THE UNIVERSITY OF
NEW SOUTH WALES

Australian School of Business
School of Economics

ECON1107
ELEMENTS OF ENVIRONMENTAL ECONOMICS

Course Outline

Semester 1, 2009

TABLE OF CONTENTS

1 STAFF CONTACT DETAILS

Lecturer-in-charge: Thomas Longden
Room Quad 3114 – on Mondays
Phone No: 9385 9790
Email: t.longden@unsw.edu.au
Consultation Times – Monday 1-3pm (or by appointment)

1.1 Communication with Students

Please feel free to contact Thomas via email or during the specified consultation time concerning course materials or for any other information concerning the course. For efficiency, all enquiries about the subject material should be made at lectures or tutorials or during consultation time. Email correspondence on administrative matters (e.g. advising inability to attend tute) will be responded to within 48 hours, but not over weekends.

Consultation hours will be determined during the first lecture so that student preferences can be taken into account. Proposed consultation hours are between 1pm and 3pm on Mondays.

2 COURSE DETAILS

2.1 Teaching Times and Locations

Lecture: Tuesday 3-5pm – Red Centre Theatre

Tutorials Start in Week 4. The Groups and Times are:
Tuesday 6pm
Thursday 1pm

2.2 Units of Credit

The course is worth 6 units of credit.

There is no parallel teaching in this course.

2.3 Summary of Course

This course is aimed at introducing students to economic perspectives on the environment and the subsequent formulation of environmental policy. After setting up the basic elements of microeconomics with a review of market models and market failure; we will review pollution control by looking at how science is used to establish policy targets and how economic policy is designed to meet these targets. After this, we will examine the techniques used to measure the environmental factors and see them applied in decision-making processes. After the mid-semester exam, we will take time to cover the application of environmental economics to specific contexts such as local air quality, water quality as well as solid waste and toxic chemicals. An analysis of natural resource economics will cover a range of issues such as 'non-renewable' resources (including oil, gas, coal & minerals) and renewable resources (including fisheries & forestry). To conclude the course, we will review international initiatives, such as the Montreal Protocol and the Kyoto Protocol, with the aim of discussing the application of environmental economics at the global level.

2.4 Aims and Relationship to Other Courses

This course is offered as part of the second year core in the B. Env Science degree and as an elective for B.Com and B.Econ.

2.5 Student Learning Outcomes

By the end of this course, students should understand environmental economic concepts, theories and policy prescriptions. In addition, students should be able to interpret and analyse environmental issues using this knowledge, as well as appreciate the application of economics to similar sub-disciplines and specialised topics.

Upon completion of Elements of Environmental Economics, students should be able to:

1) Understand the theoretical basis upon which the sub-discipline has been built on,
2) Recognise the importance of setting pollution control targets and the use of instruments,
3) Critically review how economists attempt to measure the environment, including the issue of time and discount rates in project analysis,
4) Comprehend the economic treatment of natural resources with regard to specific examples such as fossil fuels and renewable resources including fisheries and forestry,
5) Evaluate the rationale of current international environmental initiatives such as the Montreal and Kyoto Protocols.

This course contribute to your development of the following Australian School of Business Graduate Attribute which are the qualities, skills and understandings we want you to have by the completion of your degree

Graduate Attributes

Course Learning Outcomes	ASB Graduate Attributes
1, 2, 3	1. Critical thinking and problem solving
3, 5	2. Communication
3, 4, 5	3. Social, ethical and global perspectives
1,2	4. In-depth engagement with relevant disciplinary knowledge
3	5. Professional skills

3 LEARNING AND TEACHING ACTIVITIES

3.1 Approach to Learning and Teaching in the Course

The approach to learning and teaching throughout the course will be aimed at meeting UNSW Guidelines of engaging students, contextualising the information provided to students and including students in the learning and teaching process. While many of these aims will be met through the design and teaching of an engaging, contextualised and inclusive curriculum. It is often difficult for students to know what this means in practice, as a result what follows is a description of the teaching approach students should expect within this course.

Throughout the course students will be engaged with lecture notes and readings that will provide a relatively straight-forward treatment of the material discussed in the text. In keeping the material straight-forward, students will see the basic assumptions and approaches to the material outlined. The week's readings will then provide the detail that students will need to engage in a wide and vigorous discussion of the material within the tutorial held in the following week.

In addition to this, a discussion forum on VISTA will be an additional resource for students to discuss the material and pose any general questions to other students. This forum will be monitored by the lecturer-in-charge and all posts are expected to be conducted in a polite and courteous manner (refer to Section 7 – General Conduct and Behaviour for further information).

To further engage students and contextualise the material, the lectures will be broken up with discussions of the concepts being reviewed using real-life examples. These examples will usually be in graphical form (such as a map, a graph, a diagram or even a table of figures). Contextualising the material in this manner will allow students to engage in the discussion during the lectures even if the theoretical material has not been fully grasped.

