

Environment and Energy Management

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Text Books

Environmental Impact Analysis: Process and methods By James T Maughan. CRC Press (Taylor & Francis Group) 2014

Environmental Science: Towards A Sustainable Future By Wright, Dorothy & Boorse 2010

Environmental Impact Assessment. By: Larry W. Cantar (Second Edition /Third Edition), Principles Of Environmental Engineering and Science, By :Mackenzie L. Davis.

Environmental Laws In Pakistan By: Faheem Ahmed Siddiqui

Pakistan's Environmental Law, By: Dr. Sohaib Qadir

Course Description

The goal of the course is to promote an understanding of how environmental impact assessment is conducted and used as a valuable tool in the engineering project management decision-making process. Students learn to prepare an environmental impact assessment, review and critically analyze an environmental impact statement, use models for environmental impact prediction, and apply environmental impact assessment as a tool in management decision-making. Case studies of environmental impact assessment for several types of engineering projects will also be discussed in the course.

	Topic
1	Introduction to Environment. Major Components of Environment
2	Ecology and Ecosystem of Pakistan. Threatened Ecosystems
3	Biodiversity Concepts Nutrient cycle Integrated Environmental Management Case study (Bioremediation)
4	Environmental Impact Assessment What are EIA and IEE. Procedures for EPA-Regulations EIA Directives
5	Pakistan Environmental Legislation, International Conventions and National Environmental Quality Standard. Policies and Strategies, Emission Standards,
6	Industrial Air pollution control and management of atmospheric pollutants Project Assignments
7	Qualitative and Quantative Assessment of Environmental Impacts. Case study (Zulfikrabad)
8	Environmental Auditing/Environmental Monitoring Program. (Case study). Developing EIV for projects
9	Waste Management. Categorization Solid waste Management Liquid waste Management
10	Major industries and their effluents Environmental Pollution management, and Mitigation options

11	Industrial Noise Pollution and abatement techniques. Possible impact of Electromagnetic field on the environment
12	Manchaar Lake Case Study