 

URPL-GP 2250

Planning Global Cities

Urban Form and Digital Transformation of Space & Time

9/3/2024 - 12/12/2024

## Subject to Change Statement

The syllabus and course schedule may be subject to change. Changes will be communicated via email and in NYU LMS (Brightspace). It is your responsibility to check email messages and course announcements to stay current in the online phase of the course.

# Instructor Information\*

* ChengHe Guan, Assistant Professor of Urban Science and Policy [cg157@nyu.edu](mailto:cg157@nyu.edu)
* Instructor office hours: by appointment

# Course Information\*

* Course Description: The course takes an interpretative look at the spatial conditions of our rapidly urbanizing world. It focuses on comparisons and contrasts between urban development patterns of cities around the globe, such as New York City, Tokyo, Chengdu, Singapore, Accra, Istanbul, and Mumbai. By introducing multiple scales (neighborhood, city, and regional) of urban growth, the course seeks to foster an understanding of the socio-economic processes, physical planning and design practices, cultural influences, and policy interventions that influence urban design and planning. While introducing the basic analytic skills necessary for spatial interpretation, the course addresses the challenges and opportunities of future smart cities in the era of urban big data.
* Course Prerequisites: None.
* Field trips (tentative): Multiple field trips.
* Class meeting days and times: **6:45 PM – 8:25 PM Thursday**
  + Location: 60 Fifth Ave Room C14 Loc: Washington Square

# Course Requirements\*

## Class Participation

Students will be graded on (1) assignments and presentations based on course readings and material and (2) class participation and discussion

### Assignment 1

Spatial data regressions

#### Assignment 2

Park system analysis and data visualization

#### Assignment 3

Walkable cities and neighborhoods

#### Assignment 4

Presentation on final paper

#### Assignment 5

Final paper

#### Assigned Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education.

Eugenie Birch Eds. (2008) *The Urban and Regional Planning Reader*. The Routledge Urban Reader Series.

Peter Hall (2002) *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Blackwell Publishing.

All other required readings will be provided in NYU classes.

Other suggested readings:

Alex Krieger and William S. Saunders, Edited (2009) *Urban Design*. University of Minnesota Press: Minneapolis.

Zhongjie Lin and Jose L. S. Gamez (2018) *Vertical Urbanism: Designing Compact Cities in China*. Routledge, Taylor & Francis Group: London and New York.

##### Grading of Assignments

The grade for this course will be determined according to the following formula:

|  |  |
| --- | --- |
| **Assignments/Activities** | **% of Final Grade** |
| Assignment 1 | [10%] |
| Assignment 2 | [10%] |

|  |  |
| --- | --- |
| Assignment 3 | [10%] |
| Assignment 4 | [20%] |
| Assignment 5 | [30%] |
| Field trips and workshops | [10%] |
| Class participation | [10%] |

Grades

|  |  |
| --- | --- |
| A | 95-100 |
| A- | 90-95 |
| B+ | 87-90 |
| B | 83-87 |
| B- | 80-83 |
| C+ | 77-80 |
| C | 73-77 |
| C- | 70-73 |
| D | 60-70 |
| F (fail) | <60 |

# Course Schedule

## Part I The Concept of Global Cities

### Class 1. General Introduction

Course introduction: Overview of course objectives, structure, expectations, and assessment methods

Points of discussion: (1) What are global cities? Definition, characteristics, historical context, and development; (2) The rise of new global cities: Factors driving the emergence of new global cities and case studies of recent global cities; (3) The emergence of new urban form: Trends in urban development; Examples of innovative urban designs.

#### Readings

This syllabus

### Class 2. Healthy City, Well-being, and the Built Environment - U.S. Cities

Urban pandemic, the built environment, and sentiment analysis

Discussion on Healthy Cities: Concepts of urban health and well-being, strategies for promoting health in urban environments, and impact of the pandemic

**Assignment 1: Spatial data regressions.** Optional: Sentiment analysis

#### Readings

Eugenie Birch Eds. (2008) *The Urban and Regional Planning Reader*. The Routledge Urban Reader Series. Part 7. 41: Beyond Megalopolis: Exploring America’s new “Megapolitan” Geography.

