

**CE G2200: Urban Freight and City Logistics**  
**City College of New York, Spring 2015**  
**Wednesdays, 6:30 PM to 9:00 PM**

**INSTRUCTOR INFORMATION:**

**Instructor:** Dr. Alison Conway

**Office:** Steinman Hall (ST) T-195

**Office Hours:** Wednesdays 4:00 PM to 5:30 PM, or by appointment. During office hours, I will also be available by Skype.

**Email:** [aconway@ccny.cuny.edu](mailto:aconway@ccny.cuny.edu)

Please note, I check class emails Monday through Friday. If I do not respond to your email within 48 hours on these days, please resend a polite reminder, as messages do occasionally get lost in my inbox. Emails sent over the weekend or on holidays will receive a response on the next working day.

**COURSE CONTENT AND OBJECTIVES:**

City Logistics involves the means over which freight distribution can take place in urban areas as well as the strategies that can improve its overall efficiency while mitigating congestion and environmental externalities. It includes the provision of services contributing to efficiently managing the movements of goods in cities and providing innovative responses to customer demands. City Logistics has received a growing level of attention in light of urbanization throughout the world, rising standards of living, globalization, and new forms of consumption such as e-commerce.

This graduate course introduces the core concepts, challenges and methods of city logistics. It has three main objectives:

- 1. *The student will be exposed to the combination of two realms of enquiry defining city logistics that have rarely been jointly considered; urban studies and freight transportation.***

Urban geography relates to the understanding of urban areas and their dynamics. The field draws from a long tradition in geography, planning, sociology, and engineering investigating the urban spatial structure and the drivers of its changes. Freight transportation relates to the understanding of goods distribution, which mostly draws from supply chain management and intermodal transportation.

- 2. *The student will be introduced to the main components of an urban freight transport system and its primary stakeholders.***

The urban environment is eminently complex, which makes urban freight distribution a very different endeavor than non-urban transport. The "last mile" in freight distribution is prone to challenges that need to be addressed by relevant policies and mitigation strategies.

- 3. *The student will have the opportunity to learn several dimensions of what the practice of city logistics implies.***

Data sources and data collection methods will be introduced. A set of methodologies supporting policies and decision making will also be explored. Illustrative case studies will be introduced, analyzed and debated.

**REQUIRED TEXT:**

There is no required textbook for this course. Required reading materials will be available electronically via Dropbox.

**ASSIGNMENTS:**

**Exams:** There will be a mid-term exam and a cumulative final exam. Exams will be conducted in the classroom and will be open book/open notes. If needed, calculators may be used during exams; however no cell phones, tablets, computers, iPods or other electronic devices may be used. The midterm exam will constitute 25% of your final grade; the final exam will determine 30% of your final grade.

**Project:** Each student will complete a project examining and evaluating a specific city logistics implementation. The student will be required to submit a written report and to complete a 10-15 minute in-class presentation detailing findings. Together, the written report and presentation will constitute 35% of your final grade.

**Class Participation:** Students are expected to complete class readings, attend classroom meetings, and actively participate in classroom activities and discussions. Students will also be expected to participate as specified in online discussion forums. Classroom and online participation will determine 10% of your final grade.

**Disability Policy:** In compliance with CCNY policy and equal access laws, appropriate accommodations are administered by the AccessAbility Center. Students who register with AccessAbility, and are entitled to specific accommodations, must request a letter from AccessAbility to present to the Professor that states what their accommodations are. If specific accommodations are required for a test, students must present an "Exam Administration Request Form" from AccessAbility at least one week prior to the test date in order to receive their accommodations.

**GRADES**

Grades will be assigned according to the following grading scale:

A+	97 - 100
A	93-96.99
A-	90-92.99
B+	87-89.99
B	83-86.99
B-	80-82.99
C+	77-79.99
C	73-76.99
C-	70-72.99
D	60-69.99
F	Below 60

## Course Readings:

### MODULE 1: FREIGHT AND THE CITY

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#### **Lecture 1: Urban Planning**

The urban planning process and the main discrepancies between conventional urban planning and freight distribution.

