

Cairo University
Faculty of Economics and Political Science
Department of Economics

Third Year
Course code (E319): Environmental Economics
Academic Year 2017/2018, 1st semester

Ashraf Samir (Ph.D.), Assistant Professor of Economics
Office Hours: 1 pm-2.30 pm (Sunday & Tuesday), Office 81

❖ **Pre-requisites:**

Introductory microeconomics and macroeconomics. A refreshment of basic tools will be provided at the beginning of the course.

❖ **Course Objectives:**

This branch of science tries to shed light on the relationship between environment types & economic behavior of individuals & groups using micro economic analytical tools. Since increasing economic activities have caused degradation in natural resources, it is important to understand how economists see the environment. Concepts of sustainable developments reflects the idea of achieving development without the damaging effect on natural resource. In this regard, economists aim at understanding the incentives humans and societies face when making their decisions to protect the environment. Therefore, this course is designed to help students understand the essence of environmental economics; ecosystems, the trade-off between environmental quality and economic activities; and the economic principles behind different environmental policies such as green taxation.

❖ **Intended Learning Outcomes**

By the end of the course, the students will be able to:

- Understand the fundamental idea of natural goods.
- Understand the relationship between environments and economics.
- Understand main environmental analytical tools.
- Evaluate the impact of economic activities on environment.
- Acquiring critical reading, sound reasoning, academic writing, and improving students' presentation and speaking skills.

❖ **Course Design and Content:**

This course demonstrates how environmental problems and their solutions can be explained with main economic tools. The course illustrates the main economic subjects of environmental

economics, namely: natural goods, scarcity of natural resources, socially undesirable utilization of natural goods, the relationship between micro- and macro-economics and environment. The course aims at providing full understanding of the following issues: resource scarcity, economic efficiency and markets; market signals of natural resource scarcity; the market, externality, and the optimal trade-off between environmental quality and economic goods; industrial ecology; and market failures and externalities. In addition, the course provides students with analytical and practical tools regarding the following issues: climate change and renewable energy; biodiversity loss; regional waste management; and business and sustainable development. Furthermore, the course analyzes the environmental impact on sustainable development in Egypt.

The course structure and readings are described below.

❖ **Course Structure and Readings:**

Week & Date	Topic	Readings
Section 1: The Economic Approach of Analyzing Environment		
<u>Week 1</u>	- Introduction - The Fundamental Problem	Required Readings* - (Endres & Radke, 2012, pp. 9-16)
<u>Week 2</u>	- The Economic System and the Environment - Integration of the Natural Environment: Socially Undesirable Utilization of Natural Goods	Required Readings* - (Endres & Radke, 2012, pp. 17-39) - (Shmelev, 2012, pp. 3-11)
Section 2: Microeconomics and the Natural Environment		
<u>Week 3 & 4</u>	- Resource Scarcity, Economic Efficiency and Markets	Required Readings* - (Hussen, 2005, pp. 14-33)
<u>Week 5 & 6</u>	- Market Signals of Natural Resource Scarcity	Required Readings* - (Hussen, 2005, pp. 34-50)
<u>Week 7 & 8</u>	- The Market, Externality, And the Optimal Trade-Off Between Environmental Quality and Economic Goods	Required Readings* - (Hussen, 2005, pp. 70-90)
Section 3: Macroeconomics and the Natural Environment		
<u>Week 9</u>	- Industrial Ecology	Required Readings* - (Shmelev, 2012, pp. 19-31)
<u>Week 10</u>	- Macroeconomy: Market Failures and Externalities	Required Readings* - (Shmelev, 2012, pp. 75-85)
Section 4: Ecological-Economic Applications		
<u>Week 11</u>	- Climate Change and Renewable Energy: How to Choose the Optimal Pool of Technologies	Required Readings* - (Shmelev, 2012, pp. 133-154)

<u>Week 12</u>	- Biodiversity Loss: New Methods for Evaluating Ecosystems	Required Readings* - (Shmelev, 2012, pp. 155-171)
<u>Week 13</u>	- Regional Waste Management	Required Readings* - (Shmelev, 2012, pp. 195-224)
<u>Week 14</u>	- Business and Sustainable Development	Required Readings* - (Shmelev, 2012, pp. 225-240)
Section 5 "Environmental Policies in Egypt"		
<u>Week 15</u>	- Sustainable Development and Environmental Impact Assessment in Egypt	Required Readings* (Abdel-Wahaab, 2003, pp. 49–70)

***Readings:**

➤ **Required Readings**

- Abdel-Wahaab, R. (2003). Sustainable Development and Environmental Impact Assessment in Egypt: Historical Assessment. *The Environmentalist*(23), 49–70.
- Endres, A., & Radke, V. (2012). *Economics for Environmental Studies: A Strategic Guide to Micro- and Macroeconomics*. New York: Springer.
- Hussen, A. M. (2005). *Principles of Environmental Economics: Economics, Ecology and Public Policy*. New York: Taylor & Francis e-Library.
- Shmelev, S. E. (2012). *Ecological Economics: Sustainability in Practice*. New York: Springer.

Useful links for data about the transport sector:

- CAPMAS. (n.d.). Retrieved from <http://www.capmas.gov.eg>
- The World Bank Group. (n.d.). Retrieved from <http://data.worldbank.org/topic/environment>
- OECD. (n.d.). Retrieved <https://data.oecd.org/environment.htm>
- UN-Environment. (n.d.). Retrieved from <http://www.unep.org>

❖ **Evaluation:**

▪ Short Paper (approx. 5000 words, excluding reference/ tables/ charts/. etc.) – Paper Deadline: Week 12.	10
▪ Mid-term Exam	20
▪ Final Exam	70
Total	100

Note on Cheating and Plagiarism: Neither will be tolerated. All assignments, exams, and papers for this class are individual work. No notes of any sort may be used on assignments and exams. By handing in a paper, each student is affirming that this paper is her/his own personal work and that it was written by her/him.