

**Mobility, Transport and Region. Planning and Management**

Code: 44467  
ECTS Credits: 6

Degree	Type	Year	Semester
4317118 Global East Asian Studies	OT	0	1
4317520 Territorial Studies and Planning	OT	0	1

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

## Contact

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## Use of Languages

Principal working language: catalan (cat)

## Teachers

Laia Mojica Gasol

## Prerequisites

There are no prerequisites

## Objectives and Contextualisation

This subject aims to study mobility and transport within the framework of the new paradigm of sustainability. More specifically, the following specific objectives are raised.

- Know the basic concepts of mobility
- Understand the complex relationship between mobility and territory
- Know the limits and impacts associated with the current mobility model
- Understand and be able to predict the positive and negative externalities of future developments in terms of mobility and transport
- Know the main methodologies of study of mobility
- Know the necessary instruments and their methodologies for the management of mobility

## Competences

- Global East Asian Studies
  - Apply advanced theoretical concepts and analytical techniques to study interactions between population dynamics, political and economic change and environmental change.

- Apply research methodology, techniques and specific resources to research and produce innovative results in a particular area of specialisation.
- Critically analyse the socioeconomic and environmental impact of human displacement on different scales, especially in the case of global tourism, addressing the complexity of its management in specific situations.
- Knowledge and understanding that provide a basis or opportunity for originality in developing and / or applying ideas, often in a research context.
- Students can communicate their conclusions and the knowledge and rationale underpinning these to specialist and non-specialist audiences clearly and unambiguously.
- That the students can apply their knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.

#### Territorial Studies and Planning

- Analyse and interpret environmental issues, applying your knowledge of environmental and ecological economics
- Promote planning strategies based on innovation and with a gender perspective.
- Students can communicate their conclusions and the knowledge and rationale underpinning these to specialist and non-specialist audiences clearly and unambiguously.
- That students are able to integrate knowledge and handle complexity and formulate judgments based on information that was incomplete or limited, include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments.
- Use geographical information technologies in map projection and representation for the design of useful scenarios in land-use planning and management and in urban planning
- Work in an international multidisciplinary context that promotes the values of social and gender equality

## Learning Outcomes

1. Analyse recent conceptual changes and the paradigm shift in planning and management of day-to-day travel.
2. Apply research methodology, techniques and specific resources to research and produce innovative results in a particular area of specialisation.
3. Decide on management models that are adequate for mobility.
4. Decide on suitable management models for mobility.
5. Establish urban mobility proposals based on environmental premises.
6. Generate models and scenes for different problems related to mobility using the environmental cartography generated.
7. Identify models of environmentally sustainable mobility for different social situations.
8. Identify the impact of mobility on different levels: environment, society and city.
9. Identify the impact of mobility on different levels: environment, society and town.
10. Knowledge and understanding that provide a basis or opportunity for originality in developing and / or applying ideas, often in a research context.
11. Look in more depth into the variable of gender in mobility.
12. Promote the application and advance of principles of ecological, social, and economic sustainability from a gender perspective.
13. Recognise mobility-planning forms from a gender perspective
14. Recognise the interaction between demographic dynamics and population structures and demand for mobility.
15. Recognise the interaction between the demographic dynamics and the structure of the population with the demands for mobility in urban planning.
16. Recognise the usefulness of cartography and GIS for managing mobility in the area of regional and urban planning.
17. Search for new models of socially equitable mobility.
18. Students can communicate their conclusions and the knowledge and rationale underpinning these to specialist and non-specialist audiences clearly and unambiguously.
19. That students are able to integrate knowledge and handle complexity and formulate judgments based on information that was incomplete or limited, include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments.

20. That the students can apply their knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.
21. Use specific information sources on mobility.
22. Use specific quantitative and qualitative techniques for the analysis and management of mobility.

## **Content**

1. Introduction to mobility
  - 1.1 What is mobility?
  - 1.2 The evolution of mobility: farther, faster, more distance
2. The modes of transport
  - 2.1 The modes of transport the instruments that move us
  - 2.2 Access to modes of transport
  - 2.3 Transport for everyone
3. The main determinants of the forms of mobility and transport
  - 3.1 Mobility and urban form
  - 3.2 Mobility and socio-economic factors
  - 3.3 Habits, ideology and beliefs behind the use of modes of transport
4. The costs of mobility
  - 4.1 Environmental costs
  - 4.2 Social costs
  - 4.3 Health costs
  - 4.4 Economic costs
5. Future scenarios: challenges and solutions in the context of the Smart City
  - 5.1 Defining the objectives of the future mobility model
  - 5.2 Clean technologies
  - 5.3 Automation
  - 5.4 Vehicles of personal mobility
  - 5.5 Utopias
6. The sources to study mobility
  - 6.1. Quantitative sources in the study of the supply
  - 6.2. Quantitative sources in the study of demand
  - 6.3. Qualitative sources in the study of mobility

## **Methodology**

The subject will be structured based on directed and autonomous activities, where students will learn interactively with the contents of the program, with the help and support of the teacher.

