1. COURSE OVERVIEW

Calendar Description

Students apply the principles of sustainable economic management to environmental and resource issues. Topics include population and the environment; agriculture and food; scarcity and abundance of resources; energy sector; renewable resource using in the fisheries and the forestry sector; water economics; pollution, impacts and policy responses; industrial ecology; trade and development and the environment; and institutions for sustainable development.

Educational Objectives/Graduate-Level Learning Outcomes

After successfully completing the course, students will be able to:

1. Discuss the possible limits to economic growth.
2. Evaluate the economics of the interaction of population dynamics with the environment.
3. Appraise the economics of renewable resources.
4. Assess the economics of non-renewable resources.
5. Apply the principles of economic sustainability to agriculture systems
6. Use the concepts of economic sustainability towards energy efficiency.
7. Evaluate the principles of economic sustainability to the fisheries.
8. Appraise the principles of economic sustainability to the forestry sector.
9. Assess the economics of water resource.
10. Describe the impact of pollution and pollution control.
11. Discuss the economics of industrial ecology.
12. Review the institutions for sustainable development.

Course Topics

1. Resources, Environment, and Economic Development
   - A brief history of economic growth and the environment
   - Limits to growth model
   - A summary of recent growth
   - Future of economic growth and the environment
   - Introduction to sustainable development

2. Population and the Environment
   - Dynamics of population growth
   - Theory of demographic transition
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
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<tbody>
<tr>
<td>3.</td>
<td>Agriculture, Food, and the Environment</td>
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<tr>
<td></td>
<td>Population and food supply</td>
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<td>Trends in global food production</td>
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<td>Agriculture impact on the environment</td>
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<td>Sustainable agriculture</td>
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<td>4.</td>
<td>Scarcity and Abundance of Resources</td>
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<td>Supply of nonrenewable resources</td>
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<td></td>
<td>Economic theory of nonrenewable resource use</td>
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<td>Global scarcity or increasing abundance</td>
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<td>Economics of recycling</td>
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<td>5.</td>
<td>Energy Sector</td>
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<td>Energy and economic systems</td>
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<td>Economic and ecological analysis of energy</td>
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<td>Energy trends and projections</td>
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<td>Economics of alternative energy futures</td>
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<td>Policies for future energy development</td>
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<td>6.</td>
<td>Renewable Resource Use in Fisheries</td>
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<td>Principles of renewable resource management</td>
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<td>Ecological and economic analyses of fisheries</td>
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<td>Economics of fisheries in practice</td>
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<td>Policies for sustainable fisheries management</td>
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<td>7.</td>
<td>Renewable Resource Use in the Forestry Sector</td>
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<td>Economics of forest management</td>
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<td>Forest loss and biodiversity</td>
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<td>Policies for sustainable forest management</td>
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<td>8.</td>
<td>Water Economics</td>
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<td>Global supply and demand for water</td>
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<td>Addressing water shortages</td>
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<td>Water pricing</td>
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<td>Water markets and privatization</td>
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<td>9.</td>
<td>Pollution, Impacts and Policy Responses</td>
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<td>Economics of pollution control</td>
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<td>Pollution control policies: standards, taxes, permits</td>
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<td></td>
<td>Pollution control policies in practice</td>
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<td>Cumulative and global pollutants</td>
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<td>10.</td>
<td>Industrial Ecology</td>
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<td>Economic and ecological views of production</td>
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<td>Potential of industrial ecology</td>
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<td>Industrial ecology on a global scale</td>
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<td>Policies to promote industrial ecology</td>
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</tbody>
</table>
11. Environment, Trade, and Development
   - Environmental impact of trade
   - Trade and environment: policies and practice
   - Trade agreements and the environment
   - Strategies for sustainable development

12. Institutions for Sustainable Development
   - Economics of sustainable development
   - Reforming global institutions
   - Policies for sustainable development

Texts/Materials

Textbooks


Other Resources


Suggested Readings


**Student Evaluation Philosophy and Methods**

<table>
<thead>
<tr>
<th>Face-to-Face</th>
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<tr>
<td>Poster Presentation</td>
<td>20%</td>
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<tr>
<td>On-line Discussions</td>
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<td>Topic Presentation</td>
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<td>Mid-term exam</td>
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<td>Final Exam</td>
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**Online**

| Assignments          | 40%      |
On-line Discussions 15
Final Exam 45

**Poster Presentation**
Students will prepare and present a poster to the community on an application of economic sustainability in a team. A grade of zero will be given for all late assignments unless permission is received in advanced.

