Programme : Environmental Engineering Technology Level : Undergraduate

Course Syllabus

- **1. Course title:** Environmental Economics
- **2. Course code:** ENEC125510
- 3. Credit units: 2 (2/0/6) (2 units of theory/ 0 unit of practice/ 4 units of self-study)

Duration: 15 weeks (2 hours of theory+0 hours of practice, and 4 hours of self-study per week)

4. Course instructors:

1/ Dr. Nguyen Thai Anh

2/ Ma. Nguyen Thi Tinh Au

5. Course requirements:

Prerequisite courses : None

Previous courses : Environmental Generation, Environmental Law and Policy

Parallel course : None

6. Course description:

This course covers the knowledge of environmental management with economic tools in the market mechanism for the sustainable development. Application of economic knowledge in the field of exploitation and use of natural resources ...

7. Course goals:

Goals	Goal description	Programme Expected learning outcome (ELOs)
G1	Professional knowledge in the field of environmental economics	ELO3
G2	Ability to analyze, solve the environmental and resource economics problems through the application of knowledge, methods and techniques of calculation.	ELO6, ELO8
G3	Ability to form ideas, operate in the practical conditions of enterprise and society.	ELO8, ELO13

8. Course learning outcomes (CLOs)

CLOs		CLOs description (After accomplishing this course, students are able to:)	Programme ELOs
G1	CLO1	Present the concepts of environmental economics, the relationship between economics and the environment, the rules	ELO3

		of the market mechanism and the principle of sustainable development.	
	CLO2	Present the economic tools in the control of pollution such as fees, pollution taxes, permits for the pollution purchase and sale	ELO3
G2	CLO3	Solve environmental problems through Supply-Demand, Cost- Benefit, business and environmental laws.	ELO3, ELO6
62	CLO4	Demonstrate awareness of resource use and environmental protection.	ELO6, ELO8
G3	CLO5	Use the economic tools in the exploitation of resources, environmental management and control of pollution.	ELO3, ELO8 ELO13

9. Learning resources

- Text books:
- R. Kerry Turner, David Pearce & Ian Bateman, Environmental Economics An elementary introduction (Giới thiệu cơ bản về Kinh tế môi trường - bản dịch được hiệu đính bởi Nguyễn Thiện Tống)
- References:
- 1. Mattias Boman (1999) Topics in Environmental Economics, Springer
- 2. Frank R. Spellman (2015), Economics for Environmental Professionals, CRC Press.
- Tom Tietenberg, Lynne Lewis, 9th Edition (2012), Environmental & Natural Resource Economics, Pearson Education, Inc

10. Student assessment:

- Grading scale: 10
- Assessment plan:

Туре	Content	Timeline	Assessment method	CLOs	Rate (%)
Subtest					10
Exercise #1	The relationship between the economics and the environment.	Week 2	Test in class	CLO1	5
Exercise #2	Economic tools in the control of environmental.	Week 4	Test in class	CLO2	5
Essay					20
Exercise #3	Apply the economic tools in the use of resource, environmental management and control.	Week 4-10	Report Presentation	CLO2, CLO4, CLO5	20
	Assignments		•		20

Exercise #4	Environmental problems through Supply-Demand, Cost-Benefit, business and environment.	Week 5-8	Report	CLO3, CLO4	20
	Final exam				50
	The content covers all the major learning outcomes of the course.60 minutes of test duration.		Writing test	CLO1, CLO2, CLO3, CLO4, CLO5	50

11. Course content:

Week	Content	CLOs
	Chapter 1: Introduction to environmental economics (4/0/8)	
	A/ Content and pedagogical methods in class (4)	CLO1, CLO2,
	Content: + Concept and content of environmental economics course	
	+ Sustainable Development	CLO5
	+ Economic value of environmental resources	
1-2	+ Methods of assessment	
	Pedagogical methods:	
	+ Presentation of lecture	
	+ Group discussion	
	B/ Self-study content (8)	
	+ Learn more about the methods of the environment assessment through	
	economics.	
	Chapter 2: Benefit-cost analysis (6/0/12)	
	A/ Content and pedagogical methods in class (6)	CLO1,
	Content:	CLO2, CLO3,
	+ The concept of cost-benefit	CLO4,
2.5	+ Benefits and costs, supply and demand	CLO5
3-5	+ Cost-benefit analysis	
	+ Risk analysis	
	Pedagogical methods:	
	+ Presentation of lecture	
	+ Group discussion	

	B/ Self-study contents (12)	
	+ Do the exercises	
	+ Learn more about cost-benefit for projects	
	Chapter 3: Economy in the field of exploitation and the use of	
	natural resources (6/0/12)	CLO1,
	A/ Content and pedagogical methods in class (6) Content	CLO2,
	+ Renewable resources	CLO3, CLO4,
		CLO5
	+ Relationships: reserves - output - effort - income - cost, tragedy of free exploitation	
	+ Time and discount	
	+ Property ownership	
6-8	+ non-renewable resource	
00	+ The basic economic principle in the optimal exploitation of non-	
	renewable resource.	
	Pedagogical methods:	
	+ Presentation of lecture	
	+ Group discussion	
	B/ Self-study contents (12)	
	+ Do the exercises	
	+ Learn more about natural resources	
	Chapter 4: Economic tools for the control of environmental pollution (4/0/8)	
	A/ Content and pedagogical methods in class (4)	CLO1,
	+ Use economy to protect the environment	CLO2,
	+ Costs and benefits of pollution	CLO3, CLO4,
	+ Output and pollution	CLO5
	+ Environmental fees: emission fees, usage fees, product fees	
9-10	+ Trading license, deposit - refund system	
	+ Green tax (environmental tax)	
	+ Permits for pollution trading	
	+ Waste management	
	Pedagogical methods:	
	+ Presentation of lecture	
	+ Group discussion	

B/ Self-study contents (8)	
+ Learn more about pollution taxes and the situation of buying and	
selling pollution permits	

12. Learning ethics:

- If the exercises and translations from the internet are detected to be copied, the course score will be deducted 100%. If it is so serious, both the author and the copier are banned at the final exam.
- Students who do not complete the task (section 10), will be banned from the final exam and be offered the disciplinary which is showed in front of the campus.
- Student and the other who is hired for the taking the test, will be suspended or expelled.

13. Date of first approval: August 1st, 2012

14. Approval by:

Dean	Head of Department	Compiler
Prof. Nguyen Van Suc	MSc Nguyen Thi Minh Nguyet	Dr. Nguyen Thai Anh

15. Date and Up-to-date content

1 st time: Date: August 25 th , 2015	Instructor:
- Update content and structure of the programme adjusted in:	
Course title, teaching content and assessment method	
	Head of Department:
	Dr. Tran Thi Kim Anh