The subject includes classes led by the teacher, exhibitions and discussions of students, with the collaboration of external experts from different fields.

All the activities in class will have a bibliographic support that the students will have at the beginning of the course. Activities that cannot be done in person will be adapted to the possibilities offered by the UAB's virtual tools. The exercises, projects and theoretical classes will be carried out through virtual tools, such as tutorials, videos, team sessions, etc. The teacher will ensure that the student can access it or offer alternative means, which are available to them.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theoretical classes	10	0.4	
Type: Supervised			
Class exhibitions	10	0.4	
Preparation of a job	36	1.44	
Type: Autonomous			
Readings of articles or books of the subject	26	1.04	

## Assessment

The evaluation will be done on the following basis:

- Classroom presentations by students: 30%
- Exam: 40%
- Class participation (attendance is mandatory): 10%
- Attendance and participation in guided activities: 20%

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Assistance and participation in guided activities	20%	15	0.6	9, 8, 7, 15, 14, 16, 13
Classroom exhibitions	30%	15	0.6	2, 11, 17, 5, 21
Classroom participation	10%	8	0.32	1, 19, 20, 18
Written assessment test	40%	30	1.2	4, 3, 22, 6, 12, 10

## Bibliography

- Abduljabbar, R. L., Liyanage, S., & Dia, H. (2021). The role of micro-mobility in shaping sustainable cities: A systematic literature review. *Transportation Research Part D: Transport and Environment*, 92(February), 102734. <https://doi.org/10.1016/j.trd.2021.102734>
- Adkins, A., Makarewicz, C., Scanze, M., Ingram, M., & Luhr, G. (2017). Contextualizing Walkability: Do Relationships Between Built Environments and Walking Vary by Socioeconomic Context? *Journal of the American Planning Association*, 83(3), 296-314. <https://doi.org/10.1080/01944363.2017.1322527>
- Banister, D. (2011). Cities, mobility and climate change. *Journal of Transport Geography*, 19(6), 1538-1546. <https://doi.org/10.1016/j.jtrangeo.2011.03.009>
- Banister, D. (2011). The trilogy of distance, speed and time. *Journal of Transport Geography*, 19(4), 950-959. <https://doi.org/10.1016/j.jtrangeo.2010.12.004>
- Brand, C., Anable, J., & Morton, C. (2019). Lifestyle, efficiency and limits: modelling transport energy and emissions using a socio-technical approach. *Energy Efficiency*, 12(1), 187-207. <https://doi.org/10.1007/s12053-018-9678-9>
- Daher, C., & Marquet, O. (2019). La movilidad sostenible como una oportunidad estratégica para la salud pública y el bienestar en los contextos urbanos. In A. Fortes Martín (Ed.), *Movilidad urbana sostenible y acción administrativa. Perspectiva social, estrategias jurídicas y políticas públicas de movilidad en el medio urbano* (pp. 419-465). Pamplona: Thomson Reuters.
- de Vos, J., Mokhtarian, P. L., Schwanen, T., van Acker, V., & Witlox, F. (2016). Travel mode choice and travel satisfaction: bridging the gap between decision utility and experienced utility. *Transportation*, 43, 771-796. <https://doi.org/10.1007/s11116-015-9619-9>
- De Witte, A., Hollevoet, J., Dobruszkes, F., Hubert, M., & Macharis, C. (2013). Linking modal choice to motility: A comprehensive review. *Transportation Research Part A: Policy and Practice*, 49, 329-341. <https://doi.org/10.1016/j.tra.2013.01.009>
- Ewing, R., & Cervero, R. (2010). Travel and the built environment. A meta-analysis. *Journal of American Planning Association*, 76(3), 265-294. Retrieved from [http://eastportlandactionplan.org/sites/default/files/Ewing\\_Cervero\\_JAPA\\_2010\\_Travel+BE\\_MetaAnalysis](http://eastportlandactionplan.org/sites/default/files/Ewing_Cervero_JAPA_2010_Travel+BE_MetaAnalysis).
- Fonzone, A., Saleh, W., & Rye, T. (2018). Smart urban mobility - Escaping the technological Sirens. *Transportation Research Part A: Policy and Practice*, 115(July), 1-3. <https://doi.org/10.1016/j.tra.2018.07.002>
- Gehl, J. (2010). *Cities for people*. Washington D.C: Island Press.
- Gelauff, G., Ossokina, I., & Teulings, C. (2019). Spatial and welfare effects of automated driving: Will cities grow , decline or both? *Transportation Research Part A*, 121(December 2018), 277-294. <https://doi.org/10.1016/j.tra.2019.01.013>
- Hahm, Y., Yoon, H., & Choi, Y. (2019). The effect of built environments on the walking and shopping behaviors of pedestrians; A study with GPS experiment in Sinchon retail district in Seoul, South Korea. *Cities*, 89(January), 1-13. <https://doi.org/10.1016/j.cities.2019.01.020>
- James, P., Weissman, J., Wolf, J., Mumford, K., Contant, C. K., Hwang, W., ... Glanz, K. (2016). Comparing GPS, Log, Survey, and Accelerometry to Measure Physical Activity. *American Journal of Health Behavior*, 40(1), 123-131. <https://doi.org/10.5993/AJHB.40.1.14>
- Jones, S. J. (2019). If electric cars are the answer, what was the question? *British Medical Bulletin*, 129(1), 25-34. <https://doi.org/10.1093/bmb/ldy044>
- Marquet, O., & Miralles-Guasch, C. (2014). Walking short distances. The socioeconomic drivers for the use of proximity in everyday mobility in Barcelona. *Transportation Research Part A: Policy and Practice*, 70, 210-222. <https://doi.org/http://dx.doi.org/10.1016/j.tra.2014.10.007>
- Marquet, O., & Miralles-Guasch, C. (2016). City of Motorcycles. On how objective and subjective factors are behind the rise of two-wheeled mobility in Barcelona. *Transport Policy*, 52, 37-45. <https://doi.org/10.1016/j.tranpol.2016.07.002>
- Marquet, O., & Miralles-Guasch, C. (2017). Resilient territories and mobility adaptation strategies in times of economic recession. Evidence from the Metropolitan Region of Barcelona, Spain 2004-2012. *European Urban and Regional Studies*, 1-15. <https://doi.org/http://dx.doi.org/10.1177%2F0969776417703158>
- Mattioli, G. (2014). Where Sustainable Transport and Social Exclusion Meet: Households Without Cars and Car Dependence in Great Britain. *Journal of Environmental Policy and Planning*, 16(3), 379-400. <https://doi.org/10.1080/1523908X.2013.858592>
- Metz, D. (2013). Peak Car and Beyond: The Fourth Era of Travel. *Transport Reviews*, 33(3), 255-270. <https://doi.org/10.1080/01441647.2013.800615>
- Næss, P. (2006). *Urban structure matters. Residential location, car dependance and travel behaviour* (Vol. 50). New York: Taylor & Francis. <https://doi.org/10.1080/09640560701402133>

