TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

School of Economics and Finance

ECON 407 ECONOMIC DYNAMICS B

Trimester 2 2007

COURSE OUTLINE

Lecturer: Jacek Krawczyk, RH325, phone 4635352
      Contact by email preferred at: J.Krawczyk@vuw.ac.nz

Lecture times: CRN2177: Tuesday, 12:40-14:30, RWW221

Consultation time: Wednesday, 14:15-15:15, RH325

The Course Coordinator is Jacek Krawczyk. He has overall responsibility for the course. You should see him if you are having difficulties that you have been unable to resolve or if you need to make special arrangements because of a disability, or if you want to appeal your assignment mark.

You can find Blackboard at http://www.blackboard.vuw.ac.nz/ - if ECON 407 does not appear, please email Jacek Krawczyk immediately, with your SCS username.

Course Objectives

The intention of the course is to provide the mathematical framework for models of dynamic conflicts (or *dynamic games*) and for their resolution.

The emphasis is not on mathematical proofs but on providing examples of economic application. However, the nature of analytical solutions will be shown.

Readings

The text is J. B. Krawczyk (2007) "Conflicts over time: an easy approach to dynamic games" ECON 406 and 407 Lecture Notes. This is available from Blackboard.

Complementary books which might provide useful alternative explanations and practice exercises are:

- Başar T. & G.-J. Olsder. "Dynamic Noncooperative Game Theory"
- D. Bertsekas. "Dynamic Programming and Stochastic Control".
- Fudenberg D. & J. Tyrole. "Game Theory".

- L. Ljungqvist & T.J. Sargent. "Recursive Macroeconomic Theory".

The VUW library has a web page that contains detailed information about available library resources and has links to several other sites.

Its URL is http://www.vuw.ac.nz/library

Materials and Equipment

You do not need any special equipment for this course. All numerical examples provided at lectures and questions to be answered in assignments can be answered on a sheet of paper and using a pen (through calculus and algebra). However, knowledge of (and access to) Matlab or Maple might be of some help to manipulate some more complex formulae. In examinations, you are allowed to use non-programmable calculators.

Assessment Requirements

Your course mark will be a weighted average of two assignments: 14% & 16% and the final exam: 70%

Final examination is open book; all questions are compulsory.

Assignments

Two assignments will be issued at least 10 days ahead of their respective deadlines: 4 September and 8 October. The assignments are to be handed in to lecturer or left in his "pigeon" hole by 1200 noon on each of the above dates.

Expected Workload

As a guideline, students are expected to spend 8 hours a week on this course including class contact time. This may however vary considerably for individual students.

Penalties

Late assignments will be given a grade "0".

Mandatory course requirements

For passing the course obtaining an overall C grade or better is mandatory.

Communication of additional information

Additional information or information on changes will be posted on Blackboard. Some information may be emailed to you via your SCS address, so check this regularly. (This is your University email address.)

Course content

The following is the (tentative) lecture content. The numbers point to Krawczyk (2007) Lecture Notes. Please prepare for each lecture by (scanning and) reading the indicated sections.

Lecture	Topic	Text
1-2-3	Non-dominance versus non-improvability.	I.1-2
	Fundamental concepts of classical game theory	I.3-5,II,III
	Revision: Nash and Stackelberg equilibrium concepts	
	zero and non-zero sum games, matrix and infinite games.	
4	Dynamic programming (revision).	V.4
	Intertemporal conflict models. Advertising, price setting	
	and fishery's management.	VIII.1-2
5	*Information patterns.* Open-loop, memory, etc and the	VIII.3-6
	associated strategies. Various types of equilibria.	
6	Fishery's problem.	IX.1-2
7	*Growth rates divergences* explained by collusive	IX.3
	equilibria.	
8	*Stochastic games* and solutions.	X
9	*Stackelberg solutions* in dynamic games	XI.2
10	Disturbance attenuation and pursuit-evasion	XI.1
	models and "robust" solutions to dynamic games.	XI.3
11-12	*Uniqueness of Nash equilibria* (also, generalised).	XII
	A numerical method for the solution of constrained	
	static and open-loop dynamic games.	

SUPPLEMENTARY INFORMATION

Faculty of Commerce and Administration Offices

Railway West Wing (RWW) - FCA Student and Academic Services Office

The Faculty's Student and Academic Services Office is located on the ground and first floors of the Railway West Wing. The ground floor counter is the first point of contact for general enquiries and FCA forms. Student Administration Advisers are available to discuss course status and give further advice about FCA qualifications. To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

Easterfield (EA) - FCA/Education/Law Kelburn Office

The Kelburn Campus Office for the Faculties of Commerce and Administration, Education and Law is situated in the Easterfield Building - it includes the ground floor reception desk (EA005) and offices 125a to 131 (Level 1). The office is available for the following:

- Duty tutors for student contact and advice.
- Information concerning administrative and academic matters.
- Forms for FCA Student and Academic Services (e.g. application for academic transcripts, requests for degree audit, COP requests).
- Examinations-related information during the examination period.

To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

General University Policies and Statutes

Students should familiarise themselves with the University's policies and statutes, particularly the Assessment Statute, the Personal Courses of Study Statute, the Statute on Student Conduct and any statutes relating to the particular qualifications being studied; see the Victoria University Calendar or go to http://www.vuw.ac.nz/policy.

For information on the following topics, go to the Faculty's website http://www.vuw.ac.nz/fca

- Academic Grievances
- Academic Integrity and Plagiarism
- Student and Staff Conduct
- Meeting the Nees of Students with Impairments
- Student Support

Manaaki Pihipihinga Programme

Manaaki Pihipihinga is an academic mentoring programme for undergraduate Māori and Pacific students in the Faculties of Commerce and Administration, and Humanities and Social Sciences. Sessions are held at the Kelburn and Pipitea Campuses in the Mentoring Rooms, 14 Kelburn Parade (back courtyard), Room 109D, and Room 210, Level 2, Railway West Wing. There is also a Pacific Support Coordinator who assists Pacific students by linking them to the services and support they need while studying at Victoria. Another feature of the programme is a support network for Postgraduate students with links to Postgraduate workshops and activities around Campus.

For further information, or to register with the programme, phone (04) 463 5233 ext. 8977 or email manaaki-pihipihinga-programme@vuw.ac.nz. To contact the Pacific Support Coordinator, phone (04) 463 5842 or email pacific-support-coord@vuw.ac.nz.