



UNIVERSITY  
OF TASMANIA

## **School of Economics**

**Faculty of Commerce**

### **BEA301**

# **Environmental and Resource Economics**

**Semester 2, 2003**

## **Unit Outline**

**Dr Sarah Jennings**

CRICOS Provider Code: 00586B

## Contact details

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## Unit details

**Campus & Mode:** Hobart, Web CT Supported  
**Unit Weight:** 12.5%  
**Prerequisite** BEA110 Economics for Business

**Teaching Staff:** Sarah Jennings

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## **Unit description**

This is an introductory level applied economics unit in the fields of environment and natural resources. While the emphasis is on the economic approach to resource and environmental policy and management, students are provided with a solid understanding of key micro economic theory concepts.

The unit is compulsory in the Economic Policy Major in the Bachelor of Economics and may be taken as an elective in any other Bachelor of Economics program. It is an elective unit in the Bachelor of Agricultural Science, the Economic Geology Major (Bachelor of Science) and the Social Ecology Major (Bachelor of Arts). The unit may also be taken as a part of many other courses within the Faculty of Commerce and the University. Enrolments often reflect a diversity of student backgrounds and interests.

## **Aim**

This unit provides students with an introduction to the economic approach to natural resource and environmental issues. Basic economic concepts taught at first year are reviewed and extended, and students are introduced to discounting, intertemporal optimisation, social benefit-cost and non-market valuation techniques. These tools are applied to a number of resource problems, including mining, fisheries, forestry, biodiversity and pollution.

One of the main aims of the unit is to develop the student's ability to critically analyse current resource use and environmental debates and policies within an economic framework. The unit also encourages students to develop an appreciation of the implications, and limitations, of the orthodox economic framework, and the advantages and disadvantages of alternative economic systems in resolving the problem of how environmental and natural resources are used by society.

## **Learning outcomes**

On completion of this unit, you should be able to:

- recognise environmental and resource problems as failures of the economic system to properly coordinate people's actions.
- demonstrate a sound understanding of a number of key economic concepts and techniques, including some related to intertemporal decision-making,
- demonstrate a broad knowledge of a range of key environmental and natural resource issues,
- apply sound skills of economic reasoning and analysis to a range of specific environmental and natural resource issues and policies,
- know the advantages and disadvantages of alternative economic systems in resolving the problem of how environmental and natural resources are used by society.

- demonstrate an appreciation of some of the broader biological, social and political factors that also shape environmental and natural resource policy and management.

## **Generic graduate attributes**

This unit will contribute to developing the following generic attributes in University of Tasmania graduates:

*Knowledge* – the unit provides students with an introduction to two important applied fields of economics, namely natural resources and environmental economics. Students become familiar with current issues and are taught to apply the economic way of thinking to these.

*Problem-solving* – The unit equips students with the technical skills and practical ability to solve a range of natural resource and environmental problems such as optimal extraction plans for non-renewable resources and harvest levels for biological resources. Capable students should be able to apply these skills to other situations and problems.

*Communication Skills* – Students are required to submit a written report as part of their assessment in this unit. This is in the form of a policy briefing paper and students must demonstrate the ability to communicate effectively. They are required to present empirical data and use graphs and tables in this report.

*Global Perspective* – The unit deals with a number of transboundary and international environmental and resource issues such as biodiversity, ocean fisheries and pollution.

*Social Responsibility* – students are encouraged to challenge the ethical underpinnings of various economic paradigms in this unit. They are also taught to assess policies in terms of their efficiency and equity. Sustainability and intergenerational equity are both discussed.

## **Pre-requisites/co-requisites**

### **Assumed skills**

- Ability to interpret and construct simple graphs.
- Familiarity with *the economic way of thinking*.
- Basic level of literacy in the English language.
- Sound independent study and research skills.

### **Prerequisite/corequisite units**

BEA110 Economics for Business

## Texts, references and learning resources

### Prescribed text(s)

It is recommended that you have ready access to the following prescribed text. You can purchase a copy of this book from the University Bookstore.

Field, Barry C. (2001), *Natural Resource Economics – An Introduction*, First Edition, Irwin McGraw Hill.