3.2 Learning Activities and Teaching Strategies

The course is designed with the following aims in mind:

1) to extend general interest in sub-disciplines of economics,
2) to enhance learning with the use of theoretical applications as well as relevant examples,
3) to promote essay writing practices with the view of improving student's ability to write in essay and exam contexts as well as establishing an understanding and appreciation of the peer reviewed, journal article framework,
4) to encourage analytical & critical thinking, and
5) to enable critical reflection on individual progress and achievements.

The above-mentioned aims will be achieved through different teaching strategies and techniques that will be included in the lecture and/or tutorial (as described in the prior section).

The examinable material of this course is defined by the content of the lectures, the designated reading from the textbook as well as other required readings, tutorial readings and discussion throughout the course.

- During **lectures** the relevant content (e.g. economic theory and policy approaches) will be explained, reviewed with practical examples and then discussed with students to highlight the relevant concepts and assist in the understanding of the material.
- **Additional readings** will be provided on VISTA to encourage the critical review of peer-reviewed journal articles and other reliable sources.
- **Tutorials** will review key literature and applications of relevant content to emphasise concepts but also to reinforce the treatment of the material within lectures and encourage open discussion with and between students. In addition, it is expected that this will contribute to the establishment of an understanding and appreciation of the peer reviewed, journal article framework.
- Extending upon this understanding, the **assignment** will be formulated to allow the demonstration of analytical and critical thinking. Students will be appraised on their writing style as well as content with the view of improving student's ability to write in essay and exam contexts. Overall understanding of the lecture material and additional readings will be assessed using the mid-semester exam and the final exam.

4 ASSESSMENT

4.1 Formal Requirements

In order to pass this course, you must:

- Attend at least 9 of the 11 Lectures and 7 of the 8 Tutorials,
- Achieve a composite mark of at least 50%, and
- Make a satisfactory attempt at each assessment task.

(The Lecturer in Charge will be responsible for deeming a 'satisfactory attempt')

4.2 Assessment Details

Assessment is individual to each but is required to put in table like this:

Assessment Task	Weighting	Learning Outcomes assessed	ASB Graduate Attributes assessed	Length	Due Date
Tutorial and Lecture Participation	5%	1,2,3,4,5	2	See 4.3 below	Tutorials
Tutorial discussion question	5%	2	1,4		Tutorial during Week 5
Mid Semester Exam	25%				21 April (during lecture)
Assignment	15%	3	1,2,3,5	1000-1500 words	23:59 on 18 May, 2009
Final Exam	50%	1,2,3,4,5	1,2,3,4,5	2 hours	University Exam Period
	100%				

4.3 Tutorial and Lecture Participation

Marks Guide for Tutorial Participation

0	Below 80% of attendance as required by UNSW and ASB rules. Students must register by 20 minutes from start of tutorial to qualify as 'in attendance'. Signing on for another student will be treated as misconduct.
2	Has satisfied the attendance requirement but has not contributed to class discussion.
3-5	Has satisfied the attendance requirement and contributed to class discussion in relevant and constructive ways.

4.4 Tutorial Discussion Question Assessment

There will be one written tutorial assessment in week 4. The assessment will cover the material relevant to the Week 3 lecture material.

Students must hand the assessment in during the first twenty minutes of the tutorial group to which they have been allocated. Students who do not submit the assessment and do not have adequate reason will be awarded a mark of zero. Documentary evidence for an absence (e.g. medical certificate) must be provided to the Lecturer-in-charge. If approved, the student will have their final mark re-weighted according to the weight of the missed piece of assessment.

4.5 Assignment Assessment and Format

The assignments will be an essay-based format and are required to be between 1000 to 1500 words. The assignments will be based on the material discussed in Week 7 – Measuring the Environment II: Survey Methods and Valuation Techniques. Students should be aware that it is expected that they keep a copy of all work submitted for assessment and keep returned marked assignments.

The assignment topics, format and marking criteria are set out in 12 below.

4.6 Assignment Submission Procedure

1. Students must submit 1 hard copy and 1 electronic copy of their assignment.
2. The electronic copy is to be submitted to the course website by 11:59pm on 18 May 2009. Instructions will be available on the website. Upload a copy of your document - do not paste text. Use your student ID in the file name.
3. All electronic copies of essays will checked for plagiarism on the Turnitin software into which they are uploaded. See notes on Plagiarism below and also note that the Turnitin software will automatically check against all other assignments submitted.
4. The hard copy is to be submitted to the Lecturer during the lecture on 19 May 2009. Do not use plastic sheets or binders. Simply staple the pages together. Your name and ID should be on the cover page.

4.7 Late Submission of Assignment

10% of the value of each assignment will be deducted for each day (24 hours) or part thereof which the electronic copy of an assignment is submitted to the course website after the deadline. Assignments submitted more than five days late will not be marked.

4.8 Mid Semester Exam Format

The purpose of the Mid-Semester is to test your understanding of the basic concepts and theories introduced within the first six weeks of the course.

The exam will be held during Week 6 on Tuesday 21 April during class time and details will be confirmed within the lectures preceding the exam. The examination will test all

material covered in lectures up to and including Week 5. The examination is worth a total of 25 marks.

