Planning for Active Transportation

URBP (504) 3 credits Fall 2015

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Class Meeting: Macdonald Harrington Building 420 Friday 9:35 am to 11:25 am
Office hours: Monday 10:30 am to 12:30 pm or by appointment
Course website: http://tram.mcgill.ca/Teaching/URBP504/URBP504.html

Course Description

This course examines the importance of planning for public transit, cycling and walking as means of transportation in a sustainable urban environment. It covers planning, design, and operations of transit systems, cycling facilities and walkways. The course studies relevant plans and examples from various cities to help students understand the importance of planning for active transportation.

Course Objective

The readings, lectures, case studies, class discussions, and assignments are designed so that by the end of this course, students will be able to:

1. Classify the different types of users involved in active transportation;
2. Gain basic knowledge about cost benefit analysis techniques for evaluating infrastructure projects related to active transportation;
3. Understand the key influences of planning and operations of transit service;
4. Distinguish the institutional and political barriers associated with coordinated land use- and active transportation planning;
5. Contrast active transportation planning policies being proposed to promote the use of active modes;
6. Develop research skills in locating and understanding past theories studying the effects of neighborhoods on travel behavior especially in the active transportation realm;
7. Critically analyze research that tests such theories related to active transportation;
8. Actively discuss and debate contested political planning issues; and
9. Identify detailed elements of the land use/ active transportation sub-field that may be appropriate for future thesis/project work.

Course Structure

The course is organized around one week lecture/class discussions followed by student presentations of paper critique.

Assignment and Evaluation Methods

Assignments	Description	Weighting
Discussion & attendance	Discussion questions and reading reflections and attendance in class as well as participation.	20
Paper Critique	Criticizing an active transportation planning paper	10
Video and Policy Brief (1)	Educational video and a policy brief aspects of active transport and its relation to any of the following: health, emissions, travel behavior and safety	25
Policy Brief (2)	Policy brief to the mayor of Montreal on cycling planning and policies in Montreal	15
Research Paper	On an active transportation topic of your choice	30

In fairness to all students, late assignments will be marked down by 10% for every late day. The *only* exception is for documented family and/or medical emergencies. It is in your best interest to please respect this edict.

The following rules apply to all assignments handed in by students: **Use 12 point font, with double spacing, and at least 1 inch margins.**

Lectures and Readings

Discussion Component: The lecture component of this course consists of discussions of the readings and analyzing transportation plans and criticizing them based on the readings. Therefore you should have **READ THE MATERIAL BEFORE CLASS** and be ready for the discussion taking place in the class. Students are expected to come to class ready to be active participants in the discussion. If you get behind, always do the readings for the next class first. You need to read carefully for the argument or main facts, but you do not need to memorize every detail. One or two students will be leading the discussion details mentioned below.

If you miss a class you are required to write a minimum of 2 page summary of the readings and submit to the instructor prior to the next lecture. Failing in doing so will lead to 10% deduction of your final grade in the attendance and participation for every summary you did not submit.

The final part of the lecture will include a paper critique of the student choices. See paper critiques for more details.

Textbook and Readings

Tumlin, J. (2012). *Sustainable Transportation Planning: Tools for creating vibrant, healthy, and resilient communities*. Hoboken, NJ: John Wiley & Sons Inc.

In addition to the manuscripts assigned which can be purchased from the McGill book store as a course pack. In some cases I might ask you to read part of a transportation plan for one class. These will be emailed to you one week prior to the class if it is required.

Readings Reflections and Questions

Every week each student is required to submit **3 to 4 questions** for class discussion about the week's readings on mycourses. The questions can be about points you liked or disliked in the readings or stuff you think we should explore further or discuss in the class. In addition to **one paragraph** of reflection about a point you liked in the reading and you think it is important for practice or a video you would like to watch and discuss that is related to the topic being discussed and relates it to practice. It is important that your paragraph and questions should be directed towards practice applications and its relation to the theory discussed in the readings. Students are encouraged to engage in discussions during the week on mycourses, yet please remember that discussions on every week's topic will be closed at a certain day and time. There will be a discussion session opened for every week's reading. Submission has to be done before **Wednesday at 11:00 pm**. These reflections and questions should represent your thoughts about the readings and the take home lesson from the readings. You need to be critical in your thoughts and ideas presented. During the term **three sets of reflections and questions** will be selected randomly from the submitted ones and evaluated. Students will be assigned the higher mark of two of the three reflections. The reflections are only required for the assigned readings during the week. These questions will be used to guide the discussions in the class.