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#### **Required Readings:**

1. IHS Global Insight (2009). *NCFRP Report 1: Public and Private Sector Interdependence in Freight Transportation Markets*. Washington, DC: Transportation Research Board of the National Academies. 13-21.
2. Lindholm, M. and Behrends, S. (2012) Challenges in urban freight transport planning – a review in the Baltic Sea Region. *Journal of Transport Geography*, Vol. 22, 129–136.
3. Bassok, A. et al. (2013). *NCFRP Report 24: Smart Growth and Urban Goods Movement*. Washington, D.C.: Transportation Research Board of the National Academies. 14-18.

#### **Additional References:**

1. CNU (2001). Charter of the New Urbanism. Chicago: Congress for the New Urbanism.
2. FHWA (2012). Freight and Land Use Handbook. Washington, DC: Federal Highway Administration. 1-11 to 1-19.
3. FHWA (2013). MAP21 Fact Sheets – Significant Freight Provisions. Washington, DC: Federal Highway Administration. Accessed January 1, 2015 from: <http://www.fhwa.dot.gov/map21/factsheets/freight.cfm>.
4. NACTO (2013). NACTO Urban Street Design Guide. New York: National Association of City Transportation Officials.
5. Weiner, Edward (1997). Urban Transportation Planning In The US - An Historical Overview. Washington, DC: Office of the Secretary of Transportation.

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#### **Lecture 2: Urban Geography**

Historical and geographical processes that have led to urbanization. The evolution of transport technologies and their impacts of the urban spatial structure.

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#### **Required Readings:**

1. In Rodrigue, J-P *et al.* (2014) *The Geography of Transport Systems*, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>.
  - Rodrigue, J-P. "Historical Geography of Transportation: The Emergence of Mechanized Systems." <http://www.people.hofstra.edu/geotrans/eng/ch2en/conc2en/ch2c1en.html>
  - Rodrigue, J-P. "Historical Geography of Transportation: The Setting of Global Systems." <http://www.people.hofstra.edu/geotrans/eng/ch2en/conc2en/ch2c2en.html>
  - Rodrigue, J-P. "Transport and Spatial Organization." <http://www.people.hofstra.edu/geotrans/eng/ch2en/conc2en/ch2c3en.html>
  - Rodrigue, J-P. "Transportation and the Urban Form." <http://www.people.hofstra.edu/geotrans/eng/ch6en/conc6en/ch6c1en.html>
  - Rodrigue, J-P. "Urban Land Use and Transportation." <http://people.hofstra.edu/geotrans/eng/ch6en/conc6en/ch6c2en.html>

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#### **Lecture 3: Urban Economics**

Urban Economics. How freight transportation is linked to the role cities play in regional economies. Transportation and land use dynamics such as economic activities, forms of consumption and urban transport demand.

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#### **Required Readings:**

1. Tomer, A., Kane, J., and Puentes, R. (2013). *Metro Freight: The Global Goods Trade that Moves Metro Economies*. Washington, DC: Metropolitan Policy Program, Brookings. p. 1-7.
2. In Rodrigue, J-P *et al.* (2014) *The Geography of Transport Systems*, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>.
  - Rodrigue, J-P. and Notteboom, T. "Transportation and Economic Development." <http://www.people.hofstra.edu/geotrans/eng/ch7en/conc7en/ch7c1en.html>
  - Rodrigue, J-P. "Transport and Location." <http://www.people.hofstra.edu/geotrans/eng/ch2en/conc2en/ch2c4en.html>
3. FHWA (2004). *Freight Transportation: Improvements and the Economy*. Washington, DC: Federal Highway Administration. p. 1-9.
4. WSDOT (2014). Washington State Freight Mobility Plan. Olympia, WA: Washington State Department of Transportation, <http://www.wsdotfreightmobility2014.com/>. (Review the website only; you do not need to read the entire report linked from this site).