Liu, C. et al. (2021) The impacts of the built environment on the incidence rate of COVID-19: A case study of King County, Washington. *Sustainable Cities and Society* 74, 103144. <https://doi.org/10.1016/j.scs.2021.103144>

Guan, C. et al. (2023) How do density, employment and transit affect the prevalence of COVID- 19 pandemic? A study of 3,141 counties across the United States. *Health & Place* 84, 103117. <https://doi.org/10.1016/j.healthplace.2023.103117>

Optional:

Bogdanowicz and Guan (2022) Dynamic topic modeling of twitter data during the COVID-19 pandemic. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0268669>

### Class 3. Urban Green Space and Parks - Tokyo, Japan

Urban park system in Tokyo. Case study – Tokyo, Japan

#### Assignment 2: Park system analysis and data visualization

#### Readings

Guan, C., Song, J., Keith, M., Akiyama Y., Shibasaki R., Sato, T. (2020) Delineating urban park

catchment areas using mobile phone data: A case study of Tokyo. *Computers, Environment and Urban Systems*, 81. <https://doi.org/10.1016/j.compenvurbsys.2020.101474>

Guan, C., Song, J., Keith, M., Zhang, B., Akiyama Y., Da, L., Shibasaki R., Sato, T. (2021) Seasonal variations of park visitor volume and park service area in Tokyo: A mixed-method approach combining big data and field observations. *Urban Forestry & Urban Greening*, 58, 126973. <https://doi.org/10.1016/j.ufug.2020.126973>

Guan, C., Zhou, Y. (2024) Exploring environmental and social equity in peri-urban parks: A mobile phone data-driven analysis in Tokyo. *Landscape and Urban Planning* 248, 105104. <https://doi.org/10.1016/j.landurbplan.2024.105104>

### Class 4. Land Use, Human Mobility, and Walkable City - Chengdu, China

The concept of TOD, case study of NYC subway line expansion, Urban and Real Estate Development, etc.

### Assignment 3: Walkable cities and neighborhoods

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 12:

Transportation Planning.

Forsyth, A. (2015) What is a walkable place? The walkability debate in urban design. *Urban Design International* 20, 4, 274–292.

Guan, C. and Forsyth, A. (2020) The influence of urban form and socio-demographics on active transport: A 40-neighborhood study in Chengdu, China. *Journal of Transport and Land Use*, 13(1), 367-388. <https://doi.org/10.5198/jtlu.2020.1697>

### Class 5 Geospatial Data Analysis Workshop on ArcGIS

**ArcGIS Training.** Optional Exercise – Suitability analysis ArcGIS installation, GIS basics, and Modeling

#### Readings

David O’Sullivan and David J. Unwin. (2010) *Geographic Information Analysis*, Second Edition.

Published by John Wiley & Sons, Inc. Chapter 1.

### Class 6. Empirical Analysis of Cities – Istanbul, Turkey

Case: Istanbul, Turkey. Guest Speaker: Istanbul and the Marmara Region (TBD) Discussion group: Final paper topics and outlines finalized

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 16: Planning for Metropolitan Regions.

### Class 7 Urban Growth Modeling Workshop on SLEUTH and AI- Enhanced Simulation

Spatial Dynamics of Urban Growth Simulation.

Case study - Envision Future Cities – Island City State: Singapore

#### Readings

Peter Hall (2002) *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Blackwell Publishing. Chapter 9. The City on the Highway.

Michael Batty (1997) Cellular Automata and Urban Form: A Primer, *Journal of the American Planning Association*, 63:2, 266-274, DOI: 10.1080/01944369708975918

Guan, C. and Rowe, P. (2018) In pursuit of a well-balanced network of cities and towns: A case study of the Changjiang Delta Region in China. *Environment and Planning B: Urban Analytics and City Science*, 45(3) 548–566. [https://doi.org/10.1177/2399808317696073](https://doi.org/10.1177%2F2399808317696073)

Gómez, J. et al. (2021) Analyzing the spatiotemporal uncertainty in urbanization predictions.

*Remote Sensing*, 13(3), 512. <https://doi.org/10.3390/rs13030512>

## Part II Spatial Transformation of Cities

### Class 8. Field Trip to the City

Details will be posted.

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 14: Growth Management, Smart Growth, and Sustainable Development.

### Class 9 Urban Design Paradigms – Mumbai, India

Urban design paradigms in Mumbai. Spatial data analysis in the Mumbai Metropolitan Area. Case: Mumbai, India

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 10: Urban Design and Visions of the City of the Future.

##### Student presentations on Assignment 1: “spatial data regressions”

Each student/group will present for 5-10 minutes and 10-15 minutes for the Q&A session. Then each group will discuss how to revise and improve assignment 1 for final paper.

