environmental impact assessment.	11/12/15 11/12/15
2	Benefits of environmental impact assessment.	12/12/15
3	Initial environmental examination.	17/12/15 17/12/15
4	Elements of environmental impact assessment.	18/12/15 18/12/15
5	Factors affecting environmental impact assessment.	19/12/15
6	Impact evaluation and analysis.	31/12/15
7	Preparation of environmental base map.	31/12/15
8	Flow chart of environmental impact assessment.	02/01/16
9	Classification of environmental parameters.	07/01/16

UNIT-II: environmental impact assessment methodologies

Learning Objectives: At the end of the unit, the students will be able to.....

- List out different methodologies of environmental impact assessment.
- Analyze different methodologies of environmental impact assessment.
- Develop cost and benefit analysis.

- Construct the methodology for assessment of soil and ground water.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Environmental impact assessment methodologies	08/01/16
2	Criteria for the selection of environmental impact assessment.	08/01/16
3	Environmental impact assessment methods :- Adhoc methods	09/01/16
4	Matrix methods, network methods.	21/01/16
5	Environmental media quality, index methods.	21/01/16
6	Overlay methods, cost and benefit analysis.	22/01/16
7	Impact developmental activities.	22/01/16
8	Impact development land use.	23/01/16
9	Introduction and methodology for the assessment of soil and ground water.	28/01/16 28/01/16
10	Delineation of study area.	29/01/16
11	Identification of activities.	29/01/16

UNIT-III: procurement of relevant soil quality

Learning Objectives: At the end of the unit, the students will be able to.....

- Prediction of impacts on soil quality.
- Assess the impact significance on soil quality.
- Construct the methodology for assessment of impacts on surface water, air and biological environment.
- Assess the impact significance and surface water, air and biological activity.
- Assess the impact of deforestation.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Procurement of relevant soil quality.	04/02/16
2	Impact prediction on soils	04/02/16
3	Assessment of impact significance.	05/02/16
4	Identification and incorporation of mitigation measures.	05/02/16
5	Environmental impact assessment in surface water.	11/02/16
6	Air and biological environment.	11/02/16
7	Methodology for the assessment of impacts on surface water.	12/02/16
8	Air pollution sources.	12/02/16
9	Generalized approach for assessment of air pollution impact.	18/02/16
10	Cause and effects of deforestation.	18/02/16

11	Environmental impact of deforestation.	19/02/16
12	Assessment of impact of development.	19/02/16
13	Activities on vegetation and wild life.	20/2/16

UNIT-IV: Environmental audit and environmental legislation

Learning Objectives: At the end of the unit, the students will be able to.....

- List out the objectives of environmental audit.
- Illustrate the stages of environmental audit.
- Evaluation of audit data.
- Build the audit report.
- Summarize the environmental pollution act, water act, wild life act.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Environmental audit.	25/02/16
2	Environmental legislation	25/02/16
3	Objectives of environmental audit.	26/02/16
4	Types of environmental audit.	26/02/16
5	Audit protocol and stages of environmental audit.	03/03/16
6	Onsite activities and post audit activities.	03/03/16
7	Evaluation of audit data preparation of audit report.	04/03/16
8	The environmental pollution act	04/03/16
9	The water act and mota act.	10/03/16
10	The air (preparation and control of pollution act).	10/03/16
11	Wild life act.	11/03/16

UNIT-V: Case studies

Learning Objectives: At the end of the unit, the students will be able to.....

- Discuss the environmental impact assessment for various industries.
- Analyze the environmental impact assessment statement for various industries.
- Elaborate the environmental impact assessment statement for various industries.
- Develop the case studies.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Case studies of environment.	17/03/16
2	Preparation of environmental impact assessment.	17/03/16

3	Statement for various industries	18/03/16
4	Statement before going to industries.	18/03/16
5	Plan and flow chart for visiting industries.	19/03/16
6	Case studies for different projects like waste water treatment, transportation system.	26/03/16

Sr. No	Type of exam	Scheduled date (DD/MM/YY)
1	Mid semester exam - I	01/02/16 to 03/02/16
2	Mid semester exam - II	31/03/16 to 02/04/16
3	End semester exam (Regular)	04/04/16 to 30/04/16
4	End semester exam (Supplementary)	23/04/16 to 18/05/16

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COURSE OBJECTIVES:

Students will be able to

6. Recognize the basic concepts of environmental impact assessment.
7. Prediction assessment impacts on air and water environment.
8. Prediction assessment impacts on soil, noise and biological environment.
9. Develop cost benefit analysis for development activities in the projects.
10. Develop environmental management plan and analyze the case studies of different projects.

COURSE OUTCOMES:

Upon completion of this course, students will develop an ability to.....

9. Build a report on recent environmental concerns in India
10. Explain fundamentals of ecology and environment along with its management.
11. Explain strategic environmental assessment.
12. Discuss the evolution of environmental policies and laws.
13. Illustrate environmental pollution act, air act, water act etc.,.
14. Plan and carry out environmental impact assessment study.
15. Discuss environmental impact assessment as an environmental management tool.
16. List and compute the environmental clearance procedures in India.

Time Table:

Monday			Thursday	2	09:30 AM to 11:10 AM
Tuesday			Friday	2	11:10 AM to 12:50 PM
Wednesday			Saturday	1	11:10 AM to 12:00AM

LESSON PLAN

Name of the Faculty : T. Rajkumar

Course Number : CE432

Program : B. Tech.

Year/Semester : IV/ II

Academic Year: 2015 - 2016

Course Name : EIAM

Branch : CE

Section : B

UNIT – I: Basic concept of environmental impact assessment

Learning Objectives: At the end of the unit, the students will be able to.....

- Define basic concept of environmental impact assessment.
- Explain elements of environmental impact assessment.
- Sketch the flow chart of environmental impact assessment.
- Classify the environmental parameters.
- Develop the environmental base map.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Basic concept of environmental impact assessment.	11/12/15
2	Initial environmental examination	12/12/15
3	Full scale EIA	12/12/15
4	Factors affecting EIA	17/12/15
5	Classification of impacts	17/12/15
6	Impact evaluation and analysis.	18/12/15
7	Preparation of environmental base map.	18/12/15
8	Flow chart of environmental impact assessment.	19/12/16
9	Classification of environmental parameters.	31/12/16

UNIT-II: environmental impact assessment methodologies

Learning Objectives: At the end of the unit, the students will be able to.....

- List out different methodologies of environmental impact assessment.
- Analyze different methodologies of environmental impact assessment.
- Develop cost and benefit analysis.
- Construct the methodology for assessment of soil and ground water.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Environmental impact assessment methodologies	31/12/16
2	Criteria for the selection of environmental impact assessment.	01/01/16
3	Environmental impact assessment methods :- Adhoc methods	01/01/16
4	Matrix methods, network methods.	02/01/16
5	Environmental media quality, index methods.	07/01/16
6	Overlay methods, cost and benefit analysis.	07/01/16
7	Impact developmental activities.	08/01/16
8	Impact development land use.	08/01/16
9	Introduction and methodology for the assessment of soil and ground water.	09/01/16 21/01/16
10	Delineation of study area.	21/01/16
11	Identification of activities.	22/01/16
12	Tutorial	22/01/16 23/01/16

UNIT-III: procurement of relevant soil quality

Learning Objectives: At the end of the unit, the students will be able to.....

- Prediction of impacts on soil quality.
- Assess the impact significance on soil quality.
- Construct the methodology for assessment of impacts on surface water, air and biological environment.
- Assess the impact significance and surface water, air and biological activity.
- Assess the impact of deforestation.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Procurement of relevant soil quality.	28/01/16
2	Impact prediction on soils	28/01/16
3	Assessment of impact significance.	29/01/16
4	Identification and incorporation of mitigation measures.	29/01/16
5	Environmental impact assessment in surface water.	30/01/16
6	Air and biological environment.	04/02/16
7	Methodology for the assessment of impacts on surface water.	04/02/16
8	Air pollution sources.	05/02/16
9	Generalized approach for assessment of air pollution impact.	05/02/16
10	Cause sand effects of deforestation.	06/02/16

11	Environmental impact of deforestation.	11/02/16
12	Assessment of impact of development.	11/02/16 12/02/16
13	Activities on vegetation and wild life.	12/02/16 13/02/16

UNIT-IV: Environmental audit and environmental legislation

Learning Objectives: At the end of the unit, the students will be able to.....

- List out the objectives of environmental audit.
- Illustrate the stages of environmental audit.
- Evaluation of audit data.
- Build the audit report.
- Summarize the environmental pollution act, water act, wild life act.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Environmental audit.	17/02/16
2	Environmental legislation	17/02/16
3	Objectives of environmental audit.	18/02/16
4	Types of environmental audit.	18/02/16
5	Audit protocol and stages of environmental audit.	19/02/16
6	Onsite activities and post audit activities.	25/02/16
7	Evaluation of audit data preparation of audit report.	25/02/16
8	The environmental pollution act	26/02/16
9	The water act and mota act.	26/02/16
10	The air (preparation and control of pollution act).	03/03/16
11	Wild life act.	03/03/16
12	Tutorial	04/03/16 05/03/16

UNIT-V: Case studies

Learning Objectives: At the end of the unit, the students will be able to.....

- Discuss the environmental impact assessment for various industries.
- Analyze the environmental impact assessment statement for various industries.
- Elaborate the environmental impact assessment statement for various industries.
- Develop the case studies.

Lect. No.	Topic of the lecture	Schedule Date DD/MM/YY
1	Case studies of environment.	10/03/16 11/03/16
2	Preparation of environmental impact assessment.	11/03/16 12/03/16
3	Statement for various industries	17/03/16 17/03/16
4	Statement before going to industries.	18/03/16
5	Plan and flow chart for visiting industries.	18/03/16 19/03/16
6	Case studies for different projects like waste water treatment, transportation system.	24/03/16 24/03/16

Sr. No	Type of exam	Scheduled date (DD/MM/YY)
1	Mid semester exam - I	01/02/16 to 03/02/16
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3	End semester exam (Regular)	04/04/16 to 30/04/16
4	End semester exam (Supplementary)	23/04/16 to 18/05/16