

## ■ Urban Transport Policy (A1 2019)

Fridays 10:25~12:10

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### ■ Course overview

The goal of this course is to give you a general overview of transportation planning from a decision-oriented policy-making approach. In addition, this course will also address contemporary transport planning issues such as pedestrian and bicycle planning, and the opportunities and threats of new technologies such as vehicle-sharing and autonomous driving. This course will help you set the foundations for the course Urban Transport Planning and Analysis which will focus more on the workings of the analysis and modeling process.

### ■ *Pre-requisites and Grading:*

In principle, there are no pre-requisites for this class. The final grade will be based on:

- **Attendance, class participation and discussion: 20%** (Note that your level of engagement in discussion will affect your grade)
- **Case study presentation: 30%** (see calendar below for specific dates)
- **Final presentation: 50%**

### ■ Case study presentation

Four case studies will be presented in class. Students will work individually or in groups (depending of the number of students). You are requested to provide an overview of the planning and development process of the case studies assigned, focusing particularly on:

- Planning concept, objectives and general characteristics
- Planning process flow, main actors and stakeholders
- Planning and implementation constraints and challenges (technical, socio-political, economical, etc.)
- Results and performance of the plan (not limited to transportation)
- Criticism and future challenges

Presentation time: 20 minutes, discussion time: 10 minutes. Make sure to prepare handouts for all class members or share them online.

### Case studies (To be assigned in class):

- New York City transport & planning strategies during the Bloomberg tenure
- Transit oriented development in Portland, Oregon, USA
- Planning for bicycles: Amsterdam, The Netherlands
- Bus Rapid Transit systems: Curitiba, Bogota, Jakarta

### ■ Final project

To be assigned on 10/5.

## ■ Calendar

| Urban Transport Policy |       |   |
|------------------------|-------|---|
| Class no.              | Date  | Session   |
| 1                      | 9/27  | Class guidance<br>Urban transport planning: Basic process and objectives  |
| 2                      | 10/4  | Transportation in an urban context<br>Transportation system characteristics<br>◆ Assignment of case studies & final project |
| 3                      | 10/11 | Data management and use<br>Demand analysis I – The Four step model  |
| 4                      | 10/18 | Demand analysis II<br>Activity-based models & Integrated land use-transport models<br>◆ Case study presentation ①           |
| 5                      | 10/25 | Project evaluation<br>◆ Case study presentation ②   |
| 6                      | 11/1  | Planning for pedestrians and bicycles<br>◆ Case study presentation ③  |
| 7                      | 11/8  | The changing landscape of urban transport: Autonomous driving and the sharing economy<br>◆ Case study presentation ④        |
| 8                      | 11/15 | ◆ Final project presentation  |

## Readings

Readings are classified as mandatory and recommended. Mandatory readings should be read by the time stated in the header in order to be able to smoothly follow the lectures content. Recommended readings are not mandatory, but if you feel like challenging yourself and going deeper into transportation planning this list should get you going a bit further than the material covered in class.

- Journal article links are provided below. Some of these links are only accessible from in-campus networks, or from home via you ESS account.
- Books recommended in this list are available in the **Urban Transportation Research Unit library in the 11<sup>th</sup> floor of building 14, room 1114** (Department Urban Engineering)
- Note that not all the content in the mandatory readings will be necessarily covered directly in class, but when giving the lectures it is assumed that you are familiar with the material.

### ◇ Mandatory readings

#### ■ 10/04

Meyer, Michael D., and Eric J. Miller. *Urban transportation planning: a decision-oriented approach*. 2001. (Chapters 1-3)

#### ■ 10/11

Meyer, Michael D., and Eric J. Miller. *Urban transportation planning: a decision-oriented approach*. 2001. (Chapters 4-5)

McNally, Michael G. "The four-step model." *Center for Activity Systems Analysis* (2008)

■ **10/18**

[Hägerstrand, T. \(1970\). What about people in regional science?. Papers in regional science, 24\(1\), 7-24.](#)

[Rasouli, S., & Timmermans, H. \(2014\). Activity-based models of travel demand: promises, progress and prospects. International Journal of Urban Sciences, 18\(1\), 31-60.](#)

