

Course Code	Course Name	L-T-P-Credits	Year of Introduction
CE469	ENVIRONMENTAL IMPACT ASSESSMENT	3-0-0-3	2016

**Prerequisites:** Nil

**Course objectives:**

- To know the various types of environmental pollution
- To make aware the impact due to various types of pollutants and their assessment technique

**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.

**Expected Outcomes:**

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

**Text Books / References:**

1. A K Srivastava, Environment impact Assessment, APH Publishing, 2014
2. John Glasson, Riki Therivel & S Andrew Chadwick “Introduction to EIA” University College London Press Limited, 2011
3. Larry W Canter, “Environmental Impact Assessment”, McGraw Hill Inc. , New York, 1995.
4. Ministry of Environment & Forests, Govt. of India 2006 EIA Notification
5. Rau G J and Wooten C.D “EIA Analysis Hand Book” Mc Graw Hill
6. Robert A Corbett “Standard Handbook of Environmental Engineering” McGraw Hill, 1999.

### COURSE PLAN

Module	Contents	Hours	Sem. Exam Marks %
I	INTRODUCTION: Classification of Pollution and Pollutants, – Evolution of EIA (Global and Indian Scenario)- Elements of EIA — Screening – Scoping - Public Consultation - Environmental Clearance process in India - Key Elements in 2006 EIA(Govt. of India ) Notification	6	15
II	AIR POLLUTION: Primary and Secondary Types of Pollutants, sulfur dioxide- nitrogen dioxide, carbon monoxide, WATER POLLUTION: Point and Non-point Source of Pollution, Major Pollutants of Water, Impact of pollutants	6	15
<b>FIRST INTERNAL EXAMINATION</b>			
III	SOLID WASTE: Classification and sources of Solid Waste, Characteristics, effects, e waste, : Effects of urbanization on land degradation, pesticide pollution NOISE POLLUTION: Sources of Noise, Effects of Noise,	7	15

	Control measures		
<b>IV</b>	Impacts of pollutants, types, scale of impact-Global, local pollutants. Climate change, Ozone layer depletion, Deforestation, land degradation , Impact of development on vegetation and wild life	7	15,
<b>SECOND INTERNAL EXAMINATION</b>			
<b>V</b>	Socio-economic impacts - Impact assessment Methodologies- Overlays, Checklist, Matrices, Fault Tree Analysis, Event Tree Analysis- Role of an Environmental Engineer- Public Participation	8	20
<b>VI</b>	Standards for Water, Air and Noise Quality - Environmental Management Plan- EIA- Case studies of EIA	8	20
<b>END SEMESTER EXAMINATION</b>			

**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)