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#### **Lecture 4: Supply Chain Management**

Supply Chain Management. How supply chains are established and how they operate. Major trends in global manufacturing and distribution.

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##### **Required Readings:**

1. Tomer, A., Kane, J., and Puentes, R. (2013). *Metro Freight: The Global Goods Trade that Moves Metro Economies*. Washington, DC: Metropolitan Policy Program, Brookings. p. 8-14.
2. In Rodrigue, J-P *et al.* (2014) *The Geography of Transport Systems*, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>.
  - Rodrigue, J-P. "Freight Transportation and Value Chains." <http://www.people.hofstra.edu/geotrans/eng/ch5en/conc5en/ch5c3en.html>
  - Rodrigue, J-P. and Hesse, M. "Logistics and Freight Distribution." <http://www.people.hofstra.edu/geotrans/eng/ch5en/conc5en/ch5c4en.html>
3. Rhodes, Suzann *et al.* (2012). NCFRP Report 14: Guidebook for Urban Goods Movement. Washington, DC: Transportation Research Board of the National Academies. 16-28.
4. Morganti, E. and Dablanc, L. (2014). Recent Innovation in Last Mile Deliveries. In A. Hyard, *Non-technological Innovations for Sustainable Transport*. 27-45.

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## **MODULE 2: ISSUES AND CHALLENGES OF CITY LOGISTICS**

#### **Lecture 5: Urban Freight Distribution**

The components related to urban freight transportation such as modes and terminals. The provision of urban freight transport services and the main distribution channels used.

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##### **Required Readings:**

1. In Rodrigue, J-P *et al.* (2014) *The Geography of Transport Systems*, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>.
  - Rodrigue, J-P and L. Dablanc. "City Logistics." <http://www.people.hofstra.edu/geotrans/eng/ch6en/appl6en/ch6a2en.html>
2. Rhodes, Suzann *et al.* (2012). NCFRP Report 14: Guidebook for Urban Goods Movement. Washington, DC: Transportation Research Board of the National Academies. 16-28, Appendix.
3. Visser, J., Nemoto, T., and Browne, M. (2014). Home Delivery and the Impacts on Urban Freight Transport: A Review. *Procedia - Social and Behavioral Sciences*, Vol. 125, p. 15 – 27
4. Morganti, E., Seidel, S., Blanquart, C., Dablanc, L., and Lenz, B. (2014). The impact of e-commerce on final deliveries: alternative parcel delivery services in France and Germany. *Transportation Research Procedia* Vol. 4, p. 178 – 190.

**Recommended Readings:**

1. Morganti, E. and Dablanc, L. (2014). Recent Innovation in Last Mile Deliveries. In A. Hyard, *Non-technological Innovations for Sustainable Transport*. 27-45.
2. Jones Land Lasalle (2013). E-Commerce Boom Triggers Transformation in Retail Logistics. [http://www.ill.com/Research/eCommerce\\_boom\\_triggers\\_transformation\\_in\\_retail\\_logistics\\_whitepaper\\_Nov2013.pdf](http://www.ill.com/Research/eCommerce_boom_triggers_transformation_in_retail_logistics_whitepaper_Nov2013.pdf)

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**Lecture 6: Stakeholders of Urban Logistics**

The providers of urban transportation services, the workforce and the regulators.