The format of the Mid-Semester Exam will be:

Part A: multiple choice questions

Part B: short answer questions

Note: There will be NO supplementary exam offered for the Mid-Session Examination. You should make every effort to take the examination. Students who fail to attend the examination will need to apply for Special Consideration. Any student who, for reasons of **serious illness**, cannot attend an exam will need **full and convincing documentation of that illness**. Students who are found to be genuinely too ill to have attended the exam will have their mark in the remaining assessment tasks re-weighted to include the mark reserved for the missed exam. In all other cases of non-attendance students will receive a grade of zero.
Special Consideration applications must be made within 3 days of the test/exam through NewsouthQ in the Chancellery and NOT through the lecturer-in-charge (you should advise the lecturer that you have made an application). You will need to provide full documentation of the reason for the absence (eg, illness).
Employment obligations of any kind are not acceptable reasons for absence from any test/examination.

4.9 Final Exam Format

The purpose of the Final Exam is to assess understanding of all environmental economic concepts, theories and policy prescriptions introduced in the course and to test the ability to use these to interpret and analyse real world applications.

The Final Exam will be held in the University examination period which falls between Wednesday 12 June and Saturday 27 June and will be 2 hours in length. The Final Exam will cover the entire course. The format of the Final Exam will be:

Part A: multiple choice questions

Part B: short answer questions

Part C: an essay type question

Further information on the content of the Final Exam will be provided towards the end of session.

A satisfactory performance in the Final Exam is required to pass this subject.

No past exam is provided as the format is similar to the Mid-Semester Exam, with the addition of an Essay component.

5 ACADEMIC HONESTY AND PLAGIARISM

The University regards plagiarism as a form of academic misconduct, and has very strict rules regarding plagiarism. For UNSW's policies, penalties, and information to help you avoid plagiarism see: http://www.lc.unsw.edu.au/plagiarism/index.html as well as the guidelines in the online ELISE tutorial for all new UNSW students: http://info.library.unsw.edu.au/skills/tutorials/InfoSkills/index.htm.

6 COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process is one of the ways in which student evaluative feedback is gathered. You are strongly encouraged to take part in the feedback process.

7 STUDENT RESPONSIBILITIES AND CONDUCT

Students are expected to be familiar with and adhere to university policies in relation to class attendance and general conduct and behaviour, including maintaining a safe, respectful environment; and to understand their obligations in relation to workload, assessment and keeping informed.

Information and policies on these topics can be found in the 'A-Z Student Guide': https://my.unsw.edu.au/student/atoz/ABC.html. See, especially, information on 'Attendance and Absence', 'Academic Misconduct', 'Assessment Information', 'Examinations', 'Special Consideration', 'Student Responsibilities', 'Workload' and policies such as 'Occupational Health and Safety'.

7.1 Workload

It is expected that you will spend at least **ten hours** per week studying this course. This time should be made up of reading, research, working on exercises and problems, and attending classes. In periods where you need to complete assignments or prepare for examinations, the workload may be greater.

Over-commitment has been a cause of failure for many students. You should take the required workload into account when planning how to balance study with employment and other activities.

7.2 Attendance

Your regular and punctual attendance at lectures and seminars is expected in this course. University regulations indicate that if students attend less than eighty per cent of scheduled classes they may be refused final assessment.

7.3 Special Consideration and Supplementary Examinations

You must submit all assignments and attend all examinations scheduled for your course. You should seek assistance early if you suffer illness or misadventure which affects your course progress. For advice on UNSW policies and procedures for granting special consideration and supplementary exams, see:

'UNSW Policy and Process for Special Consideration':
https://my.unsw.edu.au/student/atoz/SpecialConsideration.html

Students should note the following

- Applications for special consideration (including supplementary examinations) must go through UNSW Central administration (within 3 working days of the assessment to which it refers) – applications will **not** be accepted by teaching staff;
- Applying for special consideration does not automatically mean that you will be granted additional assessment or that you will be awarded an amended result;
- If you are making an application for special consideration (through UNSW Central Administration) please notify your Lecturer in Charge;
- Please note that a register of applications for Special Consideration is maintained. History of previous applications for Special Consideration is taken into account when considering each case.

ASB Policy and Process for Special Consideration and Supplementary Exams

In the case of undergraduate students in the ASB, requests for special consideration are determined by a Faculty wide panel. If the Faculty panel grants a special consideration request, this may entitle the student to sit a supplementary examination. In such cases the following procedures will apply:

- Supplementary exams will be scheduled centrally and will be held approximately two weeks after the formal examination period. Actual date will be advised by mid-semester.

- Where a student is granted a supplementary examination as a result of a request for special consideration, the student's original exam (if completed) will not be marked and only the mark achieved in the supplementary examination will count towards the final grade.

The 'ASB Policy and Process for Special Consideration and Supplementary Exams in Undergraduate Courses' is available at:
http://wwwdocs.fce.unsw.edu.au/fce/current/StudentSuppExamProcedure.pdf .

