

PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
COLLEGE OF ENGINEERING
DEPARTMENT OF TRANSPORT ENGINEERING AND LOGISTICS
ABET COURSE SYLLABI

ICT2154 CAPSTONE OF TRANSPORT ENGINEERING

**PRELIMINARY PROGRAM (THIS COURSE WILL BEGIN TO DICTATE
ON 2-2016)**

Credits and contact hours: 10 UC credits / 10 hours. To be defined

Instructor's name: To be defined

Course coordinator's name Juan de Dios Ortúzar

Textbook: To be defined

Course Catalog Description: Groups of 3-4 students will carry out a simplified transport supply-demand modelling project, using real data and involving fieldwork, with the aim of integrating the knowledge and competences acquired at the required courses of the major. The course also includes lectures summarizing the basic knowledge required to use different computing programs available to modelling transport systems.

Prerequisite Courses: 350 credits and instructor's authorization.

Co-requisite Courses: None

Status in the Curriculum: Elective Crr2009 and Required Crr2013

Course Learning Outcomes:

1. Collect data in the field (various types of surveys, traffic counts, etc.)
2. Understand and use several computing programs available to model transport systems
3. Estimate transport models with real data
4. Apply the estimated models to examine the effects of different transport policies
5. Improve the students' capacity to communicate technical information both orally, in writing and using appropriate graphic material
6. Tackle problems forming collaborative teams.

Relation of Course to ABET Criteria:

- b. Design and conduct experiments: analyse and interpret data
- e. Identify, formulate, and solve engineering problems
- j. Knowledge of contemporary issues
- k. Techniques, skills, and modern tools for engineering practice.

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Topics covered:

1. Travel demand modelling summary.
2. Traffic flow theory summary.
3. Network flows summary.
4. Training in computer programs.