

URPL-GP 2641

Urban Transportation Planning Spring 2024

# Instructor Information

* Nicole Bucich and Jee Mee Kim Email: nb124@nyu.edu & [jmk236@nyu.edu](mailto:jmk236@nyu.edu)
* Office Hours: Via Zoom by appointment, weekdays after 5:00 pm

# Course Information

* Class Meeting Times: Tuesdays, 6:45-8:25pm
* Class Location: 238 Thompson St (GCASL) Room 379 Loe: Washington Square

# Course Prerequisites

* None

# Course Description

This course will offer an introduction to urban transportation planning, including both theoretical and practical approaches. It will provide an understanding of the evolution and role of urban public transportation modes, systems, and services. Subjects in general will include characteristics of different modes (rail, bus, ferry), project development, data collection/ mapping, transit-oriented development, and public involvement. While primarily focused upon transportation issues in New York City, national and international transit systems may be used as comparative study cases. The course will include a combination of lectures, research/readings, and guest lecturers.

# Course and Learning Objectives

The objective of this course is to expose students to the multi-disciplinary field of urban transportation planning. Students will gain an understanding of the steps of the Transportation Planning and Alternative Development process and will have the opportunity to use information described in course lectures in a real-world application. Another objective is to provide students with relevant background to pursue transportation planning-related careers.

# Required Readings

See Detailed Course Overview.

# Assessment Assignments and Evaluation

* Writing Assignments, 50%
* Class Attendance/Engagement/Preparation, 20%
* Final Project Presentation, 30%

## Late Submission Policy for Assignments

1. Extensions on assignments will be granted only in case of emergency or special circumstances. This policy is adopted out of respect to those who abide by deadlines despite equally demanding schedules. Assignments handed in late without authorized extensions will be penalized one-third of a grade per day.
2. Assignments are due prior to 6:45 pm on the dates indicated on NYU Brightspace.
3. We accept late work (that is, having a time stamp later than the time and date on which assignments are due) after the due date only by prior arrangement.

# Overview of the Semester

The course will start will an overview of the Transportation Planning/Alternatives Analysis (AA) process. Throughout the following weeks, sessions will focus on relevant topics related to the AA process, focusing on NYC project examples. The final group project/presentation will be an application of the AA process.

## Week 1 - January 23 (Bucich & Kim)

* + Topic: Orientation, Transportation Planning Process/Alternative Analysis & Evaluation
  + Writing Assignment #1 (due Feb 6)

## Week 2 - January 30 (Kim)

* + Topic: Introduction to Major NYC Transportation Projects & Transportation and the Environment

## Week 3 - February 6 (Kim)

* + Topic: Role of Federal Government, MPOs & Funding/Financing
  + Writing Assignment #1 Due

## Week 4 - February 13 (Kim)

* + Topic: Technology Applications for Planning (GIS and Visualization) & Data Collection/ Big Data
  + Writing Assignment #2 (due March 5)

## Week 5 - February 20 (Bucich)

* + Topic: Rail and Bus/BRT Planning

## Week 6 - February 27 (Kim)

* + Topic: Bike, Pedestrian, Micro-mobility Planning, Parking

## Week 7 - March 5 (Bucich)

* + Topic: Cost Estimation and Modeling
  + Writing Assignment #2 Due

## Week 8 - March 12 (Kim)

* + Topic: Resiliency/Climate Adaptation, Introduction of Final Presentation

## Week 9 - March 19 Spring Break/No Class

## Week 10 - March 26 (Kim)

* + Topic: Land Use and Transportation, Transit-Oriented Development, Public Engagement

## Week 11 - April 2 (Kim)

* + Topic: Transportation and Equity
  + Final presentation proposal/outline due
  + Presentation Review Sessions

## Week 12 -April 9 (Kim)

* + Topic: Future of Transportation

## Weeks 13 & 14-April 16 & 23 (Bucich & Kim)

* + Topic: Student Presentations

## Week 15 - April 30 (Bucich & Kim)

* + Career Panel
  + Final project written submittal due

## Student grades will be assigned according to the following criteria:

1. Excellent: Exceptional work for a graduate student. Work at this level is unusually thorough, well-reasoned, creative, methodologically sophisticated, and well written. Work is of exceptional, professional quality.

(A-) Very good: Very strong work for a graduate student. Work at this level shows signs of creativity, is thorough and well-reasoned, indicates strong understanding of appropriate methodological or analytical approaches, and meets professional standards.