Paper Critique

Each student will select a recently published article (2007 to present) from an academic journal on an active transportation issue **related to the week's topic** (for example the Journal of the American Planning Association, Transportation Research Record, Journal of Planning Literature, Environment and Planning part A and B, Transportation Research Part A, International Journal of Sustainable Transportation, and JTLU). The aim of this exercise is to get familiar with the literature and be able to criticize an article constructively. Paper critiques will be presented at the end of each class.

- A copy of the selected paper is due by email to the professor (due: **18/9/2015**). Also a copy of the selected paper should be placed in the professor's mailbox.
- Feedback from the instructor will be given to each student regarding the selected paper.
- A one page maximum review due to professor in the day of your presentation.
- Each student should be prepared to give a 5 to 10 minute presentation on his article regarding the main findings from the paper. If you plan on using a PowerPoint you should send it to the instructor one day before the class **(Thursday at 5:00 pm)**.
- It is your responsibility to send the paper to all other students one week prior to your class.

The one page review (double-spaced, 12 point font, one-inch margins) should be critical about the paper—not just copying and pasting the abstract. Concentrate on the lessons learned, points of strength in the paper and points of weaknesses, if any. Critical appraisal of a paper requires in-depth reading. The paper you select for criticizing should match the topic being discussed that day. All students are required to read the paper that is criticized that week. The papers will be sent to you in a soft format by email.

The following is a list of critical appraisal points. Some of these points were obtained from Heller, R., Verma, A., Gemmell, I, Harrison, R., Hart, J. & Edwards, R. (2008). Critical appraisal for public health: A new checklist. *Public Health,* 122, 92-98.

1- Does the paper title reflect the contents?
2- Does the abstract summarize the study adequately?
    a. Does it include the research question?
    b. Does it briefly explain the methods?
    c. Does it briefly explain the findings and policy implications?
3- What is the main research question? And what is the expected hypothesis?
    a. Is the research question stated clearly
    b. Are there any sub-questions
4- Relevance of the research question or hypothesis (Who cares)
5- Is the relation between this research paper and previous studies stated clearly in the paper? (appropriate literature review)
6- Is the study design appropriate for the research question? Did the authors use the appropriate methods?
7- Did the study use the appropriate data needed to answer the research question?
8- Is the study looking at a sample or an entire population?
    a. Sampling methods
    b. Is it a representative sample

9- What kind of statistical methods, if any, is used? Is this the most appropriate method?
10- Are the statistics easy to read and understand?
11- If the study includes a GIS component was it well explained?
12- If the study includes maps do they follow the appropriate cartographic rules (scale bar, north arrow, easy to understand and to differentiate legend etc.)?
13- Clarity of graphics and tables?
14- Can and should the results of this study influence the urban planning field?
15- What is the Policy relevance of the study?
16- To what extent the study can address a wider audience?
17- The conclusion section summarizes the paper in an appropriate manner?
18- Is the paper well organized and written? Does it flow smoothly or the authors jump from one point to the other without adequate transitions?

Of course, you are not expected to reply to each of these points; these questions are provided to give you are sense of how you may want to organize your criticism.

Paper critique starts 25/9/2015 and no paper critique on 330/10/2015

Policy Brief 1 and Video Production

Students will form groups, each group consists of 3 or 4 students to generate an educational video on one of the following topics:

1- Active Transport and Health

2- Emissions, the Environment and Active Transport

3- Built Environment Impacts on Active Travel

4- Personal Characteristics Impacts on Active Travel

5- Road Safety for Active Travel

You can use materials from any of the assigned readings or do your own search and find materials from any other sources. Students will be assigned three to four plans to use materials from as well. The goal of the video is to educate the public and policy makers about the importance of Active Travel and its relation to any of the previously discussed topics in the class. The videos should be uploaded to the following channel mcgill.transportation.planning@gmail.com

The password will be provided in class so all students can load their videos.

Be creative, and have fun expressing yourselves! Students will be evaluated based on the clarity of how the transportation issue is discussed, quality of the arguments, demonstration of a comprehensive knowledge of the issue, and approaches proposed to present the relation. The videos must be 5 minutes long, all of the group members should participate, and clearly assess, critique, and suggest recommendations related to educating the public about active transport and its importance in relation to the discussed topic. All videos will be uploaded to the class channel on youtube. This channel will be closed after the class so keep your own copies afterwards. When using music please make sure to use public and not copyrighted ones.

