

## **EVPC2001 ENVIRONMENTAL IMPACT ASSESSMENT (3-0-0)**

### **Course Objectives:**

The course in Environmental Impact Assessment aims to provide students with a comprehensive understanding of systematic environmental evaluation methodologies. It seeks to develop advanced knowledge of assessing developmental project impacts on natural and social systems. Students will explore critical concepts including impact identification, assessment techniques, legal frameworks, and mitigation strategies. The objective is to equip students with theoretical and practical skills in analyzing complex environmental interactions, understanding comprehensive assessment procedures, and applying sophisticated techniques for evaluating and minimizing potential environmental disruptions caused by human interventions.

### **Module I**

Concept of environmental impact, Introduction to Environmental impact assessment(EIA) definitions, terminology and concepts; Evolution of EIA, EIA at project, Regional and policy levels; Impact of development on environment and Environmental Impact Assessment (EIA) and Environmental Impact; Statement (EIS), Objectives, Historical development, EIA capability and limitations, Legal provisions on EIA

### **Module II**

EIA Methods: Methods of EIA, Strengths, weaknesses and applicability, Appropriate methodology, Case studies:highway, airport, dams, power plants

### **Module III**

EIA Procedures: Socio Economic Impact, Assessment of Impact on land, water and air, energy impact;Impact on flora and fauna;Mathematical models; public participation, Reports, Exchangeof Information, Post Audit, Rapid andcomprehensive EIA.

### **Module IV**

Use the mathematical models in EIA, Water quality, air quality and noise; assumptionsand limitations. Basic tenets ofGlobal Climate Models. Plan for mitigation of adverseimpact on environment, optionsfor mitigation of impact on water, air and land. Addressing the issues related to the project affectedpeople, climate impacts andEIA

### **Course Outcomes:**

1. To plan and manage impact studies and identify methods for impact identification.
2. To implement prediction and assessment of impacts on the air environment.
3. To implement prediction and assessment of impacts on the soil and ground water environment.
4. To implement prediction and assessment of impacts on the noise and biological environment.

### **Text Book:**

Canter L., (1995), "Environmental Impact Assessment", McGraw Hill.

### **Reference Books:**

1. Jain R.K., Urban L.V., Stacey G.S., (1977), "Environmental Impact Analysis – A New Dimension in Decision Making", VanNostrand Reinhold Co.
2. Rau and Wooten, (1981), "Environmental Impact Assessment Handbook". McGraw Hill.