

**Department of Environmental Health  
Faculty of Health Sciences  
American University of Beirut**

**Course number: ENHL 245**

**Course name: Environmental Economics: Spring semester 2020  
Van Dyke 101**

**Course Instructor:**

Name: Hassan Harajli

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Office hours: Mon/Wed after class upon request (and via appointment)

**Class time and location:**

Dates, times: Monday & Wednesday 8.00 – 9.15 am.

**Course description:**

The course will offer an overview of environmental economics, beginning from market allocations and efficient allocations (market failure and rectifying market failure), to economic valuation of market and non-market goods and services, cost-benefit analysis, and natural resource economics (depletable and renewable). The course will touch upon many environmental problems, local, regional and global, and understand how economic tools can value these problems and integrate them in policy decision making, and how economic instruments can be used to rectify them. Students will be able to analyze basic environmental issues with economic methods and tools while strengthening team work and research skills.

**Course learning objectives:**

- Understand why and how market externalities occur
- Understand the various economic mechanisms that are used to deal with market failures, from command and control to market-based instruments
- Understand financial appraisal of policies, programs and projects, and how financial appraisal differs from economic cost-benefit analysis (CBA)
- Understanding the various categories of costs and benefits within CBA, and what 'value' is composed off
- Have an overview of environmental economic tools used for valuation purposes of market and non-market goods and services, namely both revealed and stated preference techniques
- Understand the economics behind renewable and depletable natural resources, through the evaluation of fisheries, forests, oil, and water.

**Required readings**

- Environmental Economics: An Introduction. Barry C. Field & Martha K. Field. 7<sup>th</sup> Edition. (Select Chapters)
- Environmental Economics and Natural Resource Management, David Anderson, 3<sup>rd</sup> Edition (Routledge). (Select Chapters)
- Other readings will also be listed in various lectures

**Course requirements and student evaluations:**

	<b>Assessment</b>	<b>Percentage</b>
A.	Class attendance and participation	5%
B.	Group debates (x1)	20%
C.	Exams (x3)	55%
D.	Term paper Presentation	20%

**AUB/FHS policies**

▪ **Attendance**

Students who miss more than one-fifth of the sessions of any course in the first ten weeks of the semester (five weeks in the case of the summer term) are dropped from the course.

▪ **Academic Integrity**

Please refer to AUB Student Code of Conduct:

<http://www.aub.edu.lb/pnp/generaluniversitypolicies/Documents/StudentCodeConduct/StudentCodeConduct.pdf>, in particular section 1.1, which concerns academic misconduct including cheating, plagiarism, in-class disruption, and dishonesty. Please be aware that misconduct is vigorously prosecuted and that AUB has a zero tolerance policy. Course policy is that **credible evidence of cheating will result in course failure.**

▪ **Students with Disabilities**

‘AUB strives to make learning experiences accessible for all. If you anticipate or experience academic barriers due to a disability (such as ADHD, learning difficulties, mental health conditions, chronic or temporary medical conditions), please do not hesitate to inform the Accessible Education Office. In order to ensure that you receive the support you need and to facilitate a smooth accommodations process, you must register with the Accessible Education Office (AEO) as soon as possible: [accessibility@aub.edu.lb](mailto:accessibility@aub.edu.lb); [+961-1-350000](tel:+961-1-350000), x3246; West Hall, 314’.

▪ **Non-Discrimination**

AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University’s non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have

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experienced discrimination or harassment, including sexual misconduct, we encourage you to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University's Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information and contacts at [www.aub.edu.lb/titleix](http://www.aub.edu.lb/titleix) . To report an incident, contact the University's Title IX Coordinator Trudi Hodges at 01-350000 ext. 2514, or [titleix@aub.edu.lb](mailto:titleix@aub.edu.lb) . An anonymous report may be submitted online via EthicsPoint at [www.aub.ethicspoint.com](http://www.aub.ethicspoint.com)

### Detailed course outline

	Day	Day	Topic
Jan	Wed	22	Class introduction
	Mon	27	Introduction to Environmental Economics
	Wed	29	<b>No Classes</b>
Feb	Mon	3	Benefits and costs; supply and demand (1)
	Wed	5	Benefits and costs; supply and demand (2)
	Mon	10	Markets, externalities and public goods
	Wed	12	The economics of environmental quality
	Mon	17	Criteria for evaluating environmental policy
	Wed	19	Decentralized policies; liability laws, property rights and voluntary action
	Mon	24	<b>Debate 1</b>
	Wed	26	<b>Guest Lecturer</b>
March	Mon	2	<b>Test 1</b>
	Wed	4	Command and control: standards (1)
	Mon	9	Command and control: standards (cont.)
	Wed	11	Incentive based policies: emission charges and subsidies
	Mon	16	Incentive based strategies: Market trading systems
	Wed	18	Economics of climate change: Social cost of carbon
	Mon	23	International Climate Change Agreements
	Wed	25	<b>No Classes</b>
	Mon	30	Financial appraisal (1)
	Wed	1	Financial appraisal (2)
April	Mon	6	CBA & Discounting 1
	Wed	8	<b>Debate 2</b>
	Mon	13	<b>No Classes</b>
	Wed	15	CBA & Discounting 2
	Mon	20	<b>No Classes</b>
	Wed	22	Alternative paradigms; Behavioural economics
	Mon	27	<b>Project Presentations</b>
	Wed	29	<b>Project Presentations</b>

### Full reference for readings – organized by date

*January – March 1<sup>st</sup> 2020*

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- Chapters 1, 2, 4, 5, 9 - 13, Environmental Economics: An Introduction. Barry C. Field & Martha K. Field. 7<sup>th</sup> Edition.

### *March 2020*

- Bhattacharyya, S.C., 2011. Energy Economics: Concepts, Issues, Markets and Governance. Springer, New York. Chapter 7: Economic Analysis of Energy Investments.
- Campbell. H., Brown, R. 2003. Benefit-cost analysis: Financial and economic appraisal using spreadsheets. Cambridge Publishing, Cambridge. Chapter 4: Private Benefit-Cost Analysis: Financial Analysis (and parts of Chapter 2 and 9).
- Chapter 4. Environmental Economics: An Introduction. Barry C. Field & Martha K. Field. 7<sup>th</sup> Edition.
- Frederick, S., Loewenstein, G., & O'Donoghue, T. 2002. "Time discounting and time preference, a critical review", *Journal of Economic Literature*, vol. XL, pp. 351-401.
- Bateman, I, Carson, R, Day, B, Hanemann, M, Hanley, N, Hett, T, Jones-Lee, M, Loomes, G, Mourato, S, Ozdemiroglu, E, Pearce, D, Sugden, R and Swanson, J. (2002). *Economic Valuation with Stated Preference Techniques – A Manual*. Edward Elgar, Cheltenham.
- Chapter 21. Environmental Economics: An Introduction. Barry C. Field & Martha K. Field. 7<sup>th</sup> Edition.

### *April 2020*

- Chapter 13, 14. Environmental Economics and Natural Resource Management, David Anderson, 3<sup>rd</sup> Edition (Routledge).
- Frederiks, E.R., Stenner, K., Hobman, E.V. 2015. Household energy use: Applying behavioural economics to understand consumer decision-making and behavior. *Renewable and Sustainable Energy Reviews*, 41., pp. 1385-1394.