Further information for undergraduate students is on the ASB website (see 'Policies and Guidelines for Current Students').

7.4 General Conduct and Behaviour

You are expected to conduct yourself with consideration and respect for the needs of your fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students may be asked to leave the class. More information on student conduct is available at:
www.my.unsw.edu.au

7.5 Occupational Health and Safety

UNSW Policy requires each person to work safely and responsibly, in order to avoid personal injury and to protect the safety of others. For more information, see https://my.unsw.edu.au/student/atoz/OccupationalHealth.html.

7.6 Keeping Informed

You should take note of all announcements made in lectures, tutorials or on the course web site. From time to time, the University will send important announcements to your university e-mail address without providing you with a paper copy. You will be deemed to have received this information. It is also your responsibility to keep the University informed of all changes to your contact details.

8 STUDENT RESOURCES AND SUPPORT

The University and the ASB provide a wide range of support services for students, including:

- **ASB Education Development Unit (EDU)** (www.business.unsw.edu.au/edu)

Academic writing, study skills and maths support specifically for ASB students. Services include workshops, online and printed resources, and individual consultations. EDU Office: Room GO7, Ground Floor, ASB Building (opposite Student Centre); Ph: 9385 5584; Email: edu@unsw.edu.au

- **UNSW Learning Centre** (www.lc.unsw.edu.au)

Academic skills support services, including workshops and resources, for all UNSW students. See website for details.

- **Library training and search support services:** http://info.library.unsw.edu.au
- **UNSW IT Service Desk:** Technical support for problems logging in to websites, downloading documents etc. Library, Level 2; Ph: 9385 1333.

Website: www.its.unsw.edu.au/support/support_home.html

- **UNSW Counselling Service** (http://www.counselling.unsw.edu.au)

Free, confidential service for problems of a personal or academic nature; and workshops on study issues such as 'Coping With Stress' and 'Procrastination'.
Office: Level 2, Quadrangle East Wing ; Ph: 9385 5418

- **Student Equity & Disabilities Unit** http://www.studentequity.unsw.edu.au)

Advice regarding equity and diversity issues, and support for students who have a disability or disadvantage that interferes with their learning. Office: Ground Floor, John Goodsell Building; Ph: 9385 4734

9 COURSE RESOURCES

Important resources for this course are:

Main Reference-
Callan, S. J. & Thomas, J. M. (2007), *Environmental Economics and Management: Theory, Policy, and Applications*, 4th Edition, Thomson South-Western, Ohio.

Additional Text of Interest in Course Reserve (under Econ2127)-
Perman, R., Yue, M., McGilvray, J., & Common, M. (2003), *Natural Resource and Environmental Economics*, 3rd Edition, Pearson Education, Essex.

Additional Readings-
These Materials will be made available on VISTA in the week before the relevant lecture and are specified within the section entitled Course Schedule. Please note that some additional materials may be added throughout the course as the need arises.

Course Materials- These materials (which include the ***Lecture Notes, Course Outlines and Assignment Sheets***) will be made available on VISTA in the week before the relevant lecture. http://vista.elearning.unsw.edu.au

The Elements of Environmental Economics website can be found at: http://vista.elearning.unsw.edu.au. The Elements of Environmental Economics website includes:

- *announcements; all course handouts; lecture slides; the tutorial program and associated readings and data; additional readings; tutorial allocations and assessment marks.*

Students should consult the Elements of Environmental Economics website at least once a week as it contains important information about the course. It will be assumed that all students have seen any notice posted on the course website.

Useful Websites-
http://www.crawford.anu.edu.au/research_units/eerh/index.php
http://geodata.grid.unep.ch/
http://maps.grida.no/
http://www.unep.org/
http://www.ipcc.ch/

Students seeking resources can also obtain assistance from the UNSW Library. One starting point for assistance is:

info.library.unsw.edu.au/web/services/services.html

10 LECTURE SCHEDULE

Week 1	10.03.09	Introduction, Sustainable Development & Logistics	Lecturer: TL

Lecture Details:

This lecture will set the scene for the rest of the course by discussing how Economics views the Environment. Like most topics within economics, views and perspectives differ and we will discuss this diversity within economic thought, as well as touching on the views of other disciplines. Our discussion of how Economics views the Environment will review the concept of Sustainable Development which is designed to reconcile economic growth and environmental quality.

Text Reference –

Callan, S. & Thomas, J. Chapters 1 & 20.

Additional References –

Grafton, R. & Pezzey, J. Economics of the Environment, within Grafton, R., Robin, L. & Wasson, R. (2005), *Understanding the Environment: Bridging the disciplinary divides*, UNSW Press & CAER. (Reproductions will be available in the lecture and online. The book is also in the Library)

Arrow, K., Bolin, B., Costanza, R., Dasgupta, P., Folke, C., Holling, C. S., Jansson, B., Levin, S., Maler, K., Perrings, C., & Pimentel, D. (1995) Economic Growth, Carrying Capacity, and the Environment, *Science*, Vol. 268, No. 5210: 520-521.