In addition to the video each student should analyze and draft one to two pages max policy brief (double-spaced, 12 point font, one-inch margins) to a senior policy maker in the City of Montreal. This policy brief will cover the same area you discussed in your video. The goal of the policy is to help the senior policy maker in understanding the experiences of other cities and recommend the appropriate policies from any of the assigned plans that can fit with the Montreal region. Explain how and why these policies can help the Montreal region in the aspects mentioned earlier. The policy brief is an **individual assignment** while the **video is a group one.**

The Policy Brief 1 and Video are **due 30/10/2015**

Policy Brief 2

The Montreal bicycling coalition is currently under discussion with the City of Montreal on how to increase the number of cyclists in Montreal. The City is planning big investments but some of them might not be the best. Your role as a representative of the Montreal Bicycle Coalition to develop a policy brief to the Mayor of City of Montreal to help him in making Montreal the leading cycling city in the world. Your goal as a planner is to prepare 2 to 3 pages including any supporting figures that can help the bicycle coalition in making the case about the new policies you are proposing and their effectiveness in other regions with similar climate or a different one.

The Policy Brief 2 is **due 13/11/2015**

All **Policy Briefs** should be submitted in both hard and electronic copies. I will be posting these online and send the link to the city by the end of the term.

Please read Lessons from 40 years of planning for cycle-inclusion: Reflections from Santiago, Chile by Lake Sagaris Published in Natural Resources Forum 2015.

Research Paper

No more than 20 pages (double-spaced, 12 point font, one-inch margins) on a topic of the student's choice (due: **4/12/2015**).

- A 2 page maximum proposal including a title, one to three paragraphs describing the topics to be covered, the specific issue to be researched, and the literature to be synthesized (at least 5 articles to be included as references), and the data (if any) to be analyzed (due: **2/10/2015**).
- Final presentations (due: **4/12/2015**)

Below is a list of suggested topics that can use, please do not limit yourself to these topics

- Safe routes to school: A case study of Montreal
- Designing a trail facility
- A complete bicycle network
- Pedestrianization in Montreal
- Active transportation and health
- Planning policies for active modes
- Determinations of bus running time
- Offering express bus service
- Planning for a BRT
- Pedestrian and bicycle safety in downtown
- Travel behavior of university students and staff
- Monitoring pedestrian and bicycling movements in downtown
- Analyzing origin destination surveys
- How far people are willing to walk to certain activities
- How far people are willing to cycle to certain activities
- Pedestrian satisfaction of walking and cycling

In Accord with McGill University's Charter of Students' Right, students in this course have the right to submit in English or in French any written work that is to be graded.

Academic Integrity

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/integrity for more information).

Disabilities

If you have a disability please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 398-6009 (online at http://www.mcgill.ca/osd) before you do this.

Safety

McGill University shall strive to be recognized as an environmentally safe and responsible institution, and as a model of environmentally responsible living. (see www.mcgill.ca/tls/policy/environmental_policy). For all emergencies please contact McGill security Services at 514-398-3000.

CLASS SCHEDULES

Week/ Date	**Lecture**
(1) 11/9/2015	Introduction: Why Planning for Active Transportation?
(2) 18/9/2015	Active Transportation and Health **Paper critique submission to Prof.**
(3) 25/9/2015	Emissions, the Environment and Transportation **Paper critique starts here**
(4) 2/10/2015	Built Environment and Neighborhood Effects on Travel Behaviour **Paper abstract due**
(5) 9/10/2015	Beyond the Built Environment: The Effect of Personal Characteristics on Travel Behaviour
(6) 16/10/2015	Road Safety
(7) 23/10/2015	No class ACSP Annual Meeting work on video development in groups
(8) 30/10/2015	Cycling: Policies and Programs **Video and Policy Brief 1 due / No paper critique this week**
(9) 6/11/2015	Cycling: Facilities and Infrastructure
(10) 13/11/2015	Public Transit Planning and Operations: Bus **Policy Brief 2 Due**
(11) 20/11/2015	Public Transit Planning and Operations: Rail
(12) 27/11/2015	Walking and Pedestrianization
(13) 4/12/2015	**RESEARCH PAPER DUE**

Weekly Reading Assignments

Reading List for URBP 504 Planning for Active Transportation
Instructor Ahmed El-Geneidy

Week 2: Active Transportation and Health (18/9/2015)

Text book: Tumlin, ch. 3,

Dill, J. (2009) Bicycling for Transportation and Health: The Role of Infrastructure. *Journal of Public Health Policy*, 30, S95-S110.

Mueller, N., Rojas-Reuda, D., Cole-Hunter, T., et al. (2015) Health impact assessment of active transportation: A systematic review. *Preventive Medicine*, 76, 103-114.

NYC Dept. of Mental Health and Hygiene (2014) Neighborhood Walkability and Physical Activity in New York City. Report. http://www.nyc.gov/html/doh/downloads/pdf/epi/databrief42.pdf

Sallis, J. F., Spoon, J., Cavill, N., et al. (2015) Co-benefits of designing communities for active living: an exploration of literature. *International Journal of Behavioral Nutrition and Physical Activity*, 12:30.

Shephard, R. J. (2008). Is active commuting the answer to population health? *Sports Medicine*, 38(9), 751-758.

Wasfi, R., Ross, N., & El-Geneidy, A. (2013). Achieving recommended daily physical activity levels through commuting by public transportation: Unpacking individual and contextual influences. *Health and Place*, 23, 18-25.

Optional readings

Reynolds, C., Winters, M., Ries, F., & Gouge, B. (2010). *Active transportation in urban areas: Exploring health benefits and risks*: National Collaborating Centre for Environment Health.

Week 3: Emissions, the Environment and Transportation (25/9/2015)

Text book: Tumlin, ch. 2

Banister, D., Pucher, J., & Lee-Gosselin, M. (2007). Making sustainable transport politically and publicly acceptable: Lessons from the EU, USA and Canada. In P. Rietveld & R. Stough (Eds.), *Institutions and sustainable transport: Regulatory reform in advanced economies* (pp. 17-50). Cheltenham, England: Edward Elgar Publishing.

Bigazzi, A.Y., & Figliozzi, M.A. (2014). Review of urban bicyclists' intake and uptake of traffic-related air pollution. *Transport Reviews*, 34(2), 221-245.

Carrier, M., Apparicio, P., Seguin, A.M., and Crouse, D. (2014). The application of three methods to measure the statistical association between different social groups and the concentration of air pollutants in Montreal: A case of environmental equity. *Transportation Research Part D: Transport and Environment*, 30, 38-52

Morabia, A., Amstislavski, P. N., Mirer, F. E., Amstislavski, T. M., Eisl, H., Wolff, M. S., et al. (2009). Air pollution and activity during transportation by car, subway, and walking. *American Journal of Preventive Medicine*, 37(1), 72-77.

Stanley, J. K., Hensher, D. A., & Loader, C. (2011). Road transport and climate change: Stepping off the greenhouse gas. *Transportation Research Part A,* 45(10), 1020–1030.

Optional Readings

Woodcock, J., Edwards, P., Tonne, C., Armstrong, B. G., Ashiru, O., Banister, D., et al. (2009). Public health benefits of strategies to reduce greenhouse-gas emissions: Urban land transport. *The Lancet*, 374, 1930-1943.

Chapman, L. (2007). Transport and climate change: A review. *Journal of Transport Geography*, 15, 354-367.

Week 4: Built Environment and Neighborhood Effects on Travel Behaviour (2/10/2015)

Text book: Tumlin, ch. 5

Cervero, R., & Kockelman, K. (1997). Travel demand and the 3Ds: Density, diversity, and design. *Transportation Research Part D*, 2(3), 199-219.

Cerin, E., Leslie, E., Du Toit, L., Owen, N., & Frank, L. (2007). Destinations that matter: Associations with walking for transport. *Health & Place*, 13, 713-724.

Ewing, R., & Handy, S. (2009). Measuring the unmeasurable: Urban design qualities related to walkability. *Journal of Urban Design*, 14(1), 65-84.

Kamruzzaman, M., Shatu, F.M., Hine, J., & Turrell, G. (2015). Commuting mode choice in transit oriented development: Disentangling the effects of competitive neighbourhoods, travel attitudes, and self-selection. *Transport Policy*, 42, 187-196.

Lee, J.S., Christopher Zegras, P., Ben-Joseph, E., & Park, S. (2014). Does urban living influence baby boomers' travel behavior? *Journal of Transport Geography*, 35, 21-29.

McNeil, N. (2011). Bikeability and the 20-min Neighborhood. *Transportation Research Record: Journal of the Transportation Research Board*, 2247, 53-63.

Optional Readings

Winters, M., Brauer, M., Setton, E. M., & Teschke, K. (2010). Built Environment Influences on Healthy Transportation Choices: Bicycling versus Driving. *Journal of Urban Health*, 87(6), 969-993.