(B+) Good: Sound work for a graduate student; well-reasoned and thorough, methodologically sound. This is the graduate student grade that indicates the student has fully accomplished the basic objectives of the course.

1. Adequate: Competent work for a graduate student even though some weaknesses are evident. Demonstrates competency in the key course objectives but shows some indication that understanding of some important issues is less than complete. Methodological or analytical approaches used are adequate, but student has not been thorough or has shown other weaknesses or limitations.

(B-) Borderline: Weak work for a graduate student; meets the minimal expectations for a graduate student in the course. Understanding of salient issues is somewhat incomplete. Methodological or analytical work performed in the course is minimally adequate. Overall performance, if consistent in graduate courses, would not suffice to sustain graduate status in "good standing."

(C/-/+) Deficient: Inadequate work for a graduate student; does not meet the minimal expectations for a graduate student in the course. Work is inadequately developed or flawed by numerous errors and misunderstanding of important issues. Methodological or analytical work performed is weak and fails to demonstrate knowledge or technical competence expected of graduate students.

1. Fail: Work fails to meet even minimal expectations for course credit for a graduate student. Performance has been consistently weak in methodology and understanding, with serious limits in many areas. Weaknesses or limits are pervasive.

# Detailed Course Overview

## Recommended Resources/Readings for Week 1

* + Route 110 Alternatives Analysis Final Report (Focus on Executive Summary for Week 1)

## WEEK 1: ORIENTATION, TRANSPORTATION PLANNING PROCESS/ ALTERNATIVE ANALYSIS & EVALUATION (Jan 23)

### Assignment

Writing Assignment #1 due Feb 6: Submit a 3-4 page paper comparing your transportation experience growing up vs. your experience today. Graphics, photos and maps are encouraged.

### Recommended Resources/Readings for Week 2

* + lnterborough Express Planning and Environmental Linkages Study
  + East Side Access Program
  + Second Avenue Subway
  + Penn Station Access
  + Gateway Program
  + FTA NEPA
  + NEPA
  + CEQR Technical Manual (Procedures & Documentation Chapter)

## WEEK 2: INTRODUCTION TO MAJOR NYC TRANSPORTATION PROJECTS & TRANSPORTATION AND THE ENVIRONMENT (Jan 30)

### Recommended Resources/Readings for Week 3

* + Transportation Planning Process Briefing Book (Part 1)
  + The Benefits of Reliable Funding for Public Transportation, APTA
  + Summary of **IRA,** C40 Cities
  + Summary of BIL 2-year anniversary, Brookings
  + Helpful summary with some background on different types of funding; [https://www.bluegreenalliance.org/site/a-user-guide-to-the-bipartisan-infrastructure-law­](http://www.bluegreenalliance.org/site/a-user-guide-to-the-bipartisan-infrastructure-law) bil/

## WEEK 3: ROLE OF FEDERAL GOVERNMENT, MPOS & FUNDING/ FINANCING (Feb 6)

### Assignment

Assignment #1 due.

**Writing Assignment #2** due March 5: Write a 2-3 page memo from the point of view of a city planner to an elected official recommending a specific transportation initiative or project.

### Recommended Resources/Readings for Week 4

* + Leveraging Big Data in the Public Transportation Industry, APTA
  + National Transit Database
  + Re ica Website (especially "What We Do" and "How it Works" tabs)
  + Cell Phone Data in Traffic Analysis and Transportation Planning

## WEEK 4: TECHNOLOGY APPLICATIONS FOR PLANNING (GIS AND VISUALIZATION) & DATA COLLECTION/BIG DATA (Feb 13)

### Recommended Resources/Readings for Week 5

* + MTA Bus Network Redesign
  + BRT Design Guidelines
  + SI North Shore BRT and SI West Shore AA
  + TCRP Transit Capacity Manual (Chapter 6 [Bus] and Chapter 8 [Rail])
  + Track Basics
  + CONNECT NEC 2037
  + FRA Corridor ID Program
  + APTA High-Speed Rail Resources

## WEEK 5: RAIL AND BUS/BUS RAPID TRANSIT PLANNING (Feb 20)

### Recommended Resources/Readings for Week 6

* + *Streetfight,* Janette Sadik-Khan (Chapters 2, 3, 4)
  + NYC Streets Master Plan, sections 1-4, section 5 focus on subsections: Walking/Peds, Cycling, Bike Share and Micro-Mobility
  + Free Parking and the Urban Future

