Transportation Economics
URBP (620) 3 credits
Instructor: Ahmed M. El-Geneidy
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Meeting: Monday 2:05 pm till 3:55 pm room 409 Macdonald Harrington Building
Office Hours: Monday 10:00 to 12:00 or by appointment

Course Description
This course presents the economic and financial aspects of urban transportation policies and planning. The course introduces students to impact assessment techniques for major transportation projects and policies. In addition it discusses the political debates around transportation finance highlighting winners and losers in various financing policies.

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. Think critically about transportation economics,
2. Evaluate economic policies that affects the transportation system,
3. Apply basic econometric methods to the analysis of transportation data,
4. Understand the institutional and political barriers associated with transportation pricing and financing,
5. Actively discuss and debate contested transportation economic issues,
6. Have a solid understanding of transportation issues from the perspectives of engineering, planning, economics and other disciplines. As well as how all these fields are related,
7. Be familiar with the goals and assumptions that underlie debates about transportation finance and policy, and
8. Identify detailed elements of the transportation economics sub-field that may be appropriate for future thesis/project work.
Course Structure
The course is organized around one week lecture/class discussions.

Assignment and Evaluation Methods

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Reflections &amp;</td>
<td>Each student should submit one paragraphs (250 words max) discussing the</td>
<td>15</td>
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<tr>
<td>Participation</td>
<td>assigned readings of the week on my courses</td>
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<tr>
<td>Weekly Question</td>
<td>Starting from week 5 each student will be required to contribute to one</td>
<td>20</td>
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<tr>
<td></td>
<td>question to answer the weekly question using case studies to support your</td>
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<tr>
<td></td>
<td>answers.</td>
<td></td>
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<tr>
<td>Assignment #1</td>
<td>Cost calculation of the capital and operating cost of a new Light Rail Line.</td>
<td>10</td>
</tr>
<tr>
<td>Midterm Assignment</td>
<td>Covering the first 4 lectures</td>
<td>5</td>
</tr>
<tr>
<td>Assignment #2</td>
<td>A surprise assignment to solve at home in 3 hours you must write a memo of 2</td>
<td>15</td>
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<tr>
<td></td>
<td>pages on the assigned topic.</td>
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<tr>
<td>Assignment #3</td>
<td>Write a blog post of 2000 words max or generate a video to propose an</td>
<td>15</td>
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<tr>
<td></td>
<td>equitable source of funding for public transport in Montreal.</td>
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<tr>
<td>Assignment #4</td>
<td>Choose a planned transport project from the assigned list and write a policy</td>
<td>20</td>
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<tr>
<td></td>
<td>brief 2 to 4 pages to build a business case for this project, each student</td>
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<td>will give a 10 minutes presentation in class.</td>
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In fairness to all students, no late assignments will be accepted (read: this means “0” points will be assigned for work turned in after the deadline). The only exception is for documented family and/or medical emergencies. It is in your best interest to please respect this edict.

Lectures and Discussion
Discussion Component: The lecture component of this course consists of discussions of the readings and providing examples from real word related to the discussed topic from outside sources and criticizing them based on the readings. Therefore you should have READ THE MATERIAL BEFORE CLASS and be ready for the discussion. 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.

