

Course Outline for Comprehensive Examination

MBA, Environment and Energy Management

Environment & Energy Management program aims to prepare future decision-makers for analysing and acting in an environmentally proactive and energy efficient way when making decisions about policy, production and resource utilization in energy generation, transmission and load management.

The comprehensive examination is designed to assess students' integrated knowledge, critical thinking, and problem-solving abilities acquired throughout the MBA program. It evaluates the student's grasp of core concepts, analytical skills, and capacity to apply interdisciplinary knowledge to real-world environmental and energy challenges.

Course Outline

S. No.	Contents
1.	Solid Waste Management including; Waste hierarchy, lifecycle approach, solid waste management plan, landfill, industrial and hazardous waste, hospital waste management, Plastic etc.
2.	Environmental Impact Assessment (EIA) including; EIA process, public consultation, screening/scoping, EMP formulation.
3.	Safety, Health and Environmental Management (SHE) including; basics of occupational health and safety, safety standards, hazard identification and risk assessment, emergency response,
4.	Climatic changes, mitigation, adaptation strategies
5.	Disaster Risk Management
6.	Renewable Energy and Energy Conservation including; Solar, wind, biomass, energy efficiency technologies, innovative technologies in energy efficiency and conservation
7.	Energy Sources and Managementt including; Fossil fuels, nuclear energy, hydropower, energy pricing and policy.
8.	Case Studies including; <ul style="list-style-type: none">• Integrated solid waste management planning in an urban city.• EIA for a renewable energy development project.• Safety audit in an industrial facility.• Comparative energy audit in residential vs commercial sectors.• Renewable energy transition strategy for an organization.

Recommended Readings

- Course material including: -
 - Lecture slides and case studies/assignments provided throughout the MBA program
 - Books recommended for each course (*List of books is provided in introduction files of the respective courses*)
- Supplementary Reading including: -
 - Pakistan's National Climate Change Policy
 - Pakistan's National Energy Efficiency and Conservation Policy
 - NDC 2021 (Nationally Determined Contributions)
 - International Reports and Frameworks
 - UN SDGs (especially Goal 7, 11, 12, 13)
 - IFC Critical Habitats
 - IPCC Assessment Reports (Summaries for Policymakers)
- Case Studies including: -
 - Urban SWM in South Asia
 - Energy audits in industry
 - EIA examples for infrastructure/energy projects
 - Renewable energy implementation in developing countries
- Relevant Journals articles