## WEEK 6: BIKE/PED/MICRO-MOBILITY PLANNING AND PARKING (Feb 27)

### Recommended Resources/Readings for Week 7

* + Capital Cost Estimation Guidance
  + Operating and Maintenance Cost Estimation Guidance
  + Read the following information on the MWCOG Travel Demand Modeling {Tabs on the right of the page, hyperlinks below)

Travel Demand Modeling PROCESS

Travel Demand Modeling INPUTS and OUTPUTS

Four-Step Travel Model (Note, please read the pages on each of the Four Steps. This is the heart of the subject matter)

## WEEK 7: COST ESTIMATION AND MODELING (Mar 5)

### Assignment

Writing Assignment #2 due.

### Recommended Resources/Readings for Week 8

* + "Transportation During and After Hurricane Sandy" Sarah Kaufman, Carson Qing, Nolan Levenson, and Melinda Hanson. November 2012.
  + MTA 20 Year Needs Assessment (pages 96-123)
  + Financial District/Seaport Climate Resilience Master Plan (exec summary, chapters 4 and 5)

## WEEK 8: RESILIENCY AND CLIMATE ADAPTATION, INTRODUCTION OF FINAL PRESENTATION (Mar 12)

### Recommended Resources/Readings for Week 10

* + Promising Practices for Meaningful Public Involvement in Transportation Decision- Making, USDOT
  + Virtual Community Engagement toolkit,
  + FTA TOD [https://www.transit.dot.gov/TOD](http://www.transit.dot.gov/TOD)
  + Active-Transportation-and-Real-Estate-The-Next-Frontier.pdf (uli.org) (Chapter 1)

## WEEK 9: SPRING BREAK/NO CLASS (Mar 19)

## WEEK 10: LAND USE AND TRANSPORTATION, TOD, AND PUBLIC ENGAGEMENT (Mar 26)

### Assignment

Final Presentation Outline assignment (teams of 3 or 4)

### Recommended Resources/Readings for Week 11

* + The Big Dig Podcast, Part 1: We Were Wrong GBH (wgbh.org)
  + Is Federal Infrastructure Investment Advancing Equity Goals.pdf (urban.erg)
  + Robert Moses and His Racist Parkway Explained, Bloomberg

## WEEK 11: EQUITY (Apr 2)

### Assignment

Final Presentation Outline due (1 per group).

### Recommended Resources/Readings for Week 12

* + Shared Mobility and the Transformation of Public Transit, APTA
  + The New Automobility, Lyft, Uber and the Future of American Cities, Schaller Consult
  + [https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/shared­](http://www.mckinsey.com/industries/automotive-and-assembly/our-insights/shared) mobilitywhere-it-stands-where-its-headed

## WEEK 12: FUTURE OF TRANSPORTATION (Apr 9)

## WEEKS 13 and 14: STUDENT PRESENTATIONS (Apr 16 and 23)

## WEEK 15: CAREER PANEL (Apr 30)

### Assignment

Final project written submittal due.

# NYU Brightspace

All announcements, resources, and assignments will be delivered through the NYU Brightspace site. I may modify assignments, due dates, and other aspects of the course as we go through the term with advance notice provided as soon as possible through the course website.

# Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by Wagner's Academic Code. All Wagner students have already read and signed the Wagner Academic Oath. Plagiarism of any form will not be tolerated and students in this class are expected to report violations to co-professors. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult either professors.

# Henry and Lucy Moses Center for Students with Disabilities at NYU

Academic accommodations are available for students with disabilities. Please visit the Moses Center for Students with Disabilities (CSD) website **and click the "Get Started" button. You can also call or email CSD** (212-998-4980 or mosescsd@nyu.edu) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

# NYU's Calendar Policy on Religious Holidays

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify co-professors in advance of religious holidays that might coincide with due dates to schedule mutually acceptable alternatives.

# NYU's Wellness Exchange

NYU's Wellness Exchange has extensive student health and mental health resources. A private hotline (212-443-9999) is available 24/7 that connects students with a professional who can help them address day-to-day challenges as well as other health-related concerns.

**Letter Grades**

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| Letter grades for the entire  course will be assigned as follows:  **Letter Grade** | **Points** |
| **A** | 4.0 points |
| **A** | 3.7 points |
| **B+** | 3.3 points |
| **B** | 3.0 points |
| **B** | 2.7 points |
| **C+** | 2.3 points |
| **C** | 2.0 points |
| **C** | 1.7 points |
| **F** | 0.0 points |