**On-line Discussion**
Six discussion questions will be posted for comment by students at different times throughout the course.

Discussion 1 – Are there limits to growth?
Discussion 2 – What is economic impact of population growth on the environment?
Discussion 3 – What can be done to make agriculture more economically sustainable?
Discussion 4 – What is the literature on peak oil and what is next?
Discussion 5 – What is the total economic value of forests?
Discussion 6 – Pollution control. How much and at what cost?

Students are expected to engage in an active debate with each other of the issues involved. The discussion will be monitored to ensure it remains focused on the question asked and that all students are respectful of each other and engaged. Each on-line discussion will be graded after each discussion based on the quality and not the quantity of each student’s contributions.

**Topic Presentation**
Students will present a topic of the course in a team.

**Assignments**
Assignments will be problem solving type and case study analysis to prepare students for the exams. A grade of zero will be given for all late assignments unless permission is received in advanced.

**Mid-term Exam**
There will be a mid-term exam after Topic 5. Translators or other electronic devices are not permitted during exams with the exception of a scientific calculator.

**Final Exam**
The comprehensive final exam is three hours in length. Translators or other electronic devices are not permitted during exams with the exception of a scientific calculator.

2. **RELATIONSHIP TO OTHER COURSES**

**Prerequisites**

ESMN 6010, ESMN 6020

**Co-requisites**

None

**Links to Previous, Concurrent and Subsequent courses**

Building on ESMN 6010-Principles of Sustainable Economic Management, this course applies the principles of sustainable economic management to various real world environmental and natural resource issues and is the foundation for more in depth applications in subsequent courses.
3. COURSE PURPOSE AND FIT IN GRADUATE PROGRAM

What is this course’s role in the graduate program?

This course applies the principles of sustainable economic management to various real world environmental and natural resource issues and is the foundation for more in depth applications in subsequent courses.

4. DELIVERY

Delivery mode (face-to-face, blended, distance)

The course will be developed for distance, blended, and campus delivery.

Delivery Features

- Lectures recorded using Camtasia
- Group work
- Online discussions

Instructional Approach

This course employs an active, collaborative learning approach with a heavy reliance on group problem solving, academic research and online discussion or class participation.

5. OTHER

Methods for Prior Learning Assessment and Recognition

PLAR is not allowed in graduate programs under Northwest Commission on Colleges and Universities (NWCCU) accreditation standards. No PLAR credit will be awarded, which is permissible under TRU policy.

Course Policies

**Academic Integrity** – In accordance with TRU Policy 5-0.

**Examinations** – In accordance with TRU Policy ED 3-9. In addition, students must pass the final exam to receive a passing grade for the course.

**Grading** – In accordance with TRU Policy ED 3-5.

**Late Assignments** - A grade of zero will be given for all late assignments unless permission is received in advanced from the instructor/facilitator.

**Student Academic Appeals** - In accordance with TRU Policy ED 4-0.

**Student Attendance** – In accordance with ED 3-1.
**Team Conflict** - All team members should actively participate in the analysis of the case and the preparation of the report and act professionally towards each other. During the course, if a student feels this is not occurring, they should bring this matter to the attention of the facilitator immediately so they can investigate the conflict and take the appropriate action including assigning students a failing grade for the course. Working effectively in teams and acting professionally towards one’s colleagues is a major learning goal of an MBA program. Students should be careful to ensure their behaviour does not become an issue.