A. Introduction

The course is an introduction to the theory and practice of natural resource economics. It deals with the economic analysis of issues concerning natural resource use, management and conservation. Natural resource economics addresses questions such as how to value natural resources, how to optimally manage natural resources over time in order to maximize their value, how different systems of property rights impact natural resource use and sustainability, and how public policy can be used to achieve optimal management.

The course starts with a review of microeconomic theory and the basic principles for natural resource analysis including efficiency, sustainability and policy approaches used to address natural resource use and management. After establishing a level of comfort with the theory and some general analytical tools, we will discuss practical applications to natural resource problems such as forestry, fisheries, water resource allocation, energy and mineral economics.

B. Prerequisites

ECON 1000 or FYSM 1003. Students who believe they have taken a similar background course or courses from another university must provide appropriate documentation to the Department of Economics Undergraduate Administrator Amanda Wright.

C. cuLearn

All course content will be available via cuLearn.

D. Required Texts and Reading Materials

The text that covers much of the materials I will present is B. Field, Natural Resource Economics: An Introduction, Third Edition (Waveland Press, 2016). Additional relevant reading materials will be posted on cuLearn during the term.
Students may also find the following texts useful:

P. Berck and G. Helfand, The Economics of the Environment, Chs. 16 and 17, (Prentice Hall, 2010).


E. Course Evaluation

The final grade in the course will be determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>4 problem Sets</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam (March 1)</td>
<td>35%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>45%</td>
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Scheduled by the University between April 14-26, 2018

**Problem Sets:** I will assign four problem sets through the semester. All assignments must be submitted at the beginning of class on the day they are due. No late assignments will be accepted.

**Midterm Exam:** There will be no deferred midterm exam. For students who can document a compelling reason for missing the mid-term exam, the weight assigned to the midterm exam will automatically be shifted to the final exam. Students must inform the instructor of such an absence in advance, if possible.

**Final Exam:** The final exam will be cumulative (i.e., based on the whole course). Failure to write the final exam will result in a grade of ‘F’ until an appeal to write the deferred final exam in June 2018 is granted. A change of grade will be submitted when the deferred final exam has been written and the marks are available. See Academic Regulation 2.3 for the official meanings of these grades, and note that it stipulates that no course grades are final until approved by the Faculty Dean. Note also that course grades may be scaled upwards or downwards in a rank-preserving manner to better fit the relevant departmental distributional norm. Application to write a deferred final examination must be made at the Registrar’s Office in writing no later than three working days after the original final examination.
F. **Course Sharing Websites**

Please note that student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

G. **Academic Accommodation Requests**

Students with disabilities requiring academic accommodations in the course need to contact a coordinator at the Paul Menton Centre to complete the necessary *letters of accommodation*. After registering with the PMC, students must make an appointment to meet and discuss their needs with the instructor at least two weeks prior to the first mid-term examination. Please note that the deadline for submitting completed forms to the PMC for formally scheduled exam accommodations is March 9, 2018. For religious as well as special needs such as pregnancy, students should consult the instructor and equity services (ext. 5622 or www.carleton.ca/equity).

H. **Statement on Plagiarism**

Please be aware that plagiarism is a serious offence at Carleton and should be recognized and avoided. For example, simply copying someone’s assignment whether in whole or in part can be considered as plagiarism. For further information on how to do so, please see “Pammett on Plagiarism and Paraphrasing” at www.carleton.ca/economics/courses/writing-preliminaries.

I. **Course Outline**

Building Blocks and Fundamental Concepts

1. Important Issues in Natural Resource Economics
2. Natural Resources and the Economy
3. Willingness to Pay/Demand
4. Costs/Supply
5. Efficiency and Sustainability
6. Markets and Efficiency
Policy Instruments and Natural Resource Analysis

1. Public Policy for Natural Resources
2. Principles of Analysis

Applied Natural Resource Analysis

1. Mineral Economics
2. Energy Economics
3. Forest Economics
4. Marine Resources
5. Water Resources
6. Economics of Wildlife Management
7. Economics of Biodiversity Preservation