- Næss, P., & Cao, X. J. (2017). Which D ' s are the important ones ? The effects of built environment characteristics on driving distance in Oslo and Stavanger. *The Journal of Transport and Land Use*, 945-964.
- Priemus, H., Nijkamp, P., & Banister, D. (2001). Mobility and spatial dynamics: an uneasy relationship. *Journal of Transport Geography*, 9(3), 167-171. [https://doi.org/10.1016/S0966-6923\(01\)00007-2](https://doi.org/10.1016/S0966-6923(01)00007-2)
- Schwanen, T., Lucas, K., Akyelken, N., Cisternas, D., Carrasco, J., & Neutens, T. (2015). Rethinking the links between social exclusion and transport disadvantage through the lens of social capital. *Transportation Research Part A*, 74, 123-135. <https://doi.org/10.1016/j.tra.2015.02.012>
- Schwartz, S. I. (2018). No one at the wheel. Driverless cars and the road of the future. New York: Hachette. Chapter 6
- Shen, L., & Stopher, P. R. (2014). Review of GPS Travel Survey and GPS Data-Processing Methods. *Transport Reviews*, 34(3), 316-334. <https://doi.org/10.1080/01441647.2014.903530>
- Steg, L. (2005). Car use: lust and must. Instrumental, symbolic and affective motives for car use. *Transportation Research Part A: Policy and Practice*, 39(2-3), 147-162. <https://doi.org/10.1016/j.tra.2004.07.001>
- Stevenson, M., Thompson, J., Sá, T. H. De, Ewing, R., Mohan, D., McClure, R., ... Woodcock, J. (2016). Land use , transport , and population health: estimating the health benefits of compact cities. *The Lancet*, 6736(16), 1-11. [https://doi.org/10.1016/S0140-6736\(16\)30067-8](https://doi.org/10.1016/S0140-6736(16)30067-8)
- van Acker, V., van Wee, B., & Witlox, F. (2010).

## Software

None in specific