



University of Benha  
Faculty of Commerce  
English Section  
Dept. of Economics

## COURSE SYLLABUS

### Resources and Environmental Economics

### First Term 2019/2020

#### 1. Course Materials

##### A. (Text Book)

##### Book 1: ( Core text book)

Tietenberg, T. and L. Lewis. 2015 Environmental and Natural Resource Economics, 10th Edition. AddisonWesley: Boston, MA.

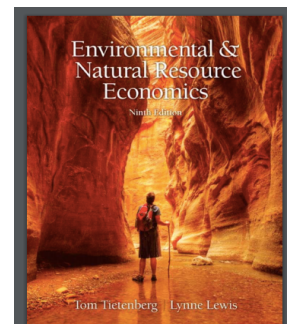
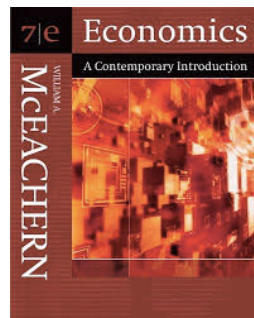
The 9<sup>th</sup> edition available at:

[https://himayatullah.weebly.com/uploads/5/3/4/0/53400977/environmental\\_and\\_natural\\_resource\\_economics\\_by\\_tom\\_tietenberg\\_9th\\_edition.pdf](https://himayatullah.weebly.com/uploads/5/3/4/0/53400977/environmental_and_natural_resource_economics_by_tom_tietenberg_9th_edition.pdf)

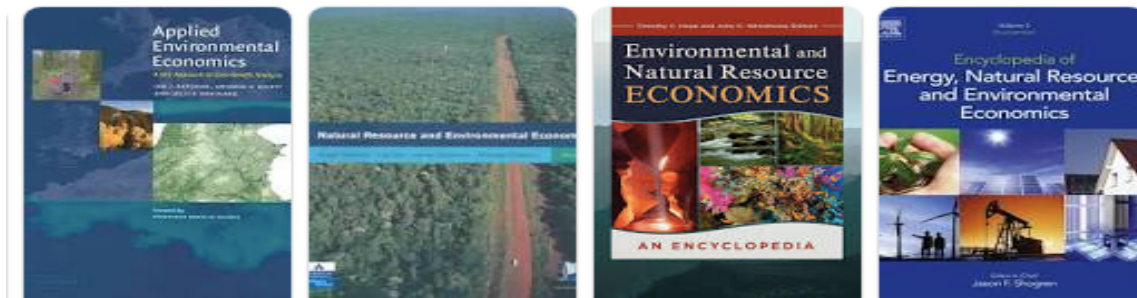
##### Book 2 (introduction )

Economics: A Contemporary Introduction,  
7e William A. McEachern

Available at: <https://sangu.ge/images/Economics1.pdf>



## B. Other Useful Books



## 2. Course Description

This course focuses on the Basic Economic Problem: Choice and the Allocation of Resources. Emphasis is placed on understanding economic concepts such as: resource scarcity, externalities, public goods, property rights, opportunity cost, market failure, social cost-benefit analysis, and sustainability. Special emphasis is devoted to analyzing the optimal role for public policy. The major objectives are for students to: (1) learn basic economic principles governing the allocation of various categories of scarce natural/environmental resources among competing uses; and (2) gain experience with basic analytical tools useful for applying these principles to real world allocation problems.

Thus, this course is designed to explore and analyze the use and management of natural resources. Since the natural world we live in contains natural resources that both a) allow our existence on the planet and b) provide for qualities of life we enjoy. These resources range from those above the ground— air, water, trees, fish, etc. to those beneath the ground— coal, natural gas, oil, water, etc. Uses of these resources are dynamic through time as human use and needs change. Economic analysis will reveal the “efficient” use of resources and identify the impact on natural systems.

So, this course introduces the student to the consequences of the interaction of market activity to the environment. It enables the student to understand how environmental problems are the outcome of market failure and, consequently, the role of governments in addressing such problems. It introduces the student to theory and practice of alternative environmental regulatory policies and natural resource management policies at the national and international levels.