Week 5: Beyond the Built Environment: The Effect of Personal Characteristics on Travel Behaviour (9/10/2015)

Gase, L.N., Barragan, N.C., Simon, P.A., et al. (2015). Public awareness of and support for infrastructure changes designed to increase walking and biking in Los Angeles County. *Preventive Medicine*, 72, 70-75.

Grimsrud, M., & El-Geneidy, A. (2014). Transit to eternal youth: Lifecycle and generational trends in Greater Montreal public transport mode share. *Transportation*, 41(1), 1-19.

Ory, D., & Mokhtarian, P. (2005). When is getting there half the fun? Modeling the liking for travel. *Transportation Research Part A*, 39, 97-123.

Saelens, B.E., Sallis, J.F., Frank, L.C., et al. (2012). Neighborhood environment and psychosocial correlates of adults' physical activity. *Medicine and Science in Sports and Exercise*, 44(4), 637-646.

Titze, S., Stronegger, W., Janschitz, S., & Oja, P. (2008). Association of built-environment, social-environment and personal factors with bicycling as a mode of transportation among Austrian city dwellers. *Preventative Medicine*, 47, 252-259.

Xing, Y., Handy, S., & Buehler, T. (2010). Factors associated with bicycle ownership and use: a study of six small U.S. cities. *Transportation*, 37, 967-985.

Optional Readings

Robertson-Wilson, J. E., Leatherdale, S. T., & Wong, S. L. (2008). Social-Ecological correlates of active commuting to School among high school students. Journal of Adolescent Health, 42, 486-495.

Week 6: Road Safety (16/10/2015)

Jacobsen, P. (2015). Safety in numbers: More walkers and bicyclists, safer walking and bicycling. *Injury Prevention*, 21, 271-275.

Parkin, J., Wardman, M., & Page, M. (2007). Models of perceived cycling risk and route acceptability. *Accident Analysis and Prevention*, 39, 364-371.

Rothmana, L., Buliungc, R., Toa, T., Macarthura, C., Macphersonb, A., Howarda, A., (2015) Associations between parents′ perception of traffic danger, the built environment and walking to school. *Journal of Transport and Health,* 2(3), 327–335.

Schepers, P., Hagenzieker, M., Methorst, R., van Wee, B., & Wegman, F. (2014). A conceptual framework for road safety and mobility applied to cycling safety. *Accident Analysis & Prevention*, 62, 331-340.

Wegmana,F., Zhanga, F., & Dijkstrab, A. (2012). How to make more cycling good for road safety. *Accident Analysis and Prevention*, 44, 19-29.

Week 8: Cycling – Policies and Programs (30/10/2015)

Text book: Tumlin, Ch. 7

Bonham, J., Koth, B. (2010). Universities and the cycling culture. *Transportation Research Part D*, 15, 94–102.

Damant-Sirois, G., *Grimsrud, M., & El-Geneidy, A. (2014). *What's your type: A multidimensional cyclist typology*. Paper to be presented at the 93rd Annual Meeting of the Transportation Research Board, Washington, D.C., USA.

Forsyth, A., & Krizek, K. (2011). Urban Design: Is there a distinctive view from the bicycle? *Journal of Urban Design*, 16(4), 531-549.

Harms, L., Bertolini, L., & Brömmelstroet, M. (2015). Performance of municipal cycling policies in medium-sized cities in the Netherlands since 2000. *Transport Reviews*.

Pucher, J., Dill, J., & Handy, S. L. (2010). Infrastructure, programs, and policies to increase bicycling: An international review. *Preventive Medicine*, 50, S106-S125.

Optional Readings

Pucher, J., & Buehler, R. (2006). Why Canadians cycle more than Americans: A comparative analysis of bicycling trends and policies. *Transport Policy*, 13, 265-279.

Week 9: Cycling – Facilities and Infrastructure (6/11/2015)

Dill, J., & Carr, T. (2003). Bicycle commuting and facilities in major U.S. cities: If you build them, commuters will use them. *Transportation Research Record* (1828), 116-123.

Eckerson Jr., C. (2014). *Streetfilms* – Journey Around Copenhagen's Latest Bicycle Innovations! http://www.streetfilms.org/journey-around-copenhagens-latest-bicycle-innovations/#more-329805, accessed 27 July 2015. (video)

Handy, S. L., Xing, Y., & Buehler, R. (2010). Factors associated with bicycle ownership and use: A study of six small US cities. *Transportation*, 37:967–985.