Kates, R., Parris, T. & Leiserowitz, A. (2005) What is Sustainable Development?, *Environment*, Vol. 47, No. 3: 8-22.

Week 2	17.03.09	Market Models and Market Failure	Lecturer: TL

Lecture Details:

Using a hypothetical market for bottled water we will review the basic microeconomic model of the market process. Having established this theoretical basis, we will then review how economics perceives environmental pollution as a form of market failure. This market failure then justifies government intervention to implement policy to allow for the inefficiency to be rectified and the externality to be internalised.

Text Reference –

Callan, S. & Thomas, J. Chapter 2 & 3.

Additional References –

Pindyck, R. & Rubinfeld, D. (2005) *Microeconomics*, 6th Edition, Prentice-Hall.

Fullerton, D. & Stavins, R. (1998) How Economists See the Environment, *Nature*, Vol. 395, No. 6701:433-434.

Dasgupta, P. (1990) The Environment as a Commodity, *Oxford Review of Economic Policy*, Vol. 6, No. 1: 51-67.

Week 3	24.03.09	Pollution Control: Targets and the Command & Control Approach	Lecturer: TL

Lecture Details:

With any level of modern production and consumption there will be some level of pollution. Here we deal with the considerations of how much pollution should be allowed. Whilst the concept of optimal pollution may be hard to achieve and impractical for policy makers, the weaker yardstick of economic efficiency will be discussed as a way for policy makers to set pollution targets.

Text Reference –

Callan, S. & Thomas, J. Chapter 4.

Plus excerpts from Perman et al Chapter 6.

Tutorial Reading –

Hepburn, C. (2006) Regulation By Prices, Quantities, Or Both: A Review Of Instrument Choice, *Oxford Review of Economic Policy*, Vol. 22, No. 2: 226-247.

Additional References –

Rose-Ackerman, S. (1973) Effluent Charges: A Critique, *The Canadian Journal of Economics/Revue canadienne d'Economique*, Vol. 6, No. 4: 512-528.

Harrington, W. & Morgenstern, R. (2004) Economic Incentives versus Command and Control: What's the Best Approach for Solving Environmental Problems?, *Resources*, No. 152: 13-17.

Week 4	31.03.09	Pollution Control: Instruments and the Market Approach	Lecturer: TL

Lecture Details:

Building on our discussion of deciding how much pollution should be allowed and traditional command and control approaches, we now turn to market mechanisms for achieving the targeted level. After reviewing the basics of environmental taxation policy and tradable permits, we will critically evaluate the role of these instruments given the practical concerns of uncertainty in abatement costs and pollution damages.

Text Reference –

Callan, S. & Thomas, J. Chapter 5.

Tutorial Reading –

Stavins, R. (2001) Lessons From the American Experiment With Market-Based Environmental Policies, Discussion Paper 01-53, Resources for the Future, Washington DC.

Additional References –

Baumol, W. & Oates, W. (1971) The Use of Standards and Prices for Protection of the Environment, *Swedish Journal of Economics*, Vol. 73, No. 1: 42-54.

Howe, C. (1994) Taxes Versus Tradable Discharge Permits: A Review in the Light of the U.S. and European Experience, *Environmental and Resource Economics*, Vol. 4, No. 2: 151-169.

Hoel, M. & Karp, L. (2002) Taxes Versus Quotas for a Stock Pollutant, *Resource and Energy Economics*, Vol. 24: 367-384.

Pezzey, J. (2003) Emission Taxes and Tradable Permits: A Comparison of Views on Long-Run Efficiency, *Environmental and Resource Economics*, Vol. 26: 329-342.

Tietenberg, T. Tradable Permits for Pollution Control when Emission Location Matters: What have We Learned?, *Environmental and Resource Economics*, Vol. 5, No. 2: 95-113.

Tietenberg, T. (1990) Economic Instruments For Environmental Regulation, *Oxford Review of Economic Policy*, Vol. 6, No. 1: 17-33.

Week 5	07.04.09	Measuring the Environment I: Time & CBA Analysis	Lecturer: TL

Lecture Details:

Here we are dealing with the intertemporal concerns of distribution and the social appraisal of investment projects which involve a current strategy/investment with consequences stretching to future time periods and impacting upon future generations.

Cost Benefit Analysis (CBA) is important within Environmental Economics as it is applied to projects with environmental impacts/consequences which need to be taken into account for the appraisal outcome to reflect the projects social impact. In addition, the project itself may deal with beneficial environmental impacts such as the protection of a natural park, the regeneration of an ecosystem or the implementation of a pollution reductive technology.

Text Reference –

Callan, S. & Thomas, J. Chapter 9.

Tutorial Reading –

Neumayer, E. (1999) Global Warming: Discounting is Not the Issue, but Sustainability is, *Energy Policy*, Vol. 27, No. 1, March.

Additional References –

Carson, R., Wilks, L. & Imber, D. (1994) Valuing the Preservation of Australia's Kakadu Conservation Zone, *Oxford Economic Papers*, Vol. 46, Special Issue on Environmental Economics: 727-749.

