

## K L UNIVERSITY

## ENVIRONMENTAL IMPACT ASSESSMENT (11 – CE 337)

Pre – requisite: 11 - CE 207

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**SYLLABUS**

**Conceptual Facts of EIA:** Introduction, Definition, Scope, Objectives and Basic Principles, Classification, Project Cycle, Grouping of Environmental Impacts: Direct Impacts, Indirect Impacts, Cumulative Impacts and Induced Impacts. Significance of Impacts: Criteria/Methodology to Determine the Significance of the Identified Impacts. **Methods for Impact Identification:** Background Information, Interaction-Matrix Methodologies: simple matrices, stepped matrices, development of a simple matrix, other types of matrices, summary observations on matrices, Network Methodologies: Checklist methodologies, simple checklists, descriptive Checklists, summary observations on simple and descriptive Checklists. **Prediction of Impacts (Air and Water):** Air Environment: Basic information on air quality, Sources of Pollutants, effects of pollutions, Conceptual approach for addressing air environment impacts, Air quality standards, Impact Prediction, Impact significance. Water Environment: Basic Information on surface-Water Quantity and Quality, Conceptual Approach for Addressing Surface-Water-Environment Impacts, Identification of Surface-Water Quantity or Quality Impacts, Procurement of Relevant Surface-Water Quantity-Quality Standards, Impact Predictions, Assessment of Impact Significance. **Predictions of Impacts (Noise, Soil, Biological and Socio-economic):** Basic Information on Noise Key Federal Legislation and Guidelines, Conceptual Approach for Addressing Noise-Environment Impacts, Identification of Noise Impacts, Procurement of Relevant Noise Standards and/or Guidelines, Impact Prediction, Assessment of Impact Significance. Soil Environment: Human Health and Society, Biological Environment: Basic Information on Biological Systems, Conceptual Approach for Addressing Biological Impacts, Identification of Biological Impacts, Description of Existing Biological Environment Conditions, Procurement of Relevant Legislation and Regulations, Impact Prediction, Assessment of Impact Significance. **Environmental Management Plan (EMP):** Case Study, identification of Impacts, EMP for Air Environment: Dust Control Plan, Procedural Changes, Diesel Generator Set Emission Control Measures, Vehicle Emission Controls and Alternatives, Greenbelt Development. EMP for Noise Environment, EMP for Water Environment: Water Source Development, Minimizing Water Consumption, Domestic and Commercial Usage, Horticulture, Storm Water Management. EMP for land Environment: Construction Debris, hazardous Waste, Waste from temporary Labour settlements.

**TEXT BOOKS:**

1. Environmental impact assessment by Canter, L.W, Mc Graw Hill, New York, 1996.
2. Technological guidance manuals of EIA. MoEF
3. Environment Impact Assessment methodologies, Y. Anjaneyulu and Valli Manickan, B.S. Publications, Hyderabad.

**REFERENCES**

1. Hand book of Environment Impact Assessment, Vol. I and II, Blackwell Science, London, 1999.
2. The world bank group, Environmental Impact Assessment source book, Vol. I, II and III.
3. Textbook of Environmental Science & Technology by M.Anji Reddy, BS Publications, 2010