



# ARSD College, University of Delhi

## Model Course Handout/Lesson Plan

| <b>Course Name : B.Com (HONS.) General Elective</b> |             |                         |             |              |               |            |
|---|-------------|-------------------------|-------------|--------------|---------------|------------|
| Semester  | Course Code | Course Title            | Lecture (L) | Tutorial (T) | Practical (P) | Credit (C) |
| VI  | 12277608    | ENVIRONMENTAL ECONOMICS | 5           | 2            | 0             | 6          |
| Teacher/Instructor(s)                               |             | KAVITA BANGARWA         |             |              |               |            |
| Session   |             | 2021-22                 |             |              |               |            |

### Course Objective:

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

### Course Learning Outcomes:

The module aims to introduce students to the main theoretical and empirical concepts in environmental economics, equip students with a thorough analytical grasp of environmental policy theory, ranging from externalities to international environmental agreements, and familiarise students with the main issues in environmental valuation and with the basic features of the environmental policy tools.

| Unit No. | Learning Objective   | Lecture No. | Topics to be covered  |
|----------|--|-------------|---|
| 1.       | Introduction: What is environmental economics, review of microeconomics and welfare economics. | 1           | Introduction of Environmental Economics                               |
|          |  | 2           | Normative and positive economics                                      |
|          |  | 3-4         | Three Year Action Agenda (NITI Aayog)                                 |
|          |  | 5-6         | Economic survey 2017-18 Volume 2, Chapter 5 (Air pollution in delhi). |
|          |  | 7-8         | State of Environment Report: India 2009, Chapter 2                    |
|          |  | 9-10        | Report to the people on Environment and forests:2010-11               |
|          |  | 11          | Revision  |
| 2.       | The Theory of Externalities  | 12-13       | Public goods and bads and their characteristics.                      |
|          |  | 14-15       | Pricing of public goods and bads                                      |
|          |  | 16-18       | Pareto optimality and market failure in the presence of               |

|    |  |       |  |
|----|--|-------|--|
|    |  |       | externalities.   |
|    |  | 19-21 | Ronald Coase Theorem, its assumptions and conditions under which its violated.   |
|    |  | 22-23 | Bargaining problems: Free riding and bargaining withing groups   |
|    |  | 24    | Tradable Permits: permit market operation and initial permit issuance  |
|    |  | 25    | Revision   |
|    |  | 26    | Internal 1   |
| 3. | The Design and implementation of Environmental Policy. | 27    | Basic Environmental regulations  |
|    |  | 28    | Basic Regulatory instrument: prescriptive regulations and economic incentives  |
|    |  | 29-30 | Spatial and temporal complications: Space and time, efficiency versus cost effectiveness and ambient-differentiated versus emission-differentiated regulation. |
|    |  | 31-32 | Emission fees: Pigovian fees in case of single polluter and multiple polluter  |
|    |  | 33    | Fees v/s subsidies : short run and long run  |
|    |  | 34-35 | Pollution fee in case of Imperfect competition.  |
|    |  | 36    | The Double Dividend  |
|    |  | 37    | Voluntary measures, Market driven voluntary actions: Green Consumers, Green as a signal  |
|    |  | 38    | Regulatory Games: Voluntary Agreements, Voluntary programs and preemptive actions.   |
|    |  | 39    | Space: Sources, Receptors and Transfer Coefficients  |
|    |  | 40    | Marketable ambient permits: (a) Two firms and (b) Multiple sources and receptors   |
|    |  | 41    | Time: (A) Stock Pollutants (B) Temporal variability  |
|    |  | 42    | Revision   |
| 4. | International Environmental Problems                   | 43-45 | Designing Environmental mitigation policy- Andy Joseph   |
|    |  | 46-48 | Carbon markets 15 years after Kyoto: Lessons learned, New challenges- Richard Newell, William Pizer and Daniel Raimi   |
|    |  | 49    | Revision.  |
|    |  | 50    | Internal 2   |
| 5. | Measuring the benefits of Environmental Improvements   | 51    | Demand for the Environmental goods: Price and Marginal Willingness to Pay(MWTP)  |
|    |  | 52    | Willingness to Pay v/s Marginal willingness to pay   |
|    |  | 53    | Types of Environmental Goods: Use Value and Nonuse value   |
|    |  | 54-55 | Measuring demand: Revealed preference and restricted demand  |
|    |  | 56    | Hedonic price Theory   |
|    |  | 57-58 | Stated preference method: Contingent valuation method  |
|    |  | 59    | Criticism of contingent valuation method   |
|    |  | 60    | Doubt class  |
|    |  | 61    | Revision   |
| 6. | Sustainable Development                                | 62-63 | Sustainable development:Concepts ;measurement  |

**Evaluation Scheme:**

| No. | Component | Duration | Marks |
|-----|-----------|----------|-------|
|-----|-----------|----------|-------|

|    |                          |      |    |
|----|--------------------------|------|----|
| 1. | Internal Assessment      |      | 25 |
|    | • Class test 1           |      |    |
|    | Class test 2             |      |    |
|    | • Attendance             |      |    |
| 2. | End Semester Examination | 3 hr | 75 |

| Details of the Course   |   |                             |
|-------------------------|---|-----------------------------|
| Unit                    | Contents  | Contact Hours               |
| I                       | Introduction: What is environmental economics, review of microeconomics and welfare economics.  | 11                          |
| II                      | The Theory of Externalities   | 15                          |
| III                     | The Design and implementation of Environmental Policy   | 16                          |
| IV                      | International Environmental Problems  | 8                           |
| V                       | Measuring the benefits of Environmental Improvements  | 11                          |
| VI                      | Sustainable Development   | 2                           |
|                         | <b>Total</b>  | <b>63</b>                   |
| <b>Suggested Books:</b> |   |                             |
| Sl. No.                 | Name of Authors/Books/Publishers  | Year of Publication/Reprint |
| 1.                      | Robert Solow (1992). " <a href="#">An Almost Practical Step towards Sustainability</a> ," Resources for the Future (RFF) 40 <sup>th</sup> anniversary lecture.                      | 1992                        |
| 2.                      | Robert Solow (1992). " <a href="#">Sustainability: An Economist's Perspective</a> "<br>[Re-printed as Chapter 28 in <i>Economics of the Environment: Selected Readings</i> (2012).] | 1992                        |
| 3.                      | Perman et al. (2011): Chapters 2 and 19.  | 2011                        |
| 4.                      | <a href="#">Economic Survey 2016-17 Volume 2, Chapter 5</a><br>Climate Change, Sustainable Development and Energy.  | 2016-17                     |

|                            |   |      |
|----------------------------|---|------|
| 5.                         | Charles Kolstad                         | 2012 |
| <b>Mode of Evaluation:</b> | Internal Assessment / End Semester Exam |      |