### **Concepts and Tools of Analysis includes but not limited to:**

- Positive and normative economics\*
- Microeconomics and macroeconomics\*
- Scarcity, choice and opportunity cost
- Production possibility curve (PPC)
- Marginal cost, marginal benefit and its principle
- Maximization of utility\*
- Maximization of profit: Marginal Revenue = Marginal Cost
- Maximization of social welfare: Marginal Social Benefit = Marginal Social Cost

### **Useful links**

- <https://quizlet.com/37185693/economic-resources-flash-cards/>
- <https://quizlet.com/37185693/test>

- <http://catdir.loc.gov/catdir/samples/cam032/98049529.pdf>
- <https://sangu.ge/images/Economics1.pdf>
- 
- [netec.mcc.ac.uk](http://netec.mcc.ac.uk)
- [www.rff.org](http://www.rff.org)
- [www.rpgogress.org](http://www.rpgogress.org)
- [www.rmi.org](http://www.rmi.org)
- [www.worldbank.org](http://www.worldbank.org)
- [www.oecd.org](http://www.oecd.org)
- [www.epa.gov](http://www.epa.gov)
- [www.eea.eu.int](http://www.eea.eu.int)

### 3. Course Aims and Objectives:

<p style="text-align: center;"><b>Learning outcomes</b></p> <p>On successful completion of this course, student should be able to:</p>	<ol style="list-style-type: none"> <li>1. Define the nature of the economic problem (finite resources and unlimited wants);</li> <li>2. Define the factors of production (land, labor, capital, enterprise);</li> <li>3. Define opportunity cost and analyze particular circumstances to illustrate the concept;</li> <li>4. Demonstrate how production possibility curves can be used to illustrate choice and resource allocation;</li> <li>5. Evaluate the implications of particular courses of action in terms of dealing with environmental issues and problems specially within the concept of the opportunity cost;</li> <li>6. Evaluate the merits of the market system;</li> <li>7. Describe the concept of market failure and explain the reasons for its occurrence, relating this to environmental economics;</li> <li>8. Define private and social costs and benefits and discuss conflicts of interest in relation to these costs and benefits in the short-term and long-term;</li> <li>9. Demonstrate the Relation between Optimality and Efficiency;</li> <li>10. Comparing Benefits and Costs Across Time;</li> <li>11. Define and explain Dynamic Efficiency;</li> <li>12. Discuss sustainability</li> </ol>
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#### **4. Course Calendar:**

At the end of this Syllabus is a Course Calendar. It outlines the topic for each class meeting and is subject to change at the discretion of the instructor and upon consideration of class dynamics.

#### **5. Background Reading:**

1. Pearce, D. W. and R. K. Turner. Economics of Natural Resources and the Environment. London: Harvester Wheatsheaf, latest edition.

#### **6. Other Supplemental (optional) Readings:**

A considerable portion of the course will cover topics related to monetary economics. You may wish to read a textbook on Environmental economics to improve your understanding of these topics like:

##### **Further reading:**

2. Field, Barry and Martha Field. Environmental Economics. McGraw Hill, latest edition.
3. Goodstein Eban, Economics and the Environment. Prentice Hall, latest edition.

As a large component of this course is macro-based, you may also wish to read a macroeconomics textbook to supplement your understanding. Numerous recommended macroeconomics books are available, such as Froyen, Gordon or Blanchard.

For better understanding of the course material, you can also read:

- Matthew Kahn, Fundamentals of Environmental Economics: Solving Urban Pollution Problems (Kindle Edition, available from Amazon.com at \$2.)
- Charles Kolstad, Environmental Economics (Oxford University Press, 1st edition 2000, or 2nd edition 2010)
- The RFF Reader in Environmental and Resource Policy (Wallace Oates Editor, 2nd edition 2006, RFF Press)

#### **7. Assessment:**

**Attendance/Participation:** Participation in class will be rewarded with up to 5 points. If you attend class consistently and occasionally answer questions during class, you'll be fine.

