SIXTH SEMESTER DSE
(Any Two per Semester)

ECO-HE-6016: ENVIRONMENTAL ECONOMICS

Course Description

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments. Selected topics on international environmental problems are also discussed.

Course Outline

1. Introduction

Basic concepts: Environment, Ecology, Economy and the ecosystem. Definition and scope of environmental economics, why study environmental economics.Interaction between the environment and the economy, environmental economics and ecological economics, environmentaleconomics and resource economics.Review of microeconomics and welfare economics: the utility function, social choice mechanism, the compensation Principle and social welfare function (concepts only).

2. The Theory of Externalities

Pareto optimality or Pareto efficiency, Externalities: meaning and types of externality, market failure: meaning, market failure in the presence of externalities; market failure and public goods, is environment a public good? Property rights and the coase theorem.

3. The Design and Implementation of Environmental Policy

Environmental Policies: an overview; Nonmarket and market based instruments of Environmental Policy: command and control (CAC) approach, economic instruments like pigovian taxes and effluent fees, tradable permits and mixed instruments. Monitoring and Enforcement: What is monitoring and enforcement? Penalties, cost of abatement. Damages from pollution. Incentives to sources to comply with environmental regulations.

4. International Environmental Problems

Nature of environmental problems: transboundary pollution –Climate change, global warming, ozone depletion and bio-diversity loss; Trade and environment: pollution haven hypothesis.

5. Measuring the Benefits of Environmental Improvements

Non-Market values: use and non-use values and optional value, measurement methods: Direct method-contingent valuation and indirect method-hedonic pricing methods, value of statistical life; their applications and limitations.

6. Sustainable Development

Conventional development model: a critique, Alternative approach: Sustainable Development and its origin, objectives of Sustainable Development, Approaches to Sustainable Development: weak sustainability, strong sustainability, Safe minimum standard approach, ecological perspective and social perspective, Rules and indicators of Sustainable Development.

Readings:

1. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press,2nd edition, 2010.
2. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W.Norton, 5th edition, 2005.
3. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource andEnvironmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.
4. Maureen L. Cropper and Wallace E. Oates, 1992, ―Environmental Economics: ASurvey, ‖ *Journal of Economic Literature*, Volume 30:675-740.
5. Subhashini Muthukrishnan, *Economics of Environment*, PHI Learning Private Limited,2nd edition, 2015.
6. Bhattacharyya R, *Environmental Economics*, Oxford University Press.
7. Nick Hanley, Jason F. Shogren and Ben White, *Introduction to Environmental Economics*, Oxford University Press.
8. Gautam Purkayastha, *Environmental Economics: Theory ,Problems and Solutions*, KalyaniPublishers , Reprinted 2016