Ma, L., Dill, J., & Mohr, C. (2014). The objective versus the perceived environment: what matters for bicycling? *Transportation*, 1-18. doi: 10.1007/s11116-014-9520-y

Murphy, E. & Usher, J. (2015). The role of bicycle-sharing in the city: Analysis of the Irish experience. *International Journal of Sustainable Transportation*, 9(2), 116-125.

NYC Department of Transportation. (2013). Street Design Manual (2nd edition). Chapter 2 – Geometry and 2.1.1 Bike Lane & Path 47-59.

Optional Readings

Larsen, J., Patterson, Z., & El-Geneidy, A. (2013). Build it. But where? The use of geographic information systems in identifying locations for new cycling infrastructure. International Journal of Sustainable *Transportation*, 7(4), 299-317.

Week 10: Transit – Bus (13/11/2015)

Text book: Tumlin, Ch. 8 & 12

Day, K., Loh, L., Ruff, R., Rosenblum, R., Fischer, S., & Lee, K. (2014). Does bus rapid transit promote walking? An examination of New York City's select bus service. *Journal of Physical Activity and Health,* 11, 1512-1516.

Diab, E. & El-Geneidy, A. (2014). Transitory optimism: Changes in passenger perception following bus service improvement over time. *Transportation Research Record,* (2415), 97-106.

Krizek, K. and E. Stonebraker (2010). Bicycling and transit: A marriage unrealized. *Transportation Research Record: Journal of the Transportation Research Board,* (2144), 161-167.

Levinson, H. (2001). Bus transit in the 21st century some perspectives and prospects. *Transportation Research Record: Journal of the Transportation Research Board,* (1760), 42-46.

Mamun, S., & Lownes, N (2014). Access and connectivity trade-offs in transit stop location. *Transportation Research Record: Journal of the Transportation Research Board,* (2466), 1-11.

Optional Readings

Surprenant-Legault, J., & El-Geneidy, A. (2011). Introduction of a reserved bus lane: Impact on bus running time and on-time performance. *Transportation Research Record,* (2218), 10-18.

Week 11: Transit – Rail (20/11/2015)

Text book: Tumlin, ch. 8

Agrawal, A. Schlossberg, M., & Irvin, K. (2008). How far, by which route and why? A spatial analysis of pedestrian preference. *Journal of Urban Design*, 13(1), 81-98.

Brown, B., & Werner, C. (2009). Before and after a new light rail stop: Resident attitudes, travel behavior and Obesity. *Journal of the American Medical Association*, 75(1), 5-12.

Hochmair, H. (2015). Assessment of bicycle service areas around transit stations. *International Journal of Sustainable Transportation*, 9 (1), 15-29.

Kuby, M., Barranda, A., & Upchurch., C. (2004). Factors influencing light rail station boardings in the United States. *Transportation Research Part A*, 38, 223-247.

Lewis-Workman, S., & Brod, D. (1997). Measuring the neighborhood benefits of rail transit accessibility. *Transportation Research Record* (1576), 147-153.

Optional Readings

Text book: Tumlin, ch. 12 **(Optional)**

Week 12: Walking and Pedestrianization (27/11/2015)

Text book: Tumlin, Ch. 6

Badami, M. (2009). Urban Transport Policy as if People and the Environment Mattered: Pedestrian Accessibility the First Step. *Economic and Political Weekly*, XLIV(33), 43-51.

Manaugh, K., & El-Geneidy, A. (2013). Does Distance Matter? Exploring the links among values, motivations and satisfaction in walking trips. *Transportation Research Part A: Policy and Practice*, 50, 198-208.

Jacobsen, P. L., Racioppi, F., & Rutter, H. (2009). Who owns the roads? How motorised traffic discourages walking and bicycling. *Injury Prevention*, 15, 369-373.

Sam Schwartz Engineering (2012). Steps to a Walkable Community—A Guide for Citizens, Planners, and Engineers. Land Use, 39-59.

Optional: Benefits of Walking Fact Sheet, 1–9.

Yang, Y. (2015). Interactions between psychological and environmental characteristics and their impacts on walking. *Journal of Transport and Health*, 2(2), 195-198.

Walton, D. & Sunseri S.(2010). Factors Influencing the Decision to Drive or Walk Short Distances to Public Transport Facilities. *International Journal of Sustainable Transportation*, 4(4), 212-226.

Optional readings

Burke, M., & Brown, A. L. (2007). Distances people walk for transport. *Road & Transport Research*, 16(3), 16-29.