Introduction to Transportation Systems (PUBP 715)

SYLLABUS – Fall 2018 (Last update: August 10, 2018)

Basic Course Information

| Time/Place:       | Tuesday, 7:20 PM – 10:00 PM (Eastern time)  
|                  | 322 Founders Hall |
| Instructor:      | Jonathan L. Gifford |
| Telephone        | 703-993-2275  
|                  | 703-993-8215 |
| E-mail:          | jgifford@gmu.edu |
| Office location  | 527 Founders Hall |
| Office hours     | Monday, 3 – 4 PM; Tuesday, 5 – 6 PM. Face-to-face or virtual (phone or Skype). An appointment is strongly recommended if you’re making a special trip. |
| Teaching Associate | Ms. Lauren McCarthy, lmccart5@gmu.edu |

Textbooks


Objectives

“The mind is not a vessel to be filled, but a fire to be ignited.” Plutarch¹

This course aims to provide an environment for students to learn essential facts, and to develop models and frameworks for understanding the planning, development and

deployment of transportation systems. An essential characteristic of transportation systems is their being comprised of technical and social components. The course uses a combination of lectures and guest lectures (generally in the first half of the class session) and case studies (generally in the second half of the class session).

The course will be successful if at the end, the student has developed a world view on transportation (not necessarily the same as the instructor’s), and has an appreciation for the merits and limitations of various points of view on transportation issues.

The course seeks to inculcate an integrated understanding of transportation issues. While many of the lectures will focus on specific transportation modes, there are a number of opportunities to see relationships between modes, in their structure and function, and the learning that occurs as one mode adopts the successful (and unsuccessful) attributes of others.

The course also aims to develop students’ capabilities in research and communication. In particular, students will develop a website, find online source material and evaluate its quality, research and write a term paper, and make an oral presentation.

Requirements and Grading

- 15% midterm exam
- 15% final exam
- 20% logistic curve fitting assignment
- 20% term paper
- 15% case study (for examples of earlier years’ work, see https://en.wikibooks.org/wiki/Transportation_Systems_Casebook)
- 15% collaboration and participation, including
  - written peer reviews of other students’ term papers;
  - written summaries/critiques of student case studies (when not presenting);
  - preparation and participation in class discussions.

For purposes of this course, the grades of A or A− are reserved for sustained excellence and outstanding performance on all aspects of the course. The grades of B+ and B are used to denote mastery of the material and very good performance on all aspects of the course. The grade of B− denotes marginal quality work that is not quite up to graduate level standards. The grade of C denotes work that may be adequate for undergraduate-level performance, but is not acceptable at the graduate level. The grade of F denotes the failure to perform adequately on course assignments.
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<td>8/28</td>
<td>Introduction</td>
<td>TTE 1, 2</td>
<td>1-page bio</td>
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<td>Wave 1 Phase 1 Logistic curve fitting</td>
<td>TTE 3-4, 25</td>
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<td>Finding and evaluating source material</td>
<td>Writing guidelines (TBA)</td>
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<td>Phase 2: The Magic Bullet</td>
<td>TTE 10 Schrag, “The bus is young and honest” (BB) Queens Streetcar Could Transform Waterfront” (BB) Roth, “Mulholland Highway and the Engineering Culture of LA in 1920s” (BB)</td>
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<td>Wave 4</td>
<td>TTE 19-24 Caro, “The power broker” (BB)</td>
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# Date | Topic | Reading* | Assignment Due | Case
---|---|---|---|---
11 11/13 | Wave 5 | TTE 27-30 McClain, “Reflections on a region” (BB) | Term paper peer reviews | 4
12 11/20 | TBA | | Term paper | |
13 11/27 | Forecasting | TTE 24 (again) | | 5
14 12/4 | Imagination, Benefits, Conclusions | TTE 31-35 | | |
12/11-12/12 | Reading days (no class meeting) | | Term paper (optional resubmission) | |
12/18 | Final exam (4:30 p.m. – 7:15 p.m.) | | | |

*Note: TTE refers to The Transportation Experience, 2nd ed., by Garrison & Levinson. BB refers to class Blackboard site.

