ENTR612 – Transport Policy & Demand Management - 2012

Course Outline

Aims and Objectives:

This course introduces students to the underlying theory and state-of-art experiences for managing and developing transport policies. Transportation engineers and planners are expected to know and apply basic and advanced concepts to conceive, manage and operate efficient transportation systems according to the needs of society.

At the end of the course, students should:

- Have a good understanding of fundamental transport economics theory;
- Be able to apply the transport economics concepts to develop transport policies;
- Have the capacity to identify strengths and deficiencies of travel demand management objectives and instruments;
- Be able to plan, manage and implement transport policies;
- Conduct a case study in which transport policy concepts are applied.

Indicative Course Content

The course will comprise ~30 hours of lectures and tutorials, covering the following topics:

		Hrs
0.	Course Introduction, Outline of Programme, Assessment, References	1
1.	Fundamentals of Transport Economics	2
2.	Project Appraisal, Cost/Benefit Analysis	2
3.	Travel Demand Management	1
4.	Principles of Transport Policy Formulation; Planning Policy	2
5.	PLUTO (Planning Land Use and Transport Options) Model	1
6.	Strategy Formulation and Testing using PLUTO	1
7.	Transport Policy Objectives: Efficiency	2
8.	Transport Policy Objectives: Environmental Protection	2
9.	Transport Policy Objectives: Land Use Planning & Sustainable Development	2
10.	Approaches to Transport Policy Formulation	1
11.	Transport Policy Instruments: (Environmental) Traffic Management	2
12.	Transport Policy Instruments: Infrastructure Provision	2
13.	Transport Policy Instruments: Public Transport, Traffic Restraint	3
14.	Transport Policy Instruments: Alternatives to Motorised Travel	2
15.	Integrated Transport Strategies	2
16.	Case Studies and Presentations	2

Block Courses:

This course will be taught in 2012 in two 3-day blocks:

Mon 12th – Wed 14th March and **Mon 14th – Wed 16th May**

The course will be held at the University of Canterbury campus, Ilam, Christchurch (actual teaching venue to be confirmed later). Students will need to make their own arrangements for travel, meals and accommodation.

Course Assessment:

- PLUTO Project Report (due on 7 May) 25%
- PLUTO Project Presentation (during second teaching block) 5%
- Essay on Transport Policy (due on 5 June) 20%
- Final Exam (mid-June 2012; date TBC) 50%

Students will undertake a strategy formulation and testing project using the PLUTO transport planning software to assess various transport policy options. Students will submit a research report and deliver an oral presentation during the second block.

Students will also write an essay on the applicability in NZ of some recent EU policy initiatives.

The final exam will be a 3-hour closed-book exam designed to test students' understanding and application of the material presented during the course and covered in the lecture notes. Students

from outside of Christchurch will be able to arrange to sit this exam in their home town with a suitable local supervisor.

While a **minimum 50% overall grade** for the year is the usual benchmark for passing, to guarantee a pass in the course you must also achieve **at least 40%** in both coursework and examination total marks.

Teaching Staff:

This course will be taught by the following people:

- Prof Alan Nicholson *(Course Coordinator)*
- Dr Nadine Roth

Target Audience:

This course is available to full-time and part-time students enrolled in Canterbury's postgraduate transport programme (i.e. MET, MEngSt or PGCertEng; see the website ***www.met.canterbury.ac.nz*** for more information).

Other undergraduate or postgraduate students at Canterbury (e.g. in engineering, management, geography, etc) may also apply to enrol and will be considered on a case-by-case basis.

The course will also benefit industry professionals and practitioners involved in transport policy but with little formal training in the area. The course can be undertaken for a one-off Certificate of Proficiency (COP) or as part of a larger qualification such as MET.

This course builds upon the material in the B.E. undergraduate programme, especially that relating to transportation systems management. The UC course ENCI412 (Traffic Planning) or equivalent (e.g. ENTR401) is considered an ideal pre-requisite.

No pre-requisite knowledge in the course topics is necessary, although some previous transport planning background is useful. Where necessary, background readings can be provided to students with limited knowledge of the course topics.

Course Workload and Learning Resources:

This course is worth 0.1 EFTS (12 points), which translates into a nominal average of **120 hours** of lectures, labs, assignment work and other study time for a typical student.

Lecture notes will be provided at the beginning of the course. They will include references for advanced reading. The lecture note set will also include orientation for assignments.

While there is no required textbook, suggested books in the Engineering Library will be indicated by lecturers where appropriate tools (note: distance services are available for non-Christchurch students). Links to useful websites and electronic documents will also be provided on the University's online teaching system, **Learn**, and students will be expected to use Learn for ongoing communications and discussions.

Enrolment:

The tuition fee for domestic students is **$703** incl. GST (international fee $3190), plus a Student Services Levy (varies). This fee also includes course notes provided during the teaching blocks.

All students should apply to enrol in "ENTR612-12A" no later than one week prior to the first block, i.e. by **Mon 5th March 2012** – otherwise late fees may be applied. Students new to the programme should ideally apply earlier than this to confirm eligibility. See ***www.canterbury.ac.nz/enrol/*** for details on enrolling. Completion of enrolment on campus (documentation, fees, etc) may be undertaken on the first day of the block course.

*For more information, contact **Alan Nicholson**, Civil & NatRes Eng Dept*
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*Postgraduate Transportation website: **www.met.canterbury.ac.nz***

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