### Recommended readings

Many students find it useful to consult alternative references as part of their study program. A number of additional references will be placed in the reserve Section of the Morris Miller Library. These are:

Wills, Ian. (1997) *Economics and the Environment: A signalling and incentives approach*, First Edition, Allen and Unwin.

Tietenberg, Tom. (2003) *Environmental and Natural Resource Economics*, Sixth Edition, Addison Wesley.

Pearce, David W. and Turner, R. Kerry. (1990), *Economics of Natural Resources and the Environment*, First Edition. Harvester Wheatsheaf.

Kahn, James R., (1997) *The Economic Approach to Environmental and Natural Resources*, Second Edition, The Dryden Press.

Goodstein, Eban S. (1999), *Economics and the Environment*, Second Edition, John Wiley and Sons.

Perman, Roger, Ma, Yue, McGilvray, James and Common, Michael. (1999), *Natural Resource and Environmental Economics*, Second Edition, Pearson Education Limited.

Readings from the prescribed text will sometimes be supplemented by lecture handouts and other readings. These are considered to be part of your reading assignment for the unit and are examinable. Reading the newspaper can also provide useful in broadening your knowledge of the economy and topical natural resource and environmental issues and can prove good practice for developing your ability to 'think like an economist'.

## Teaching arrangements

### Lectures

There will be 12 two-hour lecture sessions in the unit. Lectures will be held in Life Science Lecture Theatre 1 on Wednesdays beginning promptly at 11.00 am. Lectures will cover the core examinable material in this course.

A brief lecture outline will be available to students before lectures as part of a weekly Study Guide which can be accessed on WebCT. Lecture notes are your own responsibility in this unit. If you miss a lecture, please ask a friend or

acquaintance for notes. Copies of lecture slides can be accessed on WebCT. These are not intended as a substitute for your own lecture notes.

Note that there will **be no lecture in Week 22**. Instead students will be expected to complete a Self-directed Study Module.

## **Workshops**

There will be 12 one-hour workshops in the unit beginning in Week 15 (held on Thursdays 10.00am in Commerce Lecture Theatre 3). Workshops will consist primarily of guided problem solving and group activities, and are intended to reinforce and extend material covered in lectures. Problem sheets will be available prior to the Workshop on WebCT. To benefit most you should prepare rough answers and come prepared to ask your Workshop leader to explain parts of the subject that you have not fully understood. Workshops will also be used to review the mid-semester test.

## **Office Hours**

All students are able to consult the unit lecturer on an individual or small group basis during their office hours or by appointment. Students experiencing difficulty in the unit are urged to make use of this service early in the semester. Where possible, please respect these times and make sure that you have tried to solve problems yourself before seeking individual assistance.

## **Occupational health and safety (OH&S)**

The University is committed to providing a safe and secure teaching and learning environment. In addition to specific requirements of this unit you should refer to the University's policy at: [http://www.admin.utas.edu.au/hr/ohs/pol\\_proc/ohs.pdf](http://www.admin.utas.edu.au/hr/ohs/pol_proc/ohs.pdf)

## Unit schedule

Detailed lecture plans, reading assignments and study guidelines will be provided as weekly Study Guides on WebCT.

Week	Week Beginning	Lecture Topic
14	14 July	Introduction to the Unit Important Issues and Terminology The Economy and the Environment - An Overview Economic Paradigms and Ethics
<b>Module I: The Building Blocks</b>		
15	21 July	Willingness-to-pay and demand Costs and supply The competitive process
16	28 July	(Static) Efficiency Introduction to (Dynamic) Intertemporal Efficiency
17	4 August	Market Failure Policy Responses
<b>Module II: The Tools of Environmental and Resource Economics</b>		
18	11 August	Intertemporal Allocations (i) Comparing Values over time (ii) Dynamic Optimisation (iii) Application : Economics of the Mine
19	18 August	Benefit-Cost Analysis
20	25 August	Mid-semester test (Wednesday 20th August, 11.00 – 12.00am) Valuing the Environment
21	1 Sept	Valuing the Environment (contd.) Measuring Welfare and Environmental Quality
<b>Module III: Selected Resource and Environmental Economics Topics</b>		
22	8 Sept	<b>No classes this week.</b> Self-directed study module : Selected Topic I
23	15 Sept	Introduction to Forestry Economics
24	22 Sept	Economics of the Common Resource Fishery
<b>AVCC 29 September to 3 October</b>		
25	6 Oct	Selected Topic II
26	13 Oct	<b>Unit Review</b>