Newell, R. & Pizer, W. (2001) Discounting the Benefits of Climate Change Mitigation: How Much Do Uncertain Rates Increase Valuations?, *Economics Technical Series: Pew Center on Global Climate Change*, Washington, D.C. http://www.rff.org/Documents/RFF-RPT-disbenefits.pdf

Week 6	**21.04.09**	***Mid-Semester Exam***	

This is the week of the Mid-Semester Exam.

The Mid-Semester Exam will examine all six previous lectures and will require a good level of knowledge of both the Text References and some of the Additional References (those directly discussed within the respective lectures and/or tutorials).

The purpose of the Mid-Semester Exam is to provide feedback on individual student's progress during the middle of the course. As a result, the exam will not be as intensive as the Final Exam, but will be in a similar format so that students are well aware of the assessment format used

Week 7	28.04.09	Measuring the Environment II: Survey Methods and Valuation Techniques	Lecturer: TL

Lecture Details:

Attaching values to unpriced services is increasingly important and this is especially the case within the natural environment. However this importance has also been met with controversy concerning the attempt to place values on the environment, the techniques used to do so, and the valuations that emerge as a result of applied work.

Using Australian and International examples, we will review the techniques, the criticism and some interesting methods that have been applied in the search for reliable valuations.

Text Reference –

Callan, S. & Thomas, J. Chapter 7 and 8.

Tutorial Reading –

Johansson, P. (1990) Valuing Environmental Damage, *Oxford Review of Economic Policy*, Vol. 6, No. 1: 34-50.

Additional References –

Blamey, R. (1994) Contingent Valuation and Fraser Island, within Johnson, M., Kriesler, P. & Owen, A. (ed.) *Issues in Australian Economics*, Allen and Unwin: 161-190.

Laplante, B., Meisner, C., & Wong, H. (2005) Environment as Cultural Heritage: The Armenian Diaspora's Willingness to Pay to Protect Armenia's Lake Sevan, *World Bank Policy Research Working Paper 3520*, February 2005.

Wiser, R. (2007) Using Contingent Valuation to Explore Willingness to Pay for Renewable Energy: A Comparison of Collective and Voluntary Payment Vehicles, *Ecological Economics*, Vol. 62: 419-432.

Week 8	05.05.09	Local Air Quality	Lecturer: TL

Lecture Details:

Having covered public goods, externalities, and policy instruments, we will now turn our focus to the application of theory with a review of recent applications of the policy prescriptions for improving air quality. In our review of improving air quality we will cover the setting of standards with the aim of protecting health and ecology, controlling mobile sources of emissions (such as those from automobiles) and controlling stationary sources (such as those from electricity power plants).

Text Reference –

Callan, S. & Thomas, J. Chapter 10-12.

Tutorial Reading –

TBA

Additional References –

Fullerton, D. & West, S. (2002) Can Taxes on Cars and on Gasoline Mimic an Unavailable Tax on Emissions?, *Journal of Environmental Economics and Management*, Vol. 43: 135-157.

Sipes, K. & Mendelsohn, R. (2001) The Effectiveness of Gasoline Taxation to Manage Air Pollution, *Ecological Economics*, Vol. 36, No. 2: 299-309.

Week 9	12.05.09	Water Quality	Lecturer: TL

Lecture Details:

Having covered recent applications of the policy prescriptions for improving air quality we now turn our focus to water quality. In our review of improving water quality we will cover the setting of standards with the aim of protecting health and ecology, define the difference between controlling point and nonpoint sources of emissions (including the distinction between piped industrial waste and agricultural runoff) as well as examining the provision of safe drinking water.

Text Reference –

Callan, S. & Thomas, J. Chapter 14 -16.

Tutorial Reading –

Quiggin, J. (2001) Environmental Economics and the Murray-Darling River System, *The Australian Journal of Agricultural and Resource Economics*, Vol. 45, No. 1: 67-94.

Additional References –

Abdalla, C., Borisova, T., Parker, D. & Blunk, K. (2007) Water Quality Credit Trading and Agriculture: Recognising the Challenges and Policy Issues Ahead, *Choices*, Vol. 22, No. 2: 117-124.

Collentine, D. (2002) Search for the Northwest Passage: The Assignation of NSP (non-point source pollution) Rights in Nutrient Trading Programs, *Water Science and Technology*, Vol. 45, No. 9: 227-234.

King, D. (2005) Crunch Time for Water Quality Trading, *Choices*, Vol. 20, No. 1: 71-76.

Week 10	19.05.09	Solid Waste and Toxic Chemicals	Lecturer: TL

Lecture Details:

Our focus now turns to the management of hazardous solid waste and waste sites, the management of municipal solid waste and the incentives used to promote recycling, as well as controlling pesticides and toxic chemicals. Within this discussion we will ask the question: 'why does domestic waste matter if we can't see it?', and examine whether recycling is a prudent strategy within waste management.

Text Reference –

Callan, S. & Thomas, J. Chapter 17-19.