Main Readings

Additional assigned readings

Lectures

<table>
<thead>
<tr>
<th></th>
<th>Topic Discussed</th>
<th>Weekly Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/9/2018 Introduction: Basics of microeconomics (demand and supply, and consumer surplus)</td>
<td>No question</td>
</tr>
<tr>
<td>2</td>
<td>17/9/2018 No Class</td>
<td></td>
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<tr>
<td>3</td>
<td>24/9/2018 Transport and the economy &amp; transport and local economic development.</td>
<td>No question</td>
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<tr>
<td>4</td>
<td>1/10/2018 No Class Quebec Elections</td>
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<tr>
<td>5</td>
<td>8/10/2018 Demand for transport Distribution of Assignment 1</td>
<td>Demand for shared electric scooters, who is using them?</td>
</tr>
<tr>
<td>6</td>
<td>15/10/2018 Costs and benefits of transport services Assignment 1 due</td>
<td>HOT lanes who benefits from them the most?</td>
</tr>
<tr>
<td>7</td>
<td>22/10/2018 Midterm Assignment 2 due</td>
<td>Discussion of Assignment 2</td>
</tr>
<tr>
<td>8</td>
<td>29/10/2018 Pricing of transport services</td>
<td>Pricing of bicycle sharing systems, do they need subsidy?</td>
</tr>
<tr>
<td>9</td>
<td>5/11/2018 Regulations and competition in transport</td>
<td>Is privatizing public transport a valid option?</td>
</tr>
<tr>
<td>10</td>
<td>12/11/2018 Movement and location Assignment 2 (Sunday afternoon)</td>
<td>Tolling bridges, for how long and why?</td>
</tr>
<tr>
<td>11</td>
<td>19/11/2018 Investment and financing, and revenues of transport Assignment 3</td>
<td>Financing transit from road pricing, is it fair?</td>
</tr>
<tr>
<td>12</td>
<td>26/11/2018 Freight logistics</td>
<td>What is future of short distance delivery vehicles?</td>
</tr>
<tr>
<td>13</td>
<td>3/12/2018 Transport project evaluation, forecasting, and positive externalities.</td>
<td>Can Uber replace public transport? What will be the cost?</td>
</tr>
<tr>
<td>14</td>
<td>4/12/2018 Economic impact analysis and negative externalities Assignment 4 due</td>
<td>Presentations of Assignment 4</td>
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</tbody>
</table>
Readings Reflections

Every week each student is required to submit a reflection (one paragraph on my courses) on the assigned readings of the week (250 characters max). Reading reflections are due Saturday at 11:00 am. These reflections should represent your thoughts about the readings and the take home lesson it. You need to be critical in your thoughts and ideas presented in this one paragraph. During the term three reflections 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. One or two questions can be added below the 250 words, some of these questions will be answered during the lecture on Monday.

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 to do so will lead to 10% deduction of your final grade in the attendance and participation for every summary you did not submit.

Weekly Question and Case Studies:
Each week starting from 8/10/2018 through 3/12/2018 two or three students will be answering the question of the week stated in the table of content, the answer should depend on case studies from around the world. These students are expected to prepare a PowerPoint presentation based on the question and prepare a case study to support their answers and send it to the professor on Monday at 11:00 am. The case study presentation time will be 30 minutes including discussions at the beginning of the class.

Each student is expected to participate in answering at least 1 question with case studies.

The students leading the discussion on answering the questions related to the case study of the week are expected to provide examples related to the discussed topics from different sources. Students are expected to link the theory being read to the examples used.
Assignment 1 (due 15/10/2018)
Assignment 1 will be a simple case of calculating the fare for a Light Rail line that will open in a City. You will be provided with the capital cost, operating costs, and expected ridership. Your goal will be to calculate the cost of the fare for the city should charge to pay back the loan and the amount of subsidy needed to keep operating and maintaining it.

Midterm (22/10/2018)
The midterm will cover materials from the first 4 lectures in addition to a case study similar to assignment 1 to calculate some kind of fare or do an impact assessment for a bus line.

Assignment 2 (11/11/2018)
This is a surprise assignment, you will receive an email from the professor with the assignment and you will have 3 hours to draft a 2 pages memo and respond to this assignment. Assignment will start at 5:00 pm on 11/11/2018 (Sunday) and will be due in the same day at 8 pm. If this date and time and not convenient to all students other dates will be determined in class.

Assignment 3 (19/11/2018)
Assignment 3 will examine the current financing policies of public transport operations in Montreal. Students are expected to either criticize the current model while proposing a modified version or support the current model and state the reasons why the existing model is good and if any modifications are needed. Equity issues associated with the existing model or the proposed one should be discussed. It is important to show the effectiveness of the proposed policies using examples from other parts of the world. You are hired by an advocacy organization and your objective is to write for them a blog post of 2,000 words max or create a video of 3 minutes to show your opinion about the public transport operation financing and its prospects in Quebec please give evidence to support your arguments and case studies.

PS: Submissions will be shared with an advocacy organization in Montreal.

Assignment 4 (4/12/2018)
The fourth assignment, you will pick any of the below public transport project and complete a business case for this project stating why it's important, and how to make it a successful one. You can predict the demand for this new project and generate any kind of analysis needed to make the case for this project to go ahead or propose modifications to it from a demand or equity or environmental or social perspectives. For this assignment, you should bring case studies examples from other cities. The assignment will be written in a policy brief format (2 to 4 pages), and will be followed by 10 minutes in class presentation for each student during the final class date. You will have a time budget of 40 hours, all students should maintain a time log and should not exceed the 40 hours of work on the assignment. You won’t be penalized if you do
pass the hours, yet it’s an indication that you need to work on your time management skills.