**Lateness and Courtesy:** Please arrive on time to class and please turn off all cell phones.

Attendance is not mandatory for the course. However, mature behavior is a course is a requirement. Engaging in behavior that disturbs the class will result in a reduction in the course grade.

**There are four sets of requirements for this course:**

<b>ACTIVITIES</b>	<b>PERCENTAGES</b>
In class participation	2.5%
Quizzes	2.5%
Project& presentation	5%
Mid- term exam	10%
Final exam	80%

## **Group Project**

You are expected to work on the group project in a group of 10 students.

The final products will be a 15-20 minutes class presentation (divided equally among the members) and a paper between 8-15 pages not including references but everything else (font 12 and double spacing). The group presentations will be held during the last 3 lectures or so. The grade for the group project will be based on both the presentation and the paper itself. The group paper should have the following five sections: 1. Summary: a maximum of 1 page summary of your paper (be sure to include names of all authors) 2. Introduction. Please include the following subsections: (1) What is the issue (define the problem), and (2) why is this issue important? One way to establish your argument in the second subsection is to include quotes from major newspapers or magazines, such as the New York Times or the Wall Street Journal or the Economists, or some quote by some major public figure (politician etc.) that discusses the problem. 3. Economic analysis and findings. For an empirical project, this section should include data and empirical model. For a theoretical paper, it should include a theoretical model or theoretical arguments and derivations. Findings should be presented here. 4. Conclusion. Discuss briefly what lessons we can learn from the study (e.g., policy suggestions). 5. References. List all the references used in your article.

The paper has to be submitted in electronic format to: [Walaa.dyab@fcom.bu.edu.eg](mailto:Walaa.dyab@fcom.bu.edu.eg)

## 8. Course Calendar

Below is a tentative course calendar. It may change at discretion of lecturer and class dynamics.

### PROJECTED TIMETABLE

Tentative Lecture Schedule and Readings (the week may change)

#### **Book 2: Chapter 1:**

The Economic Problem: Scarce Resources, Unlimited Wants | Resources | Goods and Services | Economic Decision Makers | Microeconomics and Macroeconomics| Normative Versus Positive|

#### **Book 2: Chapter 2**

Opportunity Cost

#### **Book 2: Chapter 1:** The Art and Science of Economic Analysis

| A Simple Circular-Flow Model Rational Self-Interest | Choice Requires Time and Information  
|Economic Analysis Is Marginal Analysis

#### **Book 1: Chapter2**

Imperfect Market Structures

#### **Book 1: Chapter2**

Government Failure

#### **Book 1: Chapter1**

Future Environmental Challenges: Climate Change| Water Accessibility| Meeting the Challenges|  
The Role of Economics: Ecological Economics versus Environmental Economics

#### **Book 1: Chapter2**

The Human–Environment Relationship  
Environmental Problems and Economic Efficiency  
Property Rights and Efficient Market Allocations

#### **Book 1: Chapter2**

Producer’s Surplus, Scarcity Rent, and Long-Run Competitive Equilibrium  
Benefit–cost analysis case study: Pollution Control  
Cost-Effectiveness Analysis  
Impact Analysis

#### **Book 1: Chapter3**

Normative Criteria for Decision Making  
Finding the Optimal Outcome  
Relating Optimality to Efficiency  
Comparing Benefits and Costs Across Time  
Dynamic Efficiency

**Book 1: Chapter4**

Valuing the Environment: Methods

**Book 1: Chapter5**

Dynamic Efficiency and Sustainable Development

**Book 1: Chapter11**

Reproducible Private Property Resources:

**Book 1: Chapter14**

Economics of Pollution Control: An Overview

**Book 1: Chapter16**

Climate Change

**Book 1: Chapter18**

Water Pollution

**Book 1: Chapter20**

The Quest for Sustainable Development

**Book 1: Chapter21**

Population and Development

**Project Presentations**