**Instructor**

Dr. Jonathan L. Gifford is a Professor in the School of Policy, Government, and International Affairs at George Mason University, and the director of the Center for Transportation Public-Private Partnership Policy. The Center advances consideration of public-private partnerships in transportation system renewal and development through research, education and public service.

Professor Gifford’s primary area of expertise is transportation and public policy, with a particular focus on transportation and infrastructure finance. His recent research investigates transportation finance and the role of public-private partnerships.

His book *Flexible Urban Transportation* (2003) examines policies to improve the flexibility of urban transportation systems. He has also studied the role of standards in the development and adoption of technology, particularly technological cooperation across jurisdictional boundaries through coalitions and consortia.

He received a B.S. in Civil Engineering from Carnegie Mellon University, and an M.S. and Ph.D. (1983) in Civil Engineering (Transportation) from the University of California, Berkeley.

**Teaching Associate**

Ms. Lauren N. McCarthy is a doctoral student at the George Mason University Schar School of Policy and Government and a Graduate Research Assistant with the Center for Transportation Public-Private Partnership Policy. Her research interests include the intersection of technology and society, shared-use transportation companies, and innovation and entrepreneurship. She has presented her work at conferences such as the APPAM Fall Research Conference and the Automated Vehicles Symposium. Lauren
received her B.S. in Business Administration and M.A. in Geography from the University at Buffalo, SUNY.

**Policies**

- **Schar School of Policy and Government policy on Plagiarism:**

  The profession of scholarship and the intellectual life of a university as well as the field of public policy inquiry depend fundamentally on a foundation of trust. Thus any act of plagiarism strikes at the heart of the meaning of the university and the purpose of the Schar School of Public and Government. It constitutes a serious breach of professional ethics and it is unacceptable.

  Plagiarism is the use of another’s words or ideas presented as one’s own. It includes, among other things, the use of specific words, ideas, or frameworks that are the product of another’s work. Honesty and thoroughness in citing sources is essential to professional accountability and personal responsibility. Appropriate citation is necessary so that arguments, evidence, and claims can be critically examined.

  Plagiarism is wrong because of the injustice it does to the person whose ideas are stolen. But it is also wrong because it constitutes lying to one’s professional colleagues. From a prudential perspective, it is shortsighted and self-defeating, and it can ruin a professional career.

  The faculty of the Schar School takes plagiarism seriously and has adopted a zero tolerance policy. This may lead to failure for the course, resulting in termination from the University. This termination will be noted on the student’s transcript. For foreign students who are on a university-sponsored visa (e.g. F-1, J-1 or J-2), dismissal also results in the revocation of their visa.

  To help enforce the Schar School policy on plagiarism, all written work submitted in partial fulfillment of course or degree requirements must be available in electronic form so that it can be compared with electronic databases, as well as submitted to commercial services to which the School subscribes. Faculty may at any time submit student’s work without prior permission from the student. Individual instructors may require that written work be submitted in electronic as well as printed form. The Schar School policy on plagiarism is supplementary to the George Mason University Honor Code; it is not intended to replace it or substitute for it.

- **George Mason University Honor Code:** To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University
community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work. See University Catalog.

- **Disabilities:** If you are a student with a disability and you need academic accommodations, please see your instructor and contact the Disability Resource Center (DRC) at 703-993-2474 (http://www.gmu.edu/student/drc/). All academic accommodations must be arranged through the DRC.

**Acknowledgment**

Several elements of this course syllabus have been adapted (with permission) from the syllabus for Transportation Policy, Planning and Deployment (CE5212/PA5232, Fall 2013), taught at the University of Minnesota by David Levinson.