

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for B. Arch
SEMESTER - IX

SUBJECT NAME: ENVIRONMENTAL IMPACT ASSESMENT [EIA]

SUBJECT CODE: 1095007

FOCUS:

This subject deals with the various impacts of infrastructure projects on the components of environment and method of assessing the impact and mitigating the same. The student is expected to know about the various impacts of development projects on environment and the mitigating measures.

CONTENT:

1. INTRODUCTION 5

Impact of development projects under Civil Engineering on environment - Environmental Impact Assessment (EIA) - Environmental Impact Statement (EIS) – EIA capability and limitations – Legal provisions on EIA.

2. METHODOLOGIES 5

Methods of EIA –Check lists – Matrices – Networks – Cost-benefit analysis – Analysis of alternatives – Case studies.

3. PREDICTION AND ASSESSMENT 10

Assessment of Impact on land, water and air, noise, social, cultural flora and fauna; Mathematical models; public participation – Rapid EIA.

4. ENVIRONMENTAL MANAGEMENT PLAN 10

Plan for mitigation of adverse impact on environment – options for mitigation of impact on water, air and land, flora and fauna; Addressing the issues related to the Project Affected People – ISO 14000

5. CASE STUDIES 15

EIA for infrastructure projects – Bridges – Stadium – Highways – Dams – Multi-storey Buildings – Water Supply and Drainage Projects

REFERENCE BOOKS

1. John G. Rau and David C Hooten (Ed), “Environmental Impact Analysis Handbook”, McGraw-Hill Book Company, 1990.

2. "Environmental Assessment Source book", Vol. I, II & III. The World Bank, Washington, D.C., 1991.
3. Judith Petts, "Handbook of Environmental Impact Assessment Vol. I & II", Blackwell Science, 1999.