### Class 10. Literature Review for Urban Analytics

Literature review of urban studies and analytics. Final paper topic selection: Choose an urban issue related to the planning and development of cities and neighborhoods

Discussion group: Final paper topics and outlines draft.

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 13: Economic Development Planning.

Peter Hall (2002) *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Blackwell Publishing. Chapter 11. The City of Enterprise.

**Student presentations on Assignment 2: “park system analysis and data visualization”**

### Class 11. Mobility and Community Development - Medellin, Colombia

Case: Urbanization in Medellin, Colombia Urban Spatial Data processing

Discussion group: Final project progress – Methods

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 7: The Social Issues.

### Class 12. Emerging Cities Around the Globe - African Cities: Accra, Ghana

Emerging cities in Africa.

Cases – “Invisible” Urbanization in Post-colonial Accra, Ghana Discussion group: Final project progress – Result analysis

#### Readings

John Levy (2009) *Contemporary Urban Planning*. Longman by Pearson Education. Chapter 18: Planning in Other Nations.

**Student presentations on Assignment 3: “walkable cities and neighborhoods”**

### Class 13. Research progress on planning global cities of student selected topics

Built environment of the US Cities Urban Green Space in Tokyo, Japan Human Mobility in Chengdu, China Other relevant topics

Individual/Group Meetings with Instructor

### Class 14. Final Presentations and Summary

Summary of the class

#### Students’ final presentations on Assignment 4 (15 minutes per person/group) Final paper due 3 days after the final class Assignment 5.

Potential Self-Organized Field Trips to Shanghai during the winter break.

# Course Policies

## Public Health Requirements and COVID-19 Student Code of Conduct

You are expected to comply with the COVID-19 Student Code of Conduct. If you violate the COVID-19 Student Code of Conduct or fail to follow your instructor's related warnings, you may be asked to leave the classroom and/or may be subject to disciplinary action. You may review the Code on [NYU Shanghai’s Community Standards page](https://shanghai.nyu.edu/campuslife/community-standards).

### Attendance and Tardiness

You are expected to attend *all* scheduled classes. If you are unable to attend a class, notify me

*before* that class.

#### Absences and Grades

* 2 absences will lead to an F for your participation grade.
* 3 absences will lead to a 5 points reduction in your final grade.
* 4 absences will lead to failure of the course.

#### Absence Exceptions

*Observance of Religious Holidays:* You may miss class for the observance of religious holidays. If you anticipate being absent because of religious observance, notify me in advance so we can create a plan for making up missed work. For more on this policy: [https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html) [calendar-policy-on-religious-holidays.html](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html)

*Competitions, Conferences, Presentations:* You are permitted to be absent from classes to participate in competitions, conferences, and presentations, either at home or out of town, as approved by the Associate Provost for Academic Affairs. Review the Undergraduate Bulletin for the conditions you must meet to obtain approval for this kind of absence.

*Extended Illness:* If you are ill and need to miss more than one week of classes, you must speak to the Health & Wellness Office. Once Health and Wellness verifies the reasons for your extended absence, I will consult with Academic Affairs and recommend the best course of action. I will not look at doctors’ notes, both for your health privacy reasons and because I cannot verify the authenticity or content of the notes.

##### Tardiness

Punctual arrival is mandatory for this class. Be on time. Please do not leave in the middle of class unless it is an emergency.

#### Late Assignments

Assignments are due **at the date and time indicated on this syllabus**. The late penalty for all Assignments is one third of a letter grade per day (an A becomes an A-, etc.) All other late assignments will earn an F.

#### Electronic Devices

*Mobile Devices:* You may not use mobile devices in class unless otherwise indicated.

*Recording Class:* To ensure the free and open discussion of ideas, you may not record classroom lectures, discussion and/or activities without my advance written permission; any such recording can be used solely for your own private use. If you have approved accommodations from the Office of Disability Resources permitting the recording of class meetings, you must present the accommodation letter to me in advance of any recording. Distribution or sale of class recordings is prohibited without the written permission of the instructor and other students who are recorded.

#### Instructional Technology

*Email Communication:* I will contact you regularly via the NYU LMS (Brightspace). You should check for emails from me (reminders, logistics, updates, etc.) at the email address connected to NYU LMS (Brightspace). Please note that I will try to respond to your emails within 24 hours. Do not expect immediate responses to emails sent late at night or on the weekends.

*Assignment Notification:* All assignments will be posted to our class NYU LMS (Brightspace) Site. You are responsible for looking at NYU LMS (Brightspace) after each class period to learn about the next homework assignment.

