



UNIVERSITY VAN AMSTERDAM

GSSS

GRADUATE SCHOOL OF SOCIAL SCIENCES
MASTER HUMAN GEOGRAPHY/ URBAN AND REGIONAL PLANNING

Course Manual

736410080Y

Metropolitan Transportation Planning

Academic Year 2013-2014

Semester 1, Block 2

Lecturers:

Luca Bertolini

Ren Thomas

Course Manual

Metropolitan Transportation Planning

Course Catalogue Number

736410080Y

Credits

6/EC

Entry requirements

No entry requirements for Master of Urban and Regional Planning students

Instruction language

English

Time Period(s)

Academic year 2013/2014, semester 1, block 2

Location

The first meeting will be held on Monday October 28, from 9:00 to 13:00, in room REC GS.14. For other meetings see <https://rooster.uva.nl/> and programme below.

Lecturers

-Luca Bertolini, coordinator, e-mail l.bertolini@uva.nl, telephone 020-5254007, room N 1.18 - meeting following appointment by e-mail or telephone

-Ren Thomas, e-mail r.thomas@uva.nl, telephone 020-5253980, room N 1.11

Course Objectives

The objective of this course is to give students the academic skills to plan transport in a metropolitan environment. These skills will be based on a critical knowledge of transport planning and related approaches in transport research disciplines. The application of these skills will be positioned within the context of the governance issues characterizing decision making processes in a metropolitan environment. Each of the major paradigms in transport planning will be introduced, with a focus on paradigms not addressed in other parts of the Masters curriculum.

At the end of the course students:

- will have theoretical and applied knowledge of metropolitan transport planning and policy-making methods: problem analysis (system analysis, demand analysis and supply analysis), and design and assessment of innovative solutions (covering both content and process aspects)
- will be able to distinguish and fulfill in simulated form the different roles of planners in metropolitan transport, traffic and infrastructure issues

The course contributes to the following aims of the Master in Urban and Regional Planning: K4, T1, T2, T3, T7, C1, C4, O1 and O2.

Course Content

The development of cities and of transport systems are deeply intertwined. A major contemporary challenge, and one which will be central in the course, is how to ensure that this development becomes sustainable. In practice, metropolitan transport planning is performed by various disciplines. All of them have their own approach or paradigm. Working in interdisciplinary teams is typical for metropolitan transport planners. The following 5 guiding paradigms are designated as a basis for transport planning and as building blocks of the course :

- the system analysis approach of (technical) system equilibrium and evolution, as a framework for logical and model-based work;

- the individual behavioral demand analysis approach based on maximization of utility, as applied in modeling and forecasting traffic and transport;
- the multi-disciplinary, pragmatic supply analysis approach focusing on assessing system performance;
- the (welfare) economic approach aiming at social-economic efficiency, specified in social cost-benefit analysis for large infrastructure investments;
- finally, the planning approach integrating different paradigms (including paradigms taught in other courses) and a normative point of view to tackle a complex planning problem, resulting in a substantive strategy (the "what") and an associated process architecture (the "how").

Furthermore, the students will be encouraged to integrate insights from a sixth paradigm, which will not be addressed explicitly in the course as it is extensively treated in other parts of the Masters curriculum:

- the (public) management science approach aimed at satisfying different interests in decision-making processes

Teaching Methods/Learning Formats

A variety of teaching methods will be applied including lectures, seminars, and guest tutorials. The emphasis is on self-study through alternately working in groups and individually on actual theories and cases. There are two main streams that form the course. The first stream, with a theory focus, will alternate sessions where a new theme/discipline/paradigm will be introduced by the course coordinator and a guest-expert (indicated as 'Lecture' / LE in the program below), and sessions where theories and/or methods will be applied and links will be drawn to the more critical/innovative literature on the subject ('application and reflection', A&R in the program). The A&R sessions will have two parts: a first part at the beginning of the day to clarify the assignments, and a second part at the end of the day, to discuss the work of the students (see program below). In the second stream, with a practice focus, the students will work independently in groups (4 students per group) on a complex metropolitan transportation planning issue in the Netherlands, and the lecturers will supervise the process by means of feedback to student presentations (in the A&R sessions and in the 'Presentations and Feedback' sessions, P&F in the program).

