CIVIL-351 **Transportation systems engineering I**

Geroliminis Nikolaos

Cursus	Sem.	Type
Civil Engineering	BA5	Obl.
Urban Planning and Territorial Development minor	H	Opt.

Language of teaching	English
Credits	4
Session	Winter
Semester	Fall
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
Courses	3 weekly
Exercises	1 weekly
Number of positions	

Summary

- Introduce the major elements of transportation systems and create awareness of the broader context - Develop basic skills in applying the fundamentals of the transportation field - Understand the key concepts and physics of the transport phenomena - Connect with real transportation problems

Content

Transportation Systems and Mobility:
Mobility - Activities - Land Use, Classification-Hierarchy , Multimodality-Urban Planning
Demand:
Demand analysis, Travel Forecasting (4-step models)
Modeling and Operations:
Basic assessment tools , Traffic flow modeling, Control and capacity of transport systems
Design of multimodal systems:
Urban Policy, Case Studies, Intro to bus operations

Teaching methods

Ex-cathedra with assisted exercises, course group projects

Assessment methods

Midterm 30%
Final Exam 40%
Laboratories 30%

Resources

Bibliography

Lecture notes, book chapters and handouts will be distributed throughout the semester, or posted on web.

Prerequisite for

Master classes in Transportation

"Le contenu de cette fiche de cours est susceptible d'être modifié en raison du covid-19"