## Important Dates to Remember

Week	Date	Event
14	Wed 16 July	Lectures begin
15	Thurs 24 July	Workshops begin
18	Fri 15 Aug	Assignment 1 due: 5.00pm
20	Wed 20 Aug	Mid-semester Test
22	8 – 12 Sept	Self-directed Study Module
23	Fri 19 Sept	Assignment 2 due: 5.00pm
<b>AVCC 29 September to 3 October</b>		
25	Fri 10 Oct	Major Paper due: 5.00pm
26	Fri 17 Oct	Classes end
	20 – 24 Oct	Study Period
	25 Oct – 11 Nov	Examinations

## Learning expectations and strategies

### Expectations

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers.

The University's Code of Conduct for Teaching and Learning states:

*Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.*

### Learning strategies

If you need assistance in preparing for study please refer to your tutor or lecturer. For additional information refer to the Learning Development website : <http://www.utas.edu.au/learndev/>

If you will be using WebCT for the first time and would like some information on how to use WebCT refer to the following guide: [http://www.utas.edu.au/coursesonline/docs/using\\_webct.pdf](http://www.utas.edu.au/coursesonline/docs/using_webct.pdf)

Some of the units you will study use video conferencing to deliver lectures and tutorials. To enable you to get the best out of a video conference please refer to the following guide. <http://www.its.utas.edu.au/videoconf/vcstudentguide.pdf>

## **Assessment**

Your overall grade in this unit will be determined by your performance in a final exam and in course work. Course work will account for 40% of the overall mark. The remaining 60% will be in the form of a final exam. Course work will consist of the following:

### **Mid-semester Test (10%)**

A one hour test will be held during the first hour of lectures on Wednesday 20 August (Week 20). This will test students understanding of material covered during Weeks 14 – 19. Except under exceptional circumstances it will not be possible for students to sit this test at any other time. Students who are unable to attend this test session for legitimate medical or other reasons must, where possible, notify the lecturer before the test commences. Students who fail to attend the test session without the prior permission of the lecturer will receive a mark of zero.

### **Written Paper (20%)**

Students are required to submit a written paper before Friday 10 October (Week 25). Details of the topic for this paper will be distributed during the lecture in week 15 or maybe downloaded from WebCT.

### **Assignments (10%)**

Students will be required to hand-in written answers to two short assignments during the semester. Each assignment will contribute 5% to your final grade. Assignments are due at 10.00 am Monday 18 August (Week 19) and Monday 15th September (Week 23).

### **Final Exam (60%)**

The final examination in this unit will be held during the November examination period and will be based on material covered in lectures, workshops, handouts and in prescribed readings. The entire semester's work is examinable. The purpose of the final examination is to determine the extent to which you have achieved the Learning Outcomes as set out above.

## Assessment summary

Component	Weight/Value	Due date
Assignment 1	5%	15 August
Mid Semester Test	10%	20 August
Assignment 2	5%	19 September
Written Paper	20%	10 October
Final Exam	60%	Exam Period
Total	100%	

## Submission of assignments

All work must have the School of Economics Assignment Cover Sheet attached. The cover sheet will be available on the unit page on WebCT.

Please remember that you are responsible for lodging your written work on or before the due date. We suggest that you keep a copy – photocopying is ideal. Even in the most 'perfect' of systems, items sometimes go astray. Lodge your assignments in the box marked BEA301 on Level 4, Foyer Area, Commerce Building. Work will be returned during classes. Uncollected assignments will be available from the Secretary's office, Room 407.

## Requests for extensions

Extensions will only be granted on the basis of consultation with your lecturer before the due date. If you are ill, please provide a medical certificate so that this can be noted. If you are unable to attend the mid-semester test due to circumstances beyond your control, please inform your lecturer or the School Secretary before the test date.

