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**ENVIRONMENTAL IMPACT ASSESSMENT AND  
MANAGEMENT****Course Code: 13CE2112****L P C  
4 0 3****Course Educational Objectives:**

1. To familiarize student with the knowledge of preparing E.I.A for various projects.
2. To impart awareness of environmental issues in water resource and industrial development.
3. To create an understanding of applying various methodologies for carrying out environmental impact assessment.

**Course Outcomes:**

1. Student will be able to prepare environmental impact statement of a project.
2. Student will be capable of interpreting and analyzing data and report environmental impact assessment.
3. Acquiring the knowledge of environmental indicators.
4. Use and application of knowledge of environmental issues in water resource development and industrial development.

**UNIT – I****BASIC CONCEPTS OF EIA**

Elements of EIA – Preparation of environmental base map, classification of environmental parameters – Environmental setting – Environmental Indicators.

**UNIT – II****EIA METHODOLOGIES**

Introduction, criteria for the selection of EIA methodology, Categorization of methodologies, Ad-hoc methods, matrix methods, Network method, Environmental Media quality index method, overlay methods, cost / benefit analysis.

**UNIT – III****IMPACT OF DEVELOPMENTAL ACTIVITIES AND LAND  
USE**

Introduction and methodology for the assessment of soil and ground water, delineation of study area, identification of activities.

Procurement of relevant soil quality, impact prediction, assessment of impact significance, identification and incorporation of mitigation measures.

#### **UNIT-IV**

#### **METHODOLOGY FOR THE ASSESMENT OF IMPACTS OF SOME ATTRIBUTES**

Surface water, air and biological environment. Methodlogy and generalized approach for the assessment of impact of development activities on vegetation and wildlife, environmental impact of deforestation.

#### **UNIT – V**

#### **ENVIRONMENTAL AUDIT – LEGAL ASPECTS**

Environmental audit and environmental legislation objectives of environmental audit, types of environmental audit, audit protocol, stages of environmental audit, onsite activities, evaluation of audit data and preparation of audit report – Legal aspects – case studies.

#### **TEXT BOOKS**

1. CANTER L.W., “*Environmental Impact Assesement*”, International 1996, Mcgraw Hill Inc. New York
2. Jain, R.K. Urban L.V.Stracy, G.S. “*Environmental Impact Analysis*”, 2<sup>nd</sup> edition, Vau Nostrand Reinhold Co, New York.
3. Anjaneyulu, Vall Manickam,” *Environmental Impact Assessment Methodologies*”, 2<sup>nd</sup> Edition, B.S.Publications, Sultanbazar, Hyderabad.

#### **REFERENCES**

1. Ran, J.G. & Wooten, D.C.,” *Environmental Impact Assessment*”, 1<sup>st</sup> edition, Mc Graw Hill Pub. Co. Ltd, New York.
2. UNESCO, 1987, “*Methodologies, Guidelines for the Integrated Environmental Evaluation of Water Resources Development*”, UNESCO/UNEP, Paris.