

Course No.: Econ 3105	Credit: 3.0	Year: Third	Term: First
Course Title: Environmental Economics		Course Status: Core	
<p>Rationale: This course attempts to equip students with economic concepts, methods, tools and techniques for analyzing environmental phenomena.</p>			
<p>Course Objectives: The aim of this course is to:</p> <ul style="list-style-type: none"> • Develop understanding of the interrelationship between environment and economics. • Train up students to identify the impact of externality on market failure. • Motivate students to address environmental pollution in Bangladesh from economic viewpoint. 			
<p>Intended Learning Outcomes (ILOs): At the end of this course students will be able to:</p> <ul style="list-style-type: none"> • Understand interrelationship between economics, environment and resources. • Identify how externality influences market failure. • Apply economic approaches and instruments to solve environmental problems. • Estimate environmental benefits and costs. • Evaluate environmental decision making process. • Diagnose causes and extent of environmental pollution in Bangladesh. 			

Course Content

Section – A

Introduction: Relation between economics and the environment; Circular flow model; Material Balance Model; Types of pollutant; Sources of pollution; Pollution heaven hypothesis; Scope of environmental damage; Damage function; Environmental quality; Sustainable development; Risk analysis; Pollution reduction versus pollution prevention.

Dealing with Resources: Types of resources; Theory of optimal harvest of renewable resources; Static model of effort-harvest function; Revenue and cost strategy of a profit maximizing firm dealing with renewable resources; Fundamental principle of exhaustible resource extraction and use.

Market Failure: Public good; Externality; Modeling the market of environmental quality – a public good; Modeling environmental damage as a negative externality; External cost; Competitive versus efficient equilibrium; Property right; Coase theorem; Common property resources.

Conventional Solution to Environmental Problems: Command and control approach; Environmental standard; Allocative efficiency of standards; Cost effectiveness; Equi-marginal principle of optimality.

Economic Solution to Environmental Problems: Market instruments; Pollution charge; Subsidy; Deposit-refund system; Pollution permit trading system.

Section – B

Environmental Decision Making: Public policy process; Environmental public policy development; Key players in environmental decision making – environmentalists, private firms, govt., scientists and economists.

Valuation of Environmental Benefits and Costs: Incremental benefit; User versus existence value; Damage function method; Political referendum method; Contingent valuation method; Averting expenditure method; Travel cost method; Hedonic price method; Engineering approach; Survey approach.

Benefits-cost Analysis: Present value determination; Inflation correction; Present value of benefits and costs; Benefit-cost ratio; Allocative efficiency and cost effectiveness.

Strategic Planning for Sustainable Development: Sustainable development; Conflict between economic gain and environmental quality; Industrial ecosystem; Industry's response to pollution; Agenda 21.

Environmental Pollution in Bangladesh: Major polluting sources; Threats; Environmental pollution – local, national and global perspectives; Impacts of pollution; Environmental policy.