Course Evaluations & Adjustments of the Course

The course was restructured two years ago and the students were very positive about the outcome. Last year, the philosophy was maintained, but we had to account for the switch from 10 to 6 EC, from 3 periods to 1 period, and from around 30 to around 40 students. The students were again positive, but made some suggestions for improvement which have been implemented. Most importantly, we have:

- allowed for more words in the assignment and gave it more weight in the final mark (it was 35%, it is now 50%)
- made the reflection step/chapter in the group assignment individual, to discourage free-riding
- better integrated the theory and practice stream, in particular by strengthening the relationship between the A&R sessions and the steps/chapters in the assignment (see Appendix 1 for details)
- given more time for independent work during the A&R sessions, which have gone from continuous to two separate sessions (see programme for details)
- added a lecture on emerging strategies in Dutch and international planning practice

Manner & Form of Assessment and Assessment Requirements & Criteria

The first stream will be assessed by means of a written examination (determining 50% of the final grade); the second stream by means of a group paper (determining 50% of the final grade). The examination will take place on Friday December 13, 13-16:30h. The deadline for the paper is Friday December 6, 17h. The paper has to be delivered digitally by e-mail to r.thomas@uva.nl and to l.bertolini@uva.nl, and on paper in the pigeon hole of Ren Thomas. A minimum grade of 5,5 for each of these assessments will be required to pass the course. Those failing the examination can have re-try on Tuesday February 4, 17-20h. Those failing the paper can revise and resubmit it by Friday, December, 20, 17h. The grade of the examination will be communicated within 15 working days of the examination date, and the grade of the group paper by Friday, December 13.

Requirements and criteria concerning Lectures, Application and Reflection sessions, and examination

We assume participation of the students in both 'Lectures' and 'Application and Reflection' sessions. Participation includes studying the relevant literature beforehand and engaging in on-the-spot applications. Participation in Lectures will be not controlled formally. However, knowledge of presentations and discussions during the sessions, not only of the literature, will be tested in the written examination. Furthermore, the Lectures are essential in understanding how to study the literature. Participation in the interactive Application and Reflection sessions is obligatory and will be controlled. Students missing more than one of these sessions will be required to do an extra assignment. Students missing more than two will be not allowed to take part in the exam.

Requirements and criteria concerning presentation and feedback sessions and group paper

We assume equal contribution of group members to the paper. In particular, all the students in the group must be present when the group presents their work. In principle, the same grade will be given to all students in the group. However, if some group members feel not everybody is contributing equally, the course coordinator should be contacted so that a different arrangement can be made. Please contact the course coordinator as soon as problems emerge.

The group paper must be delivered on time. If it is not, and up to two days of delay, one point (out of 10) will be subtracted from the mark. In the case of more than two days of delay the paper will not be graded and the group will be automatically deferred to the re-try deadline. The same applies to groups not achieving at least a 'pass' (5,5). No additional feedback will be provided to groups having to recur to a re-try.

The group paper should be written according to the Guidelines for creating academic reports (see "Handleiding en Richtlijnen- Master Planologie - Universiteit van Amsterdam.").

Detailed instructions for the group paper, including assessment criteria are in the Appendix 'Group Assignment Instructions' below.

Inspection of Exams/Assignments, Feedback

After communication of the grades for the original examination, students can inspect their exam and the model answers by making an appointment with Ren Thomas (see contact information above). Lecturers will give directions for the study of the literature during the 'Lecture' sessions, and feedback during the 'Application and Reflection' sessions.

Written comments will accompany the grade of the group paper. These comments also provide the basis for an improved version, if this is necessary. If more explanation is felt to be needed, the group can make an appointment with Ren. Lecturers will give directions for the group paper during the introductory session and the guest lecture on metropolitan transportation planning issues in the Netherlands, and will provide feedback during the 'Application and Reflection' and 'Presentation and Feedback' sessions.

Rules regarding Fraud and Plagiarism

The provisions of the Regulations Governing Fraud and Plagiarism for UvA Students apply in full. Access this regulation at <http://www.student.uva.nl/preventfraud-plagiarism>. For this purpose a check with Ephorus may be performed.