Tutorial Reading –

Miranda, M. & Aldy, J. (1998) Unit Pricing or Residential Municipal Solid Waste: Lessons from Nine Case Study Communities, *Journal of Environmental Management*, Vol. 52: 79-93.

Additional References –

Kinnanman, T. & Fullterton, D. (1999) The Economics of Residential Solid Waste Management, *National Bureau of Economic Research Working Paper 7326*: 1-44.

Norgate, T. (2004) Metal Recycling: An Assessment Using Life Cycle Energy Consumption as a Sustainability Indicator, *CSIRO Report DMR-2616*

ASSIGNMENT ONE DUE – Online: 18 May Hardcopy: 19 May

Week 11	26.05.09	Natural Resource Economics I : Non-renewable & Renewable Resources	Lecturer: TL

Lecture Details:

Our economy depends upon the use of fossil-fuel energy supplies and as such the way we use this stock of non-renewable resources is of vital importance as once they are extracted, they cannot be renewed.

As a result of this economist's want to know 'what is the optimal extraction path over time for any particular non-renewable resource stock?'

Renewable resources, in contrast to 'nonrenewable' resources, have the capacity for reproduction and growth. Using examples based on the management of fisheries we will review the idea of a sustainable yield and a maximum sustainable yield. With a review of renewable resources policy, we will build towards a comparison of command and control regulations with incentive-based instruments such as taxes and transferable property rights.

Text Reference –

Excerpts from Perman et al Chapter 16 & 17

Tutorial Reading –

Petersen, L. (2001) Governance of the South Pacific tuna fishery, Paper presented as part of the 30th Annual Conference of Economists, Perth, Australia, 23rd-26th September 2001.

Additional References –

Chapter One: The Economics of Fishing and Fisheries Economics, within Grafton, R., Kirkley, J., Kompas, T. & Squires, D. (2006) *Economics for Fisheries Management*, Ashgate Publishing, Hampshire.

Chapter Six: Economics for Fisheries Management, within Grafton, R., Kirkley, J., Kompas, T. & Squires, D. (2006) *Economics for Fisheries Management*, Ashgate Publishing, Hampshire.

Chapter Five: Managing Fisheries Rationally: Framework and Tools, within Iudicello, S., Weber, M. & Wieland, R. (1999) *Fish, Markets, and Fishermen: The Economics of Overfishing*, Earthscan Publications, London.

Week 12	02.06.09	International Environmental Problems: Global Air Quality and Intergovernmental Agreements	Lecturer: TL

Lecture Details:

To conclude the course, we will further examine the application of theory with a review of recent applications of the policy prescriptions to well-known international environmental problems. Amongst the international problems to be reviewed are Acid rain pollution, Ozone depletion, and Climate Change. As a result we will review the Montreal Protocol (CfCs), the Kyoto Protocol (CO2) and the Stern Review on the Economics of Climate Change.

Text Reference –

Callan, S. & Thomas, J. Chapter 13.

Additional References –

Executive Summary within Stern, N. (2006) *Stern Review on the Economics of Climate Change*, HM Treasury, Cambridge Uni Press.
http://www.hm-treasury.gov.uk/media/4/3/Executive_Summary.pdf

Chapter Two: Economics, Ethics and Climate Change, within Stern, N. (2006) *Stern Review on the Economics of Climate Change*, HM Treasury, Cambridge Uni Press.
http://www.hm-treasury.gov.uk/media/5/7/Chapter_2_Economics_Ethics_and_Climate_Change.pdf

Grubb, M. (2003) The Economics of the Kyoto Protocol, *World Economics*, Volume 4, Number 3, July-September, pp: 143-189.

Mulder, K. (2005) Innovation by Disaster: The Ozone Catastrophe as Experiment of Forced Innovation, *International Journal of Environment and Sustainable Development*, Vol. 4, No. 1: 88-103.

Tietenberg, T. (2003) The Tradable-Permits Approach to Protecting the Commons: Lessons for Climate Change, *Oxford Review of Economic Policy*, Vol. 19, No. 3: 400-419.

11 TUTORIAL SCHEDULE

Week	Date	Tutorial Topic
4	31.03	Week 3
5	7.04	Week 4 (Assessment Due)
7	28.04	Week 5
8	5.05	Week 7
9	12.05	Week 8
10	19.05	Week 9
11	26.05	Week 10
12	2.06	Week 11

12 ASSIGNMENTS

The word length is 1000-1500 words.