**Time logs should be submitted** with the final assignment in an additional sheet.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>CMA</th>
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<tbody>
<tr>
<td>Reseau Express Metropolitain</td>
<td>Montreal</td>
</tr>
<tr>
<td>Blue Line Extension</td>
<td>Montreal</td>
</tr>
<tr>
<td>Ottawa LRT Stage 2</td>
<td>Ottawa</td>
</tr>
<tr>
<td>Broadway subway + Surrey LRT</td>
<td>Vancouver</td>
</tr>
<tr>
<td>Green Line Stage 1</td>
<td>Calgary</td>
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<tr>
<td>Edmonton LRT Valley Line</td>
<td>Edmonton</td>
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<tr>
<td>London BRT</td>
<td>London</td>
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<tr>
<td>SmartTrack (including Eglinton West)</td>
<td>GTHA</td>
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<tr>
<td>Scarborough Subway Extension</td>
<td>GTHA</td>
</tr>
<tr>
<td>Regional Express Rail</td>
<td>GTHA</td>
</tr>
<tr>
<td>Eglinton LRT Planning and Design</td>
<td>GTHA</td>
</tr>
<tr>
<td>Relief Line Planning and Design</td>
<td>GTHA</td>
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<tr>
<td>Finch West LRT</td>
<td>GTHA</td>
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</tbody>
</table>

All submissions has to be printed and handed to the professor at the beginning of the class. In addition to a pdf version to be uploaded on my courses for all assignments.

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](http://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](http://www.mcgill.ca/osd)) before you do this.

**Dealing with Stress**
If you feel stressed during the term do not hesitate to speak with any of the class instructors to discuss any possible needs around academic accommodations; students can also seek support from McGill’s professional counseling services at: [https://mcgill.ca/counselling/about](https://mcgill.ca/counselling/about).
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.

Acknowledgment
Thanks to Prof. Kara Kockelman and Prof. David Levinson for providing many of the materials used in the class lectures and in the course outline. Thanks to Marie-Pier Viellette for her help in updating the reading materials and course contents.

Detailed Weekly Readings

Week 1: Introduction to course outline.


Week 3: Transport and the economy & transport and local economic development.


Other recommended readings:


Week 5: Demand for Transport

Chapter 4.


Other recommended readings:

Steer, davies, gleave(2017). REM Forecasting demand  

11- 55. **Concentrate in the section starting from page 24 titled Advanced disaggregate demand models.**


**Week 6: Costs and benefits of transport services**

Kockelman, et al (2013). **Chapter 1**

https://en.wikibooks.org/wiki/Transportation_Economics/Costs


**Other recommended readings:**


Week 8: Pricing of transport services


https://en.wikibooks.org/wiki/Transportation_Economics/Pricing


Other recommended readings:


Week 9: Regulations and competition in transport (20/10/2017)

https://en.wikibooks.org/wiki/Transportation_Economics/Regulation


Other recommended readings:


Week 10: Movement and Location (27/10/2017)

Kockelman, et al (2013). Chapter 4


Other recommended readings:


Week 11: Investment, financing of transport, and revenues of transport

Levinson, D. (2014). Wiki Book, Revenue
https://en.wikibooks.org/wiki/Transportation_Economics/Revenue
Kockelman, et al (2013). **Chapter 5**


**Other recommended readings:**


Translink (2013). Overview of Potential Transportation funding Sources.  
[https://www.translink.ca/-/media/Documents/plans_and_projects/regional_transportation_strategy/Research/Overview%20of%20Potential%20Transportation%20Funding%20Sources.pdf](https://www.translink.ca/-/media/Documents/plans_and_projects/regional_transportation_strategy/Research/Overview%20of%20Potential%20Transportation%20Funding%20Sources.pdf)


**Week 12: Freight logistics**


Other recommended readings:


Week 13: Transport project evaluation, forecasting, and positive externalities

https://en.wikibooks.org/wiki/Transportation_Economics/Positive_externalities


Other recommended readings:


**Week 14: Economic impact analysis and negative externalities**

https://en.wikibooks.org/wiki/Transportation_Economics/Negative_externalities