Specification Workload

The total course load is 6 EC credits or 168 hours. It will be approximately be distributed as follow:

- contact = 24 hours
- paper = 50 hours
- literature study = 94 hours

We have designed the course to provide an even spread of work throughout the period. We expect, however, also some self-discipline on the part of the students.

Literature/Materials

1) A selection of chapters from: Meyer, M.D. and E.J. Miller *Urban Transportation Planning*. We will clarify in the lectures which sections require the most attention (NB: this book is currently being updated to a digital version, and instructions for buying the update (entirely or as individual chapters) has been provided on Blackboard)

2) The articles in the literature list below. These articles can be downloaded through the university library search website. (NB: you have to be in a University of Amsterdam digital environment to be able to access most articles)

At the examination we expect that the student will have studied:

- selection of chapters 1, 2, 3, 5, 7 and 8 of Meyer and Miller (for more details see the literature list below)
- the articles in the literature list below
- the PowerPoint presentations of the lecturers and guests and what has been said and discussed during these sessions

Date Final Grade

We will communicate the final grade by e-mail and Blackboard after grading the examinations, or 15 working days after the examination date.

Programme

Week	Date & time	Location needs	Activity	Contents	Lecturers
1	Monday October 28, 9-13h	REC G S14	LE	Introduction & instructions	Luca Bertolini
			LE	Current issues in the Netherlands	Thomas Straatemeier
	Thursday October 31, 11-13h	REC P 019	LE	System analysis/ Models in planning	Luca Bertolini, Marco te Brömmelstroet
2	Monday November 4, 9-10h	REC G S14 REC G S04	A&R (two parallel sessions)	System analysis/ Models in planning	Luca Bertolini, Ren Thomas
	Monday November 4, 16-17h	REC G S06 REC G S08	A&R (two parallel sessions)	System analysis/ Models in planning	Luca Bertolini, Ren Thomas
	Thursday November 7, 11-13h	REC P 019	LE	Demand analysis	Luca Bertolini, Veronique van Acker
3	Monday November 11, 9-10h	REC G S14 REC G S04	A&R (two parallel sessions)	Demand analysis	Luca Bertolini, Ren Thomas
	Monday November 11, 16-17h	REC G S06 REC G S08	A&R (two parallel sessions)	Demand analysis	Luca Bertolini, Ren Thomas
	Thursday November 14, 11-13h	REC P 019	LE	Supply analysis	Luca Bertolini, Julio Soria
4	Monday November 18, 9-10h	REC G S14 REC G S04	A&R (two parallel sessions)	Supply analysis	Luca Bertolini, Ren Thomas
	Monday November 18, 16-17h	REC G S06 REC G S08	A&R (two parallel sessions)	Supply analysis	Luca Bertolini, Ren Thomas
	Thursday November 21, 11-13h	REC P 019	LE	Emerging strategies in the Netherlands and abroad	Enrica Papa
5	Monday November 25, 9-13h	REC G S14	P&F (two rounds)	Presentation: <i>what is the solution?</i>	Luca Bertolini, Ren Thomas
	Thursday November 28, 11-13h	REC P 019	LE	Evaluation	Luca Bertolini, Els Beukers
6	Monday December 2, 9-10h	REC G S14 REC G S04	A&R (two parallel sessions)	Evaluation	Luca Bertolini, Ren Thomas
	Monday December 2, 16-17h	REC G S06 REC G S08	A&R (two parallel sessions)	Evaluation	Luca Bertolini, Ren Thomas
Friday December 6, 17h: paper deadline!!!					
Friday December 13, 13-16,30h: examination!!!					
Friday December 20, 17h: paper re-try deadline!!!					
Tuesday February 4, 17-20h: examination re-try!!!					

LE = Lecture; A&R = Application and reflection; P&F = Presentations and feedback.