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**Required Readings:**

1. In Rodrigue, J-P *et al.* (2014) *The Geography of Transport Systems*, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>.
  - Rodrigue, J-P. "Main Stakeholders in Urban Freight Distribution." [http://www.people.hofstra.edu/geotrans/eng/ch6en/appl6en/stakeholders\\_urban\\_freight.html](http://www.people.hofstra.edu/geotrans/eng/ch6en/appl6en/stakeholders_urban_freight.html)
2. FHWA (2012). *Freight and Land Use Handbook*. Washington, DC: Federal Highway Administration. 1-11 to 1-19.
3. Burks, S. *et al.* (2010). *Trucking 101: An Industry Primer*. Transportation Research Circular E-C146. Washington, DC: Transportation Research Board of the National Academies. 9-14, 18-24.
4. Lindholm M. and Browne, M. Engaging Stakeholders in Sustainable Urban Freight Initiatives: An International Perspective. VREF Center of Excellence for Sustainable Urban Freight Systems Webinar: <https://coe-sufs.org/wordpress/peer-to-peer-exchange-program/webinar09/>
5. Dablanc, L., Diziain, D., and Levifve, H. Urban freight consultations in the Paris region. *European Transport Research Review*, Vol. 3. 47–57.

**Recommended Readings:**

6. Lindholm, M. and Browne, M. (2013). Local Authority Cooperation with Urban Freight Stakeholders: A Comparison of Partnership Approaches. *European Journal of Transport and Infrastructure Research*, Vol. 13, No. 1. p. 20-38.

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**Lecture 7: Urban Logistics Facilities**

The physical organization of urban freight terminals. How distributors and retailers are setting facilities.

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**Required Readings:**

1. Dablanc, L. (2014). Logistics Sprawl and Urban Freight Planning Issues in a Major Gateway City. *Sustainable Urban Logistics: Concepts, Methods and Information Systems*, EcoProduction. p. 49-69. Access from: [http://link.springer.com/chapter/10.1007/978-3-642-31788-0\\_4](http://link.springer.com/chapter/10.1007/978-3-642-31788-0_4).
2. Raimbault, N., Andriankajaa, D., and Paffonia, E. (2009). Understanding the Diversity of Logistics Facilities in the Paris Region. *Procedia - Social and Behavioral Sciences*, Vol. 39. p. 543–555.
3. Higgins, C. and Ferguson, R. (2011). An Exploration of the Freight Village Concept and its Applicability to Ontario. McMaster Institute of Transportation and Logistics, Hamilton, Ontario. p. 22-43.
4. Allen, J., Thorne, G., and Browne, M. (2007). BESTUFS Good Practice Guide on Urban Freight Transport. Rijswijk, The Netherlands: BESTUFS Consortium. p. 59-78.

**Recommended Resources:**

1. Dablanc, L. and Goodchild, A. (2014, July 22). Logistics Sprawl: Spatial Patterns of Logistics Facilities and their Impacts on Metropolitan Areas. VREF Center of Excellence for Sustainable Urban Freight Systems Webinar: <https://coe-sufs.org/wordpress/peer-to-peer-exchange-program/webinar06/>

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**Lecture 8: Congestion and Externalities**

The major challenges and externalities in urban freight distribution.

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**Required Readings:**

1. Holguín-Veras, J., Silas, M., Polimeni, J., and Cruz, B. (2007). An Investigation on the Effectiveness of Joint

Receiver–Carrier Policies to Increase Truck Traffic in the Off-peak Hours, Part I: The Behavior of Receivers. *Networks and Spatial Economics*, Vol. 7. p. 277–295.

2. Holguín-Veras, J., Silas, M., Polimeni, J., and Cruz, B. (2008). An Investigation on the Effectiveness of Joint Receiver–Carrier Policies to Increase Truck Traffic in the Off-peak Hours, Part II: The Behavior of Carriers. *Networks and Spatial Economics*, Vol. 8. p. 327–354.
3. Hallaway, B. and Spahr, C. (2013). Getting the Goods without the Bads: Freight Transportation Demand Management Strategies to Reduce Urban Impacts. Madison, WI: National Center for Freight and Infrastructure Research and Education (CFIRE), University of Wisconsin, Madison. p. 3-10.
4. Weisbrod, G. and Fitzroy, S. (2008). Defining the Range of Urban Congestion Impacts on Freight and their Consequences for Business Activity. Conference Proceedings, TRB 87th Annual Meeting, January 13-17, 2008. Washington, D.C.

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### **Lecture 9: Mitigation Policies and Strategies**

The main strategies that have been implemented and their outcome. The balance between conventional and alternative modes of urban freight distribution.

