

# GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 1

## Master of Environmental Engineering

Subject Name **Inter Disciplinary 1 (to be offered by the Environmental Section of the Department for other PG students of the institute/s)**

### **ENVIRONMENTAL IMPACT ASSESSEMENT of ENGINEERING PROEJCTS**

| Sr.No | Course content   |
|-------|--|
| 1     | <b>Introduction to Environmental Impact Analysis</b> :Terms-environment,Impact and assessment, concept of EIA, Environmental settings, Prediction and assessment of impact on physical, biological and socio-economic environment. |
| 2     | <b>Methods of Analysis of Impacts on Environment</b> :Adhoc , Checklist, Matrix, Network, environmental Media quality Index Method, Cost Benefit Analysis,   |
| 3     | <b>Public Participation</b> :Concept, Public hearing procedure and guidelines  |
| 4     | <b>Practical Considerations</b> :Economic development and environmental degradation. Practical consideration in impact assessment  |
| 5     | <b>Location of Industries</b> :Environmental impacts of typical industries, power plants, large projects, present scenario of various government resolutions on selecting the location of industries, environmental point of view. |
| 5     | <b>Case Histories</b> of Engineering Projects like Energy Generation Projects both thermal and Hydal , Infra-structure projects , Power Transmission etc..   |

#### **Exercise / Practice of the subject**

1. Exercise on Delphi technique for assigning significance to Environmental Attributes
2. Exercise on IMPASS game using example of EIA of Engineering Project
3. Exercise on Adhoc Method of EIA
4. Exercise on, Matrices, Method of EIA
5. Exercise on, Network, Method of EIA
6. Exercise on, Overlays c Method of EIA
7. Visit to a Project site/ Office of EIA expert
8. Collection data of Environmental attributes of project ongoing nearby
9. A report of EIA is to be prepared by a student on the project of his specilization

#### Reference Books:

1. Environmental Impact Assessment, Canter Mc Graw Hill Pub.
2. Environmental Impact Analysis. R.K. Jain, L. V. Urban and G.S. Stacey Publishers : van Nostrand reinhold New York
3. Environmental Impact Analysis. Hand book by John Ray and David Wooten .
4. Environmental Impact Assessment and Statement. John E. Heer, Joseph Hoggerty,