Welcome to AEC 923 and research in environmental and resource economics (ERE). This course is about what economists do as environmental and resource economists. The course covers the concepts environmental and resource economists use, the models they work with, and the stories they tell. The course is intended for Ph.D. students with a solid background in microeconomics and ERE policy.

Meeting: Monday and Wednesday, 10:20 to 11:40 a.m., 145 Natural Sciences Building.
Final: December 16, 10 a.m. to 12 noon.

Description: MSU Catalog: “Advanced economic theory of environmental management and policy. Treatment of externalities and market and non-market approaches to environmental improvement. Topics in conservation and sustainable economic growth. Applications to research and policy.” 3 credits.

Attendance: Class attendance and participation are required, unless prior arrangements are made with the instructor.

Instructor: Professor John Hoehn

Office: 301A Agriculture Hall, MW 1:30 to 3 pm and by appointment.

Contacts: Phone: 353-6735; E-mail: hoehn@msu.edu.


Other readings are provided by the instructor in paper or electronic form. Most journal articles are accessible through the electronic resources of the main library.

Objective. The objective is to understand economic research on environmental and resource problems. The course examines major ERE themes and explores how economists research these themes.

Prerequisites. The design of the course assumes that students have a good, general understanding of issues in environmental and natural resource economics, such as gained from AEC 829. AEC 923 uses comparative static analysis and other fundamental microeconomic, general equilibrium, and welfare economic concepts. Completion of at least one advanced course in microeconomics equivalent to EC 812A is assumed. ERE empirical tools are derived from statistics and econometrics, so a basic understanding of statistical hypothesis testing and regression analysis is essential for understanding research in ERE.
Topics. Environmental and resource economics addresses issues as air quality, water quality, climate change, environmental risks, food safety, waste disposal, land use, conservation reserves, species protection, international trade, and the pricing and valuation of nonmarket resources. In particular, the course focuses on how human institutions aggravate, alleviate, and resolve such ERE issues. When economic institutions work well, the resource scarcity generates incentives that encourage conservation and sustainability through innovation and substitution. Common, less valuable resources are substituted for scarce and costly resources. Economists investigate and debate the nature and management of these tradeoffs, opportunity costs, incentives, and substitutions—as well as the consequences for human well-being.

AEC 923 examines how economists address the issues of environmental conservation and sustainability in their research. The conceptual building blocks should be somewhat familiar from students' previous courses in ERE: externality, Pigouvian tax, Pareto efficiency, property rights, exclusion, non-rivalry, public goods, transactions costs, liability, principle and agent, tradeable permits, common property, open access resource, standards, asymmetric information, and moral hazard.

Requirements. The course requires your full participation as an active learning. Each student is responsible for understanding the concepts, findings, and models covered in the class meetings and in the assigned readings. Students are expected to study the assigned readings prior to class and come to class prepared to discuss the content of the readings. Student will have the opportunity to make presentations on the required readings and lead in-class discussions.

The specific requirements of the course are to:

1. Master the concepts and results covered in the readings.
2. Make in-class presentations on the assigned readings. Presentations less than 10 minutes may use transparencies and the chalk board. Longer presentations should use PowerPoint.
3. Complete worksheets and homework assignments
4. Prepare written questions prior to class for in-class discussions.
5. Complete midterm and final examinations.
6. Submit a well-organized portfolio of the material developed for requirements 1 to 5 by December 8, including printouts of the transparencies and PowerPoints used in presentations.
7. Enjoy the course.

Course Grade. The course grade is weighted sum of grades on each of the specific requirements. The percentage weights are listed in below:

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<tr>
<th>Item</th>
<th>Weights</th>
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<tbody>
<tr>
<td>In-class presentations</td>
<td>20%</td>
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<tr>
<td>Worksheets and homework</td>
<td>15%</td>
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<tr>
<td>In-class participation and questions</td>
<td>10%</td>
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<tr>
<td>Midterm</td>
<td>25%</td>
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<tr>
<td>Final</td>
<td>30%</td>
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<td>Total</td>
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Questions? E-mail Dr. Hoehn at hoehn@msu.edu