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#### **Required Readings:**

1. Giuliano, G. and Dabanc, L. (2013). Approaches to Managing Freight in Metropolitan Areas. In *City Logistics Research: A Transatlantic Perspective*. Washington, DC: Transportation Research Board of the National Academies.
2. Hallaway, B. and Spahr, C. (2013). Getting the Goods without the Bads: Freight Transportation Demand Management Strategies to Reduce Urban Impacts. Madison, WI: National Center for Freight and Infrastructure Research and Education (CFIRE), University of Wisconsin, Madison. p. 11-54.
3. Morris, A. (2009). *The Last Mile: Developing Efficient Freight Operations for Manhattan's Buildings*. New York: Stephen L. Newman Real Estate Institute, Baruch College.

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## **MODULE 3: CITY LOGISTICS IN PRACTICE**

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### **Lecture 10: Data Sources and Collection**

The major types of urban freight data. Emerging strategies and technologies in the collection of urban freight data.

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#### **Required Readings:**

1. Allen, J. and Browne, M. (2008). *Review of Survey Techniques Used in Urban Freight Studies*. Transport Studies Group, University of Westminster, London.  
[http://www.greenlogistics.org/SiteResources/16adc811-45bb-42f4-8fe8-39930e2e8a30\\_Review%20of%20Survey%20Techniques%20final\\_%20November%202008\(2\).pdf](http://www.greenlogistics.org/SiteResources/16adc811-45bb-42f4-8fe8-39930e2e8a30_Review%20of%20Survey%20Techniques%20final_%20November%202008(2).pdf).
2. Rhodes, Suzann et al. (2012). NCFRP Report 14: Guidebook for Urban Goods Movement. Washington, DC: Transportation Research Board of the National Academies. 29-40.
3. Holguín-Veras, J. et al. (2012). *NCHRP Report 739/NCFRP Report 19: Freight Trip Generation and Land Use*. Washington, DC: Transportation Research Board of the National Academies. p. 21-36.
4. Hancock, K. (2012). *Transportation Research Circular E-C169: Measuring the Transportation System from a Supply Chain Perspective*. Washington, DC: Transportation Research Board of the National Academies.

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### **Lecture 11: Urban Freight Models**

Review of the most common models used to estimate the generation, attraction and allocation of urban freight movements. The benefits and pitfalls of urban freight modeling.

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#### **Required Readings:**

1. Anand, N. et. al. (2012). City logistics modeling efforts: Trends and gaps - A review. *Procedia - Social and Behavioral Sciences*, Vol. 39. 101–115.
2. Browne, M. and Goodchild, A. (2013). Modeling Approaches to Address Urban

Freight's Challenges: A Comparison of the United States and Europe. In *City Logistics Research: A Transatlantic Perspective*. Washington, DC: Transportation Research Board of the National Academies.

3. Gonzalez-Feliua, J. and Routhiera, J-L. Modeling urban goods movement: How to be oriented with so many approaches? *Procedia - Social and Behavioral Sciences*, Vol. 39. 89 – 100.
4. Holguín-Veras, J. et al. (2012). *NCHRP Report 739/NCFRP Report 19: Freight Trip Generation and Land Use*. Washington, DC: Transportation Research Board of the National Academies.

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**Lecture 12: Case Studies and Best Practices**

Selected case studies of city logistics strategies involving modes, terminals and regulations. Assessment of their respective effectiveness.

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**Recommended Resources:**

1. Allen, J., Thorne, G., and Browne, M. (2007). *BESTUFS Good Practice Guide on Urban Freight Transport*. Rijswijk, The Netherlands: BESTUFS Consortium.
2. SUGAR (2011) *City Logistics Best Practices: a Handbook for Authorities*. European Union, SUGAR project, 272p. [www.sugarlogistics.eu/pliki/handbook.pdf](http://www.sugarlogistics.eu/pliki/handbook.pdf)