

COURSE OUTLINE

Course Code	AUTH2
Course Title	Impact of Metro construction on the long term sustainability of a Metropolitan city: The case of Thessaloniki
Course Address	Faculty of Engineering Aristotle University Thessaloniki, Greece
City	Thessaloniki
Minimum year of study (<i>absolute superior education level</i>)	3rd, 4th and 5th year (5 th year = 3 ^{ème} année Grande Ecole)
Minimum level of English :	high, good , average, weak
Key words	Metro systems, sustainability, construction, building environment
Language (in which the Course will be taught)	English
Professor Responsible	Professor Emeritus Aris Avdelas Telephone: (+30)2310-995784 e-mail: avdelas@civil.auth.gr
Participating Professors & Tutors	A. Avdelas, G. Konstantinidis, S. Melidis, C. Anagnostopoulos, S. Argyroudis, K. Ptilakis, C. Pyrgidis, A. Giannakou, I. Politis, P. Papaioanou, G. Tsegas, N. Moussiopoulos, P. Savvaidis, K. Petroutsatou, A. Papadakis, C.-S. Chatzigogos
Number of places:	40
Minimum	10
Maximum	40 places in total = 10 Home and 30 Incoming students
Reserved for Home students	10
Objectives	To provide the theoretical and practical background required for undergraduate students in order to gain an improved understanding of both the financial, managerial and technical difficulties related to the construction of a new Metro system and its overall consequences to the city sustainability.
Programme to be followed	4 morning lectures of 4 hours each and 4 evening lectures of 2 hours each and 6 hours of site visit.
Prerequisites	Basic knowledge of Civil Engineering
Course exam	A questionnaire to be answered on-line after the end of the course



Impact of Metro construction on the long term sustainability of a Metropolitan city: The case of Thessaloniki

Detailed Programme to be Followed

Thessaloniki, March 17-24, 2018

SATURDAY 17/03	Arrival
SUNDAY 18/03	European Dimension Activities: Visits to Museums. City Tour
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MONDAY 19/3	OVERVIEW OF THE METRO PROJECT – SITE VISIT
10:00-10:10	Welcome Addresses A. Avdelas, Professor Emeritus, Aristotle University Thessaloniki I. Mylopoulos, Professor, President, ATTIKO METRO S.A.
10:10-11:15	Overview of the Thessaloniki Metro Project G. Konstantinidis, Dr Civil Engineer, ATTIKO METRO S.A.
11:30-12:30	Visit of one of the Metro construction sites*
14:30-15:30	Visit of one of the Metro construction sites*
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TUESDAY 20/3	GEOTECHNICAL AND SOIL-STRUCTURE INTERACTION ASPECTS
09:00-11:00	Innovative construction techniques of the Thessaloniki Metro S. Melidis, Civil Engineer, Aristotle University Thessaloniki Ch. Anagnostopoulos, Professor, Aristotle University Thessaloniki
11:00-13:00	TRANSPORTATION ASPECTS Urban railway systems – Basic characteristics of Metro systems - Metro systems in Greece Ch. Pyrgidis, Professor, Aristotle University Thessaloniki
15:00-17:00	WORKSITE MANAGEMENT ASPECTS Health and safety challenges of a Metro construction project A. Papadakis, Safety Engineer, ATTIKO METRO S.A. <i>(Presented by A. Avdelas, Professor Emeritus, Aristotle University Thessaloniki)</i>
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WEDNESDAY 21/03	WORKSITE MANAGEMENT ASPECTS
09:00-11:00	Construction, operation and maintenance management of underground projects K. Petroutsatou, Assistant Professor, Aristotle University Thessaloniki
11:00-13:00	IMPACT OF CONSTRUCTION TECHNIQUES ON CULTURAL HERITAGE Alternative solutions to preserve the Byzantine antiquities while retaining the operability of the Venizelou - Thessaloniki Metro station Ch. Anagnostopoulos, Professor, Aristotle University Thessaloniki A. Sextos, Associate Professor, Aristotle University Thessaloniki
15:00-17:00	URBAN PLANNING ASPECTS Urban planning aspects of Thessaloniki Metro construction A. Giannakou, Associate Professor, Aristotle University Thessaloniki
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THURSDAY 22/03

09:00-11:00

TRANSPORTATION ASPECTS

Thessaloniki Metro: contribution to the sustainability of the city agglomeration.

I. Politis, Assistant Professor, Aristotle University Thessaloniki**P. Papaioannou, Professor, Aristotle University Thessaloniki**

11:00-13:00

ENVIRONMENTAL ASPECTS

Environmental implications of the Metro construction

G. Tsegas, Research Associate, Aristotle University Thessaloniki**N. Moussiopoulos, Professor, Aristotle University Thessaloniki**

15:00-17:00

LAND PLANNING AND MONITORING ASPECTS

Deformation Monitoring of Underground Technical Works

P. Savvaidis, Professor, Aristotle University Thessaloniki**FRIDAY 23/03**

09:00-11:00

GEOTECHNICAL AND SOIL-STRUCTURE INTERACTION ASPECTS

Simplified Methods for Ground Settlements Due to Tunnelling in Urban Environment

C.-S. Chatzigogos, Lecturer, Aristotle University Thessaloniki

11:00-13:00

Seismic design and vulnerability assessment of metro tunnels

S. Argyroudis, Dr. Civil Engineer, Aristotle University Thessaloniki**K. Pitilakis, Professor, Aristotle University Thessaloniki**

15:00-17:00

Info on Exams, discussion and feedback

SATURDAY 24/03**European Dimension Activities: Excursion to the Vergina and Dion archaeological sites**