Topic:
Measuring the Environment II: Survey Methods and Valuation Techniques
(Specific details TBA)

Marking Criteria:

	H 100% (excellent)	D 75% (very good)	C 65% (good)	P 50% (adequate)	Cp 40% (poor)	F <40% (very poor)	Weight	Final Mark
Presentation							1.5	
Referencing							1.5	
Readability and Fluency							1.5	
Diverse Academic References							1.5	
Rigorous Critique of Key Concepts							4.5	
Use of Unique Examples							4.5	
							15	

Marking Criteria Explained

Criteria	H	D	C	P	Cp	F
Presentation	Very well presented, title page, stapled and page numbers listed	Well presented with one forgotten attribute	Well presented with two forgotten attributes	Well presented, no title page, not stapled and no page numbers	Poorly presented, but readable	Poorly presented and unreadable
Referencing	Comprehensive and follows academic writing style	Comprehensive but varies from prescribed style	Applied well but varies from prescribed style	Applied adequately but varies from prescribed style	Not used but references listed	Not used and no references listed
Readability and Fluency	Comprehensible, well structured and persuasive writing of professional quality	Comprehensible well structured and persuasive writing of a high standard	Comprehensible, well structured and persuasive	Comprehensible but poorly structured	Diffuse structure, incomprehensible	No structure and incomprehensible

Criteria	H	D	C	P	Cp	F
Diverse Academic References	Range of relevant secondary material used, critically integrated to advance argument and theorise	Range of relevant secondary material used, critically integrated to advance argument	Range of relevant secondary material used, critically integrated in paper	Range of relevant secondary material used uncritically to illustrate points	Some use of secondary material but sourced from low quality sources	Rare to no use of secondary material but sourced from low quality
Rigorous Critique of Key Concepts	Highly coherent review going beyond synthesis to create/discuss a new idea or concept	Highly coherent review going beyond synthesis to discuss recent developments/concepts	Synthesises concepts into a coherent report	Make connections /links between some concepts	Concepts are noted with no discussion of concepts	No coherence / aim of report unclear
Use of Unique Examples	Development of own examples which captures concepts very well	Development of own examples which captures concepts quite well	Synthesises common examples into discussion	Notes some examples explained but not integrated within discussion	Some examples are listed	No examples included

Essay Submission details: as outlined above in 4.5 – 4.7.

Essay Preparation Advice

1. Plan your essay and produce a draft structure to clarify your ideas and to develop a logical essay structure.
2. Do not use bullet points and use sub-headings sparingly. You are writing an essay, not a report.
3. Make sure your grammar and expression are clear – consider whether your meaning is clear to a reader.
4. Use simple language (big words do not necessarily impress). Remember to address yourself to the reader.
5. Avoid slang, colloquialisms, & conversational styles of language.

Essay Writing Style

The School of Organisation and Management has produced a comprehensive Essay and Assignment Guide. The Guide offers excellent practical advice for preparing work for assessment and is available from the 'Current Students' page in the School of Organisation and Management's web site. Students should read the Guide to be familiar with the expectations of written work.

For written assessments, students will be expected to demonstrate an ability to read further than the prescribed readings and to use work published in academic journals. Essays are expected to follow traditional academic referencing styles and to have clear structure.

Citing References: You should cite your sources using the Harvard System and include all cited sources in a reference list.

Format: Essays should be one and half spaced. Under no circumstances should an essay be typed on both sides of a single page.

Margins: on both the left and right hand sides of the page. This provides adequate room for comments as well as creating an uncluttered presentation.

Page Numbers and Format: All pages should be numbered consecutively. A cover page must give a title to your essay and include your name, student number and the date on which you submit the essay.

Quotations: In general, all quotations should be enclosed with single inverted commas. The exception is quotations of two or more sentences which run to four or more lines – these quotes should be indented. However, long quotes should be avoided where possible. Excess use of long quotes will be penalised.

A Bibliography: is a standard requirement of all essays and should contain all references cited. Do not include material which is quoted in one of the references unless the quoted source was actually consulted by you.

Failure to follow these instructions will result in essays being penalised.

13 Summary Table: Overview of Lectures/ Assessments

Week	Date	Lecture Topic	Reference	Tutorial
1	10.03	Introduction, Sustainable Development & Logistics	Chapter 1 & 20	
2	17.03	Market Models and Market Failure	Chapter 2 & 3	
3	24.03	Pollution Control: Targets and the Command & Control Approach	Chapter 4 + Ext.	
4	31.03	Pollution Control: Instruments and the Market Approach	Chapter 5	Week 3
5	7.04	Measuring the Environment I: Time & CBA Analysis	Chapter 9	Week 4
	14.04	**Mid Semester Break**		
6	21.04	**Mid Semester Exam**		
7	28.04	Measuring the Environment II: Survey Methods and Valuation Techniques	Chapter 7 & 8	Week 5
8	5.05	Local Air Quality	Chapter 10-12	Week 7
9	12.05	Water Quality	Chapter 14-16	Week 8
10	19.05	Solid Waste and Toxic Chemicals	Chapter 17-19	Week 9
11	26.05	Natural Resource Economics: Non-renewable & Renewable Resources	Ext.	Week 10
12	2.06	International Environmental Problems: Global Air Quality and Intergovernmental Agreements	Chapter 13 + Ext.	Week 11
	9.06	**Study Period**		
	12.06	**Examination Period**		

Week	Date	Assessment
5	7.04	Tutorial Discussion Questions
6	21.04	Mid Semester Exam
10	19.05	Assignment One - Essay
	12.06	Examination Period Begins