(B) Course information in english

General course information:

Course title:	Sustainable Urban Mobility	**Course code:**	ΣΥ1210
Credits:	5	**Work load (hours):**	130
Course level:	Undergraduate ☑	Graduate ☐	
Course type:	Mandatory ☐	Selective ☑	
Course category:	Basic ☐	Orientation ☑	
Semester:	8th	**Hours per week:**	4

Course objectives (capabilities pursued and learning results):

The objective of this course is to provide knowledge on the design, infrastructure and operation of sustainable urban transport systems. The course includes introduction to the components of a sustainable urban transport system, with emphasis on integrated policy planning, addressing environment, economy and energy, safety, accessibility, land use and social policy. New and emerging mobility options are analyzed, such as cycling and walking, sharing systems, use of autonomous and electric vehicles in public transport, etc. The course, also, aims to provide theoretical knowledge and practical guidance on drafting Sustainable Urban Mobility Plans.

Upon successful completion of the course, students will:

- have understood the gaps in traditional approaches in transportation planning,
- be able to apply alternative and integrated concepts in transportation planning,
- have acquired knowledge in the design of non-motorized infrastructure,
- be familiar with the key factors that affect travel choices and behavior in general,
- be able to collect, analyze and interpret traffic and environmental data,
- be familiar with new technologies and applications in sustainable transport,
- have understood the basic principles of drafting a Sustainable Urban Mobility Plan,
- have acquired the required basic knowledge for further specialization in the course's topics.

Prerequisites:

- Transportation planning.
- Environmental impact assessment studies for transport infrastructure.
- Road safety.

Instructor's data:

Name:	Dr. Ioannis Adamos
Level:	Teaching Staff
Office:	Department of Civil Engineering (Office no. 111) University of Thessaly Pedion Areos, GR-38334 Volos, Greece
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Other tutors:	-

Specific course information:

Week No.	Course contents	Hours	
		Course attendance	Preparation
1	European transport polity: transportation – energy – environment – safety – economy	4	1
2	Urban mobility and traveler behavioral analysis	4	1
3	Sustainable development and sustainable urban mobility	4	1
4	Soft modes of transport: cycling, walking: planning, design, infrastructure, operation, maintenance	4	1
5	Sharing transport systems	4	1
6	Energy and environment	4	1
7	Safety and social concerns	4	1
8	Accessibility	4	1
9	Urban transport interchanges	4	1
10	Transport economy (ticketing, user costs)	4	1
11	Intelligent Transport Systems applications for the improvement of urban mobility	4	1
12	Big data and sustainable urban mobility	4	1
13	Business models, strategies and regulations for sustainable urban mobility	4	1
14	Sustainable Urban Mobility Plans and implementation in Greece	4	1

Additional hours for:			
Class project	**Examinations**	**Preparation for examinations**	**Educational visit**
40	3	15	2

Suggested literature:

- Attard, M. & Shiftan, Y. (Ed.) (2015) «Sustainable Urban Transport». Emerald, ISBN: 978-1-78441-616-4.
- Wheeler, S. & Beatley, T. (Ed.) (2014) «The Sustainable Urban Development Reader». Routledge, ISBN: 978-0-415-70775-6.
- Kliučininkas, L. (2012) «Towards Sustainable Urban Transportation–Environmental Dimension». Peter Land, ISBN: 978-3-631-62367-1.
- Monzon, A. & Di Ciommo, F. (Ed.) (2015) «CITY-HUBs: Sustainable and Efficient Interchange Stations». Taylor and Francis Group, ISBN: 978-1-4987-4084-5.
- Cascetta, E. (2009) «Transportation system analysis: models and applications». 2nd edition. Springer, ISBN: 978-0-387-75856-5.
- Meyer M., Miller E. (2000) «Urban transportation planning». 2nd Edition, McGraw-Hill Series in Transportation, ISBN: 978-0072423327.
- Black, W. (2010) «Sustainable Transportation: Problems and Solutions». The Guilford Press, ISBN: 978-1606234853.
- Holden, E. (2007) «Achieving Sustainable Mobility: Everyday and Leisure-time travel in EU». Ashgate, ISBN: 978-0-7546-4941-0.

Teaching method *(select and describe if necessary -* **weight***):*		
Teaching	☑	75%
Seminars	☐	0%
Demonstrations	☐	0%
Laboratory	☐	0%
Exercises	☑	20%
Visits at facilities	☑	5%
Other *(describe):* …….	☐	0%
Total		100%

Evaluation method *(select)* - **weight:**				
	written	*%*	*Oral*	*%*
Homework	☐	0	☐	
Class project	☑	25	☑	5
Interim examination	☑	20	☐	
Final examinations	☑	50	☐	
Other *(describe):* ……	☐	0	☐	