COURSE CONTENT

Course Coordinator  Euston Quah
Course Code  HE3005 / HE3024
Course Title  Environmental Economics
No of AUs  3
Contact Hours  3hrs seminar per week

Course Aims
Economic theory is applied to: environmental questions and issues associated with resource exploitation; the problem with externalities, in particular with pollution and their management through various economic institution, economic incentives, command and control policies and other instruments. Methods to analyse the economic implications of environmental policy are discussed with particular emphasis on the valuation of environmental quality, assessment of environmental damages. Analytical tools needed for the evaluation of projects which affects the environment, such as cost-benefit analysis, and environment impact analysis will also be presented. Further topics will include aspects of sustainable development, the problems associated with natural resource management, and select topics on international environmental issues as in global warming and climate change, and transboundary pollution.

Intended Learning Outcomes (ILO)
By the end of this course, you (as a student) would be able to:
1. Explain the keys concepts of environmental economics
2. Differentiate the forms of market failures
3. Compare and adopt the appropriate policy interventions for environmental market failures
4. Apply valuation techniques for intangible and non-market environmental goods
5. Recognize and apply cost-benefit analysis and game theory as tools in environmental issues
6. Evaluate contemporary environmental issues

Course Content
- Introduction to and history of environmental economics
- Optimal levels of externalities and pollution: Marginal abatement cost vs marginal damage function
- Public goods and the environment: Preference revelation
- Policy intervention measures in environmental market failures: moral suasion, direct provision, Pigouvian taxes, command and control, and others.
- Game theory and the environment
- Valuation of environmental goods: Stated and revealed preference approaches, damage schedule approach
• Introduction to cost-benefit analysis in environmental policies and problems: The 6 questions of CBA
• Contemporary issues in environmental economics: NIMBYs, waste management, climate change, transboundary pollution, and others.

Assessment (includes both continuous and summative assessment)

1. Continuous Assessment : 50%
2. Final Exam : 50%
Total : 100%

Reading and References
5. Environmental and Natural Resource Economics by Tom Tietenberg & Lynne Lewis; 8th Edition; Pearson Addison Wesley 2009
7. Economics of the Environment: Selected Readings by Robert Stavins(editor); WWW Norton 2000 Page
12. The Economics of the Environment by Wallace Oates (editor); Edward Elgar 1994
13. Sustainable Environmental Management by Kerry Turner (editor); Belhaven: Westview 1990
14. Sustainable Development by David Reid; Earthscan 1999
15. The Costs of Economic Growth by E. J. Mishan; 2nd Edition; Weidenfeld and Nicolson 1993
16. Economic Growth and Environmental Sustainability by Paul Ekins; Routledge 2000
17. An Introduction to Ecological Economics by Robert Costanza et al.; St Lucie Press 1997
20. Siting Environmentally Unwanted Facilities by Euston Quah and K C Tan; Edward Elgar 2002
## Course Instructors

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Office Location</th>
<th>Email</th>
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<tbody>
<tr>
<td>Euston QUAH</td>
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## Planned Weekly Schedule

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<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Course LO</th>
<th>Readings/ Activities</th>
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<tr>
<td>1</td>
<td>Introduction to Environmental Economics, Overview</td>
<td>1</td>
<td>NA</td>
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<tr>
<td>2</td>
<td>Externalities, optimal levels of pollution</td>
<td>2</td>
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<td>3</td>
<td>Public goods and the environment</td>
<td>2</td>
<td>NA</td>
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<td>4</td>
<td>Policy interventions and environmental market failures</td>
<td>1</td>
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<td>5</td>
<td>Game theory and the environment</td>
<td>3</td>
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<tr>
<td>6</td>
<td>Valuation techniques: Stated preference approaches</td>
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<td>NA</td>
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<tr>
<td>7</td>
<td>Valuation techniques: Revealed preference approaches, pairwise comparison</td>
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<td>NA</td>
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<td>8</td>
<td>Presentation of Group project proposals, assessment and feedback</td>
<td>1-6</td>
<td>NA</td>
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<tr>
<td>9</td>
<td>Introduction to CBA and applications to environmental issues</td>
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<td>NA</td>
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<tr>
<td>10</td>
<td>Contemporary issues in Environmental Economics: NIMBYs, Climate change</td>
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<td>11</td>
<td>Contemporary issues in Environmental Economics: Waste management, transboundary haze pollution</td>
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<td>12</td>
<td>Case study</td>
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<tr>
<td>13</td>
<td>Group project presentations, assessment, discussion and feedback</td>
<td>1-6</td>
<td>NA</td>
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<td><strong>Recess Week</strong></td>
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