Monday October 28: Introduction

- a) Meyer & Miller, chapter 1 (pp. 8-45), selection of chapter 2 (pp. 75-80, NB: pages from chapter 2 will be sent as pdf with permission of the author)
- b) Bertolini, L. (2012) Integrating Mobility and Urban Development Agendas: a Manifesto. *disP - The Planning Review*, 188 (1) 16-26.
- c) Wilson, R. (2001) Assessing communicative rationality as a transportation planning paradigm. *Transportation*, 28 (1), 1–31.

Thursday October 31: System Analysis/Models in Planning

- a) Meyer & Miller, chapter 3 (pp. 1-88)
- b) Te Brömmelstroet, M. and L. Bertolini (2011) The Role of Transport-Related Models in Urban Planning Practice (Introduction to the theme issue). *Transport Reviews*, 31 (2), 139-143.
- c) Te Brömmelstroet, M. and L. Bertolini (2008) Developing Land use and Transport PSS. Meaningful information through a dialogue between modelers and planners. *Transport Policy*, 15 (4), 251-259.
- d) Jones, P. (2011) Developing and Applying Interactive Visual Tools to Enhance Stakeholder Engagement in Accessibility Planning for Mobility Disadvantaged Groups. *Research in Transportation Business and Management*, 2, 29–41.

Thursday November 7: Demand Analysis

- a) Meyer & Miller, chapter 5 (pp. 1-81)
- b) Van Acker, V., Witlox, F., van Wee, B. (2010) When transport geography meets social psychology: Towards a new conceptual model of travel behaviour. *Transport Reviews*, 30 (2), 219-240.
- c) Næss, P., and A. Strand, A. (2012) What kinds of traffic forecasts are possible? *Journal of Critical Realism*, 11(3), 277-295. (NB: this article is not available through the library, and will be sent as pdf with permission of the author)

Thursday November 14: Supply Analysis

- a) Meyer & Miller, selection of chapter 7 (sections 7.0 introduction ; 7.1 role of supply analysis; 7.2 system performance (up to time-distance diagrams); 7.5 impact models; 7.6 cost models)
- b) Banister, D., K. Anderton, D. Bonilla, M. Givoni, and T. Schwanen (2001) Transportation and the environment. *Annual Review of Environment and Resources*, 36, 247-270.
- c) Jones, P., and K. Lucas (2012) The social consequences of transport decision-making: clarifying concepts, synthesising knowledge and assessing implications. *Journal of Transport Geography*, 21(1), 4-16.

Thursday November 28: Evaluation

- a) Meyer & Miller, selection of chapter 8 (pp. 1-73; 75-82)
- b) Mackie, P., and J. Preston (1998) Twenty-one sources of error and bias in transport appraisal. *Transport Policy*, 5(1), 1-7.

c)Beukers, E., L. Bertolini, and M. Te Brömmelstroet (2012) Why Cost Benefit Analysis is perceived as a problematic tool for assessment of transport plans: A process perspective. *Transportation Research Part A: Policy and Practice*, 46, 68-78.

d)Mouter, N., J. A. Annema, and B. van Wee (2013) Ranking the substantive problems in the Dutch Cost-Benefit Analysis practice. *Transportation Research Part A: Policy and Practice*, 49, 241–255.

Appendix 1: Group Assignment Instructions

Setting

Students will work in groups. Each group is made up of 4 students, with at least one and preferably two Dutch speaking students (in order to have access to all the relevant information); alternatively an international case can be chosen if two people in the group are natives of this city/country and can access plans and data in the native language. Each group acts as a metropolitan transportation planning consultancy, hired by the metropolitan authority to help tackle a complex planning issue. Each group must choose an issue to tackle among those introduced by Thomas Straatemeier on Monday, October 28. A maximum of three groups can choose the same issue. Groups must finalize their case city/region by the second week of the course.