Bierlaire, Michel, et al. *Integrated transport and land use modeling for sustainable cities*. No. EPFL-BOOK-207449. EPFL Press, 2015. (Chapters 2-3)

■ **10/25**

Meyer, Michael D., and Eric J. Miller. *Urban transportation planning: a decision-oriented approach*. 2001. (Chapter 8-9)

■ **11/1**

[Lo, Ria Hutabarat. "Walkability: what is it?" Journal of Urbanism 2.2 \(2009\): 145-166.](#)

Rapoport, Amos. "Pedestrian street use: Culture and perception." *Public streets for public use* (1987): 80-94.

[Southworth, Michael. "Designing the walkable city." Journal of urban planning and development 131.4 \(2005\): 246-257.](#)

Tumlin, Jeffrey. *Sustainable transportation planning: Tools for creating vibrant, healthy, and resilient communities*. Vol. 16. John Wiley & Sons, 2011. (Chapters 5-7)

■ **11/8**

[Harding, S., Kandlikar, M., & Gulati, S. \(2016\). Taxi apps, regulation, and the market for taxi journeys. Transportation Research Part A: Policy and Practice, 88, 15-25.](#)

[International Transport Forum \(2015\). Big Data and Transport: Understanding and assessing options.](#)

[International Transport Forum \(2016\). Data-driven transport policy.](#)

◇ **Recommended readings**

**On Transportation policy and planning in general:**

Banister, David. *Transport planning*. Taylor & Francis, 2002.

Basbas, Socrates, ed. *Advances in city transport: case studies*. Vol. 17. WIT Press, 2006.

Curtis, Carey, John L. Renne, and Luca Bertolini, eds. *Transit oriented development: making it happen*. Ashgate Publishing, Ltd., 2009.

Buchanan, Colin. *Traffic in Towns: A study of the long term problems of traffic in urban areas*. Routledge, 2015.

Marshall, Stephen, and David Banister. "Land use and transport. European research towards integrated policies." (2007).

OECD, *Compact City Policies: A Comparative Assessment*, OECD Green Growth Studies, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264167865-en>, 2012

Richards, Martin Gomm. *Congestion charging in London-The policy and the politics*. 2006.

Sumantran, Venkat, Charles Fine, and David Gonsalvez. *Faster, Smarter, Greener: The Future of the Car and Urban Mobility*. MIT Press, 2017.

Takami, Kiyoshi, Hatoyama, Kiichiro "Sustainable Regeneration of a Car-dependent City: The Case of Toyama toward a Compact City" *Sustainable City Regions: Space , Place and Governance*, T. Kidokoro et al. (ed.), Springer, pp.183-200, (2008)

#### **On activity-based models:**

Kwan, M. P. (1997). GISICAS, an activity-based travel decision support system using a GIS-interfaced computational-process model. In D. F. Ettema & H. J. P. Timmermans

[Bowman, J. L., & Ben-Akiva, M. E. \(2001\). Activity-based disaggregate travel demand model system with activity schedules. \*Transportation research part a: policy and practice\*, 35\(1\), 1-28.](#)

Kitamura, R., & Fujii, S. (1998). Two computational process models of activity-travel choice. In T. Gärling, T. Laitila, & K. Westin (Eds.), *Theoretical foundations of travel choice modelling* (pp. 251–279). Oxford: Elsevier.

[Arentze, T. A., & Timmermans, H. J. \(2004\). A learning-based transportation oriented simulation system. \*Transportation Research Part B: Methodological\*, 38\(7\), 613-633.](#)

#### **On walkable cities and human-oriented planning:**

Gehl, Jan. *Life between buildings: using public space*. Island Press, 2011.

Grescoe, Taras. *Straphanger: saving our cities and ourselves from the automobile*. Macmillan, 2012.

National Association of City Transportation Officials. (2013). *Urban street design guide*. Island Press.

Sadik-Khan, Janette. *Streetfight: Handbook for an urban revolution*. Penguin, 2017.

Tumlin, Jeffrey. *Sustainable transportation planning: Tools for creating vibrant, healthy, and resilient communities*. Vol. 16. John Wiley & Sons, 2011.