Course guides
250ST2032 - 250ST2032 - Planning and Management of Transport Systems

Last modified: 27/06/2018

Unit in charge: Barcelona School of Industrial Engineering
Teaching unit: 751 - DECA - Department of Civil and Environmental Engineering.

Degree: **Academic year:** 2018 **ECTS Credits:** 5.0
Languages: English

LECTURER

Coordinating lecturer: Robusté Antón, Francesc

Others: Estrada Romeu, Miguel Angel
Perez Jimenez, Felix-Edmundo
Magrinya Torner, Francesc
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TEACHING METHODOLOGY

two parts, T (concepts) and C (cases). Part T (theory) includes the background, scientific issues and further readings. Part C (cases) includes professional cases, mainly related to Barcelona, trying to illustrate how the principles have (or have not) been implemented in practice and showing the real life constraints that face implementations (they may include renowned professionals as guest speakers).

LEARNING OBJECTIVES OF THE SUBJECT

Teaching and learning methods, expected learning results, competences: See Camins OpenCourseWare.
Vertical contents: Transportation Planning and Management principles and applications.
Transversal concepts: Economic and Social Territory, City and Regional Planning, Sustainability, Environment, Energy, Accessibility, trade-off Supply vs Demand, trade-off Global vs Local, Functionality, Transportation System Management, etc.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	15,0	12.00
Self study	80,0	64.00
Hours large group	30,0	24.00

Total learning time: 125 h

CONTENTS

1. Transportation networks and operations

Description:
Transportation networks and operations (system, location, MLP, trajectories, queues, networks, accessibility).

Full-or-part-time: 20 h
Practical classes: 10h
Self study : 10h

2. Economics and demand.

Description:
Economics and demand (microeconomics, pricing, demand models, planning, appraisal).

Full-or-part-time: 24 h
Practical classes: 12h
Self study : 12h

3. Transportation modes.

Description:
Transportation modes (traffic, transit, city logistics, taxicabs).

Full-or-part-time: 16 h
Practical classes: 8h
Self study : 8h

4. Cases.

Description:
Cases (infrastructure planning, T1 airport terminal, L9 subway line, C+D, air quality, ports, pavements, social participation).

Full-or-part-time: 24 h
Practical classes: 18h
Self study : 6h

Exams

Description:
Exams (4 Quizzes of Theory + 1 of problems)

Full-or-part-time: 36 h
Practical classes: 6h
Self study : 30h

Course report.

Description:
Course report.

Full-or-part-time: 30 h
Self study : 30h

GRADING SYSTEM

Exam of part T (theory) plus part C (cases) (1.5 hours). After, there will be a second final exam for failed grades or just to improve grades. Part H is volunteer homework (individual cases and/or course reports). A self-evaluating exam about part T? (theory) (the solution will be given in class and each student will grade his/her exam as a proof of continuous evaluation). This self-evaluating exam will only account for the final grade if the average grade of 2015 is less than 5/4 of the average grade obtained during the course when the exam was put, and if the standard deviation of the grade is higher than 4/5 of the standard deviation obtained by the class that took the exam some course before. When the two conditions of normality are met, the T? grade will count for 25% of T. The final grade is computed as follows: Final grade = max { (3T+C)/4; (3T+C+H)/5 }.

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