Steps

The assignment should be developed along the following steps:

- 1) **Problem definition:** What is the problem? Why is it a problem? For whom is it a problem?
For this step, insights from the lecture on current issues and notions and tools from public management science, as learnt in other parts of the Master curriculum, can be useful
- 2) **Problem analysis:** What are the causes of the problem? Which role can transport and land use policy interventions play in solving it?
For this step, notions and tools from paradigms 1 (system analysis), 2 (demand analysis) and 3 (supply analysis) can be useful
- 3) **Solution generation:** What is the solution? How does it solve the problem? What is required for its implementation? Who should do what when? What are threats along the way? How can these be dealt with?
For this step, insights from the lecture on emerging strategies issues and notions and tools from public management science, as learnt in other parts of the Master curriculum, can be useful
- 4) **Solution assessment:** In which measure does the solution solve the problem? How certain of its effectiveness are we? Do the benefits/advantages outweigh the benefits/disadvantages? How can the solution be improved following the assessment?
For this step, notions and tools from paradigm 4 (evaluation) can be useful
- 5) **Reflection:** How does the proposal relate to the knowledge from the theoretical stream? Which knowledge has been used and which not? Why? Has knowledge not considered in the MTP course proven to be important? What are the implications for education and research in metropolitan transportation planning?

In doing the assignment the students will be, in principle, free to choose among the themes/disciplines/paradigms introduced in the theory stream. However, they should at least explicitly consider all themes/disciplines/paradigms. In other words: students might end up not using everything they learned in the theory stream only if they are able to show that they can still solve the problem. This will be a main area of concern for lecturers when giving feedback.

Output

The final product is **a paper of between 10.000 and 15.000 words**, making appropriate use of text, figures, maps and tables and including a literature list. Each of the five steps above will result in a chapter of the paper. Furthermore:

- Step 2 will include material developed in the Application & Reflection sessions of November 4, 11 and 18 (on system analysis, demand analysis, and supply analysis)
- Step 4 will include material developed in the Application & Reflection session of December 2 (on evaluation)
- Step 5 (reflection) will be carried out individually by each member of the group. All reflections will be added as an Appendix to the paper but will not be included in the word count. They should each be between 1.000 and 2.000 words long.

Assessment criteria

Specific criteria:

- Is the **problem definition** clear and supported by evidence? Is the problem relevant and challenging?
- Is the **problem analysis** sound? Does it give insight in critical factors and relationships? Do system, demand, and supply analysis play a clear role?
- Is the **solution** clearly related to the problem? Is it innovative? Is it realistic?
- Does the **assessment** convincingly address all the important dimensions of the problem? Does it lead to improvement of the solution? Do concepts and tools from the evaluation paradigm play a clear role?
- Have the different MTP paradigms been used appropriately? If they have not been used, or other paradigms have been used, does the **reflection** clarify why?

General criteria:

- Is the **argumentation** clear and consistent?
- Is there evidence of **original insights** and of a critical and creative attitude?
- Is the paper **easy to read** and grammatically correct? In particular, do text, figures and tables complement each other?
- Is the paper written according to the **guidelines for scientific publications**? In particular, are literature references appropriate and correctly reported?

Important dates

- Monday October 28, 11-13h: lecture on current issues
- Thursday November 21, 11-13h: lecture on emerging strategies
- Monday, November 25, 9:00-13:00, presentation: What is the solution? Schedules and instructions for presentations will be circulated when the groups are known
- **Friday, December 6, 17:00, deadline** (NB: The paper has to be delivered digitally by e-mail to r.thomas@uva.nl and to l.bertolini@uva.nl, and on paper in the pigeon hole of Ren Thomas)
- **Friday December 20, 17:00, re-try deadline!!!**

Appendix 2: Useful Websites

‘CURRENT ISSUES’ SESSION:

- Government, NL:
 - <http://www.rijksoverheid.nl/ministeries/ienm>
 - <http://www.overheid.nl/>
- Research, NL:
 - <http://www.rijksoverheid.nl/ministeries/ienm/kennisinstituut-voor-mobiliteitsbeleid>
 - <http://www.pbl.nl/>
- Data, NL:
 - www.cbs.nl
 - www.bereikbaarheidskaart.nl
 - www.nieuwekaart.nl

‘EMERGING STRATEGIES’ SESSION:

- Advice, NL:
 - www.kpvv.nl
- Advice, international:
 - <http://www.vtpi.org/tdm/>
 - <http://www.konsult.leeds.ac.uk/>
- Innovative practices, international:
 - <http://www.civitas-initiative.org/>
 - <http://www.mobilityplans.eu/>
 - <http://www.epomm.eu/>
 - <http://www.eltis.org/>