## Access to WebCT

The WebCT entry page is at <http://webct.utas.edu.au:8900/>. Click 'Log on to myWebCT' and enter the same username and password that you use for your University email account. Your personal WebCT page will appear, with the units in which you are enrolled listed at the top left of the screen. Click on the 'BEA301Environmental & Resource Economics' link to gain access to the home page for this unit. Details about WebCT features are available on <http://www.webct.com/quickstart>. If you run into problems with WebCT, contact the Help Desk on Telephone: 6324 3888, or Email: [HelpDesk@weboffice.utas.edu.au](mailto:HelpDesk@weboffice.utas.edu.au).

## Penalties

Late submission of assignments and other forms of assessment will incur a penalty of:

1 – business day late	=	10% penalty
2 – 5 business days late	=	25% penalty
More than 5 business days	=	100% penalty

## Academic referencing

Student writers need to back up their ideas by referring to scholarly literature, works of art and inventions that they have used. Failure to do so constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence. It is important that students understand how to correctly refer to the work of others and maintain academic integrity.

The appropriate referencing style for this unit is

Baumol, William (1986), "Productivity Growth, Convergence and Welfare", *American Economic Review*, vol. 76, pp. 1072-85.

Maddison, Angus (1970), *Economic Progress and Policy in Developing Countries*, London, Allen and Unwin.

For information on presentation of assignments :

<http://www.utas.edu.au/library/assist/gpoa/gpoa.html>

Please read the following statement on plagiarism. Should you require clarification please see your unit coordinator or lecturer.

## Plagiarism

Plagiarism is a form of cheating. It is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example, using an author's words without putting them in quotation marks and citing the source, using an author's ideas without proper acknowledgment and citation or copying another student's work.

In fact the intentional copying and submission of someone else's work as one's own is a serious offence tantamount to academic fraud. It is a University offence punishable by a range of penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, exclusion from a unit, a course, or the University. **When in doubt consult your lecturer or tutor.** Details of penalties that can be imposed are available in the Ordinance of Student Discipline or at: [www.utas.edu.au/plagiarism](http://www.utas.edu.au/plagiarism)

Useful resources on academic integrity, including what it is and how to maintain it, are also available at [http://www.utas.edu.au/tl/academic\\_integrity/index.html](http://www.utas.edu.au/tl/academic_integrity/index.html)

## **Additional assistance**

If you are experiencing difficulties with your studies or assignments, have personal or life planning issues, disability or illness which may affect your course of study, you should raise these with your lecturer.

Student Services staff are located in Hobart, Launceston and Burnie and provide a wide range of services to assist students, they include:

- Student Counsellor
- Careers Adviser
- Disability Adviser
- Student Employment Service.

Or visit the Student Services website at :  
<http://student.admin.utas.edu.au/services/>

Should you require assistance in accessing the Library visit their website for more information at <http://www.utas.edu.au/library/>

Your contact Librarian for this unit is :

Heather Mitchell (ext 2306)

International Services website provides information on the assistance available to international students, visit their site at :  
<http://www.international.utas.edu.au/index.html>

The Learning Development website has a wide range of resources on study skills and learning strategies, visit their site at : <http://www.utas.edu.au/learndev/>

## **Help resolving concerns about this unit**

If you have any concerns or complaints with the administration and/or management in this unit or your BEc course of either a general or personal nature, then you should in the first instance discuss the matter with your lecturer. If you feel that you would rather discuss the issue with an independent person within the School of Economics, then contact the Ombusperson:

**Dr Sarah Jennings**  
**School of Economics**  
**Room 413**  
email [sarah.jennings@utas.edu.au](mailto:sarah.jennings@utas.edu.au)

If the matter is still unresolved and you would like to know who to contact or the procedures for resolving your concern refer to the following website :  
<http://student.admin.utas.edu.au/services/complaints/index.html>

The Hobart based Tasmanian University Union (TUU) or the Launceston/Burnie based Student Association (SA) may also be able to assist.

## **Unit feedback**

The University of Tasmania, on a regular basis, evaluates its teaching and learning environment through the Student Evaluation of Teaching and Learning (SETL) system. The University values feedback from students and from time to time you will be asked to complete a SETL evaluation for a unit of study. For more information on SETL go to :

<http://student.admin.utas.edu.au/setl/index.html>