*Instructional Technology Tools and Assistance:* If you need background on specific instructional technology tools, such as Zoom, NYU LMS (Brightspace) and Voicethread, check the [RITS](https://wp.nyu.edu/shanghai-online_learning/) [Student Toolkit](https://wp.nyu.edu/shanghai-online_learning/). You may also email [shanghai.rits@nyu.edu](mailto:shanghai.rits@nyu.edu) for assistance.

#### Academic Honesty/Plagiarism\*

Carefully read NYU Shanghai’s *Statement on Academic Integrity* (in the [Undergraduate](https://shanghai.nyu.edu/academics/curriculum/bulletin) [Bulletin](https://shanghai.nyu.edu/academics/curriculum/bulletin)). Breaches of academic integrity could result in failure of an assignment, failure of the course, or other sanctions, as determined by the Academic Affairs office.

#### Disability Disclosure Statement\*

NYU Shanghai is committed to providing equal educational opportunity and participation for students with disabilities. It is NYU Shanghai’s policy that no student with a qualified disability be excluded from participating in any NYU Shanghai program or activity, denied the benefits of any

NYU Shanghai program or activity, or otherwise subjected to discrimination with regard to any NYU Shanghai program or activity. Any student who needs a reasonable accommodation based on a qualified disability should register with the [Moses Center for Student Accessibility](https://www.nyu.edu/students/communities-and-groups/student-accessibility.html) for assistance. Students can [register online](https://www.nyu.edu/students/communities-and-groups/student-accessibility/academic.html) through the Moses Center and can contact the Academic Accommodations Team at [shanghai.academicaccommodations@nyu.edu](mailto:shanghai.academicaccommodations@nyu.edu) with questions or for assistance.

#### Title IX Statement

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination on the basis of sex in educational programs. It protects victims of sexual or gender-based bullying and harassment and survivors of gender-based violence. Protection from the discrimination on the basis of sex includes protection from being retaliated against for filing a complaint of discrimination or harassment. NYU Shanghai is committed to complying with Title IX and enforcing University policies prohibiting discrimination on the basis of sex. Mary Signor, Executive Director of the Office of Equal Opportunity, serves as the University’s Title IX Coordinator. The Title IX Coordinator is a resource for any questions or concerns about sex discrimination, sexual harassment, sexual violence, or sexual misconduct and is available to discuss your rights and judicial options. University policies define prohibited conduct, provide informal and formal procedures for filing a complaint and a prompt and equitable resolution of complaints.

##### Links to the Title IX Policy and related documents:

* [Sexual Misconduct, Relationship Violence, and Stalking Policy](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/sexual-misconduct--relationship-violence--and-stalking-policy.html)
* [Procedures for Complaints Against Students](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/test-reporting--investigating--and-resolving-sexual-misconduct--rela.html)
* [Procedures for Complaints Against Employees](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/reporting--investigating--and-resolving-sexual-misconduct--relat.html)
* [Resource Guide for Students](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/sexual-misconduct--relationship-violence--and-stalking-resource-.html)
* [Resource Guide for Employees](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/sexual-misconduct--relationship-violence--and-stalking-resource-0.html)

## Academic Resources

### ARC Services

The Academic Resource Center (ARC) offers both individual, one-on-one tutoring as well as group sessions in a variety of ways, in a variety of courses. You can log on to [WCOnline](https://nyus.mywconline.com/index.php?logout=YES) to book an appointment with a Global Writing & Speaking Fellow or a Learning Assistant (LA). The Global Writing & Speaking Fellows conduct individual consultations on writing, speaking, reading, and academic skills coaching. LAs provide both individual and small-group tutoring support in over 30 STEM, Business, Economics, IMA/IMB, and Chinese Language classes. Visit [shanghai.nyu.edu/arc](https://shanghai.nyu.edu/arc) for more information about ARC services.

### Library Support

#### Library Services

The Library is available to support your research needs. They have access to over 27,000 print resources, 2,000 DVDs, and 1,000 databases (including over a million e-books, as well as streaming audio and video and image databases).

Librarians with expertise in your research topic are available to meet either *in person* or *online* [by](https://nyu-shanghai.libcal.com/appointments) [appointment](https://nyu-shanghai.libcal.com/appointments) or [by email](https://nyu.qualtrics.com/jfe/form/SV_893SmPggYfKqOz3?Q_JFE=qdg) to help you navigate the research process. Our library team features experts in Business, