

Semester V
B.A. (Non-Honours) Economics
DSE 3: ENVIRONMENTAL ECONOMICS (6 Credits)
Full marks: 100 (Mid Term-20 + End Term-80)

Course Description

This course introduces students to concepts, methods and policy options in managing the environment using tools of economic analysis. This course should be accessible to anyone with an analytical mind and familiarity with basic concepts of economics. Since several environmental problems are caused by economic activity (for instance, carbon emissions, overharvesting of renewable resources and air and water pollution as a by-product of industrial activity), this course examines different approaches to adjusting behaviour through economic institutions such as markets and incentives as well as through regulation, etc. It also addresses the economic implications of environmental. Conversely, the impact of economic growth on the environment is also addressed under the rubric of sustainable development. Environmental problems and issues from the Indian and international context (especially global warming) are used to illustrate the concepts and methods presented in the course. The course will be useful for students aiming towards careers in the government sector, policy analysis, business, journalism and international organisations.

| Units | | No of Lecture Hours | No of Tutorial Hours | Marks |
|--------------|---|----------------------------|-----------------------------|--------------|
| 1. | Introduction: Environment and Economy: The economy and the environment: inter-linkages; Key environmental issues and problems : Air, water, soil and noise pollution, deforestation, desertification and acid rain, economic way of thinking about these problems; basic concepts from economics: Meaning and types of externalities, Pareto optimality, market failure; Pareto optimality and market failure in the presence of externalities; solution to market failure: Pigouvian tax, property rights and the Coase theorem. | 20 | 4 | 20 |
| 2. | The Design and Implementation of Environmental Policy: Overview; Economic instruments of environmental policies: Pigouvian taxes and effluent fees; tradable permits; implementation of environmental policies in India: joint forest management, watershed management; international experience and transboundary environmental problems: Global warming, ozone depletion; Global Treaties, the Montreal Protocol; economics of climate change. | 20 | 4 | 20 |
| 3. | Environmental Valuation Methods and Applications: Non-Market values: Types and definitions of non-market values; measurement or valuation methods: Contingent valuation and Travel cost methods; their comparative advantages and disadvantages | 20 | 4 | 20 |
| 4. | Sustainable Development: Concepts; Notions of Sustainability: Strong and Weak | 15 | 3 | 20 |

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| | sustainability, measurement and indicators of sustainability: The Pearce–Atkinson indicator. | | | |
| Total | | 75 | 15 | 80 |

Readings

1. Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, “*Natural Resource and Environmental Economics*”, Pearson Education/Addison Wesley, 4th edition, 2011.
2. Charles Kolstad, “*Intermediate Environmental Economics*”, Oxford University Press, 2nd edition, 2010.
3. Robert N. Stavins (ed.), “*Economics of the Environment: Selected Readings*”, W.W. Norton, 6th edition, 2012.
4. Robert Solow, “An Almost Practical Step toward Sustainability,” Resources for the Future 40th anniversary lecture, 1992.
5. Kenneth Arrow et al. , “Are We Consuming Too Much?” *Journal of Economic Perspectives*, 18(3): 147-172, 2004.
6. IPCC (Intergovernmental Panel on Climate Change), Fifth Assessment Report.
7. Bhattacharyya R, *Environmental Economics*, Oxford University Press
8. Nick Hanley, Jason F. Shogren and Ben White, *Environmental Economics in Theory and Practice*, Macmillan India Ltd.