

| Course Code | Course Name | L-T-P-Credits | Year of Introduction |
|-------------|---------------------------------|---------------|----------------------|
| CE482 | ENVIRONMENTAL IMPACT ASSESSMENT | 3-0-0-3 | 2016 |

Prerequisites: Nil

Course objectives:

- To study the various types of environmental pollution
- To study the impact of various types of pollutants and their assessment techniques

Syllabus:

Pollution, Types. Air pollution-sources, effects, types of pollutants. Water pollution, characteristics of water pollutants, Solid wastes, sources, types, soil pollution, pesticide pollution. Noise pollution, Impacts, positive and negative Environmental impact assessment, steps of doing EIA, methodology adopted, EIA procedure in India, Case studies.

Course Outcomes:

- The students will have a basic knowledge of various pollution sources and their impacts

Text Books / References:

1. B.C Punmia , “Waste Water Engineering”, Laxmi Publications Pvt. Ltd,
2. Dr. PN Modi, “Sewage Treatment & Disposal and Waste water Engineering”, Standard Book House, New Delhi
3. John Glasson, Riki Therivel & S Andrew Chadwick “Introduction to EIA” University College London Press Limited
4. Larry W Canter, “Environmental Impact Assessment”, McGraw Hill Inc. , Newyork.
5. Mackenzie L Davis, Introduction to Environmental Engineering, McGraw hill Education (India)
6. Peavy H S, Rowe, D.R. Tchobanaglou “Environmental Engineering” Mc Graw Hill Education
7. Rau G J and Wooten C.D “EIA Analysis Hand Book” McGraw Hill
8. Robert A Corbett “Standard Handbook of Environmental Engineering” McGraw Hill

COURSE PLAN

| Module | Contents | Hours | End Sem. Exam Marks % |
|--------|---|-------|-----------------------|
| I | INTRODUCTION: Classification of Pollution and Pollutants, AIR POLLUTION: Primary and Secondary Pollutants, air pollutants-sulfur dioxide- nitrogen dioxide, carbon monoxide, Impact of air pollutants on human, vegetation and environment, , Ambient Air Quality Standards | 7 | 15 |
| II | WATER POLLUTION: Point and Non-point Source of Pollution, Major Pollutants of Water, Physical, chemical and biological characteristics of water , Water borne diseases, Water Quality standards | 7 | 15 |

| FIRST INTERNAL EXAMINATION | | | |
|------------------------------------|---|---|-----|
| III | SOLID WASTE: Classification and sources of Solid Waste, Characteristics of Solid Waste, e waste, Radioactive wastes LAND/SOIL POLLUTION: Effects of urbanization on land degradation, Impact of Modern Agriculture on Soil, pesticide pollution, Effect on Environment | 6 | 15 |
| IV | NOISE POLLUTION: Sources of Noise, Effects of Noise, measurement of noise, Equivalent sound pressure level, Control measures | 6 | 15, |
| SECOND INTERNAL EXAMINATION | | | |
| V | Impacts of pollutants, types, scale of impact-Global, local pollutants. Climate change, Ozone layer depletion, Deforestation, land degradation Environmental impact assessment, Need for EIA, | 8 | 20 |
| VI | EIA Procedure-Screening, Scoping, EIA procedure in India, Impact analysis- checklists, matrix methods, overlay analysis, Case studies of EIA | 8 | 20 |
| END SEMESTER EXAMINATION | | | |

QUESTION PAPER PATTERN (External Evaluation) :

Maximum Marks :100

Exam Duration: 3 Hrs

Part A -Module I & II : 2 questions out of 3 questions carrying 15 marks each

Part B - Module III & IV: 2 questions out of 3 questions carrying 15 marks each

Part C - Module V &VI : 2 questions out of 3 questions carrying 20 marks each

Note : 1.Each part should have at least one question from each module

2.Each question can have a maximum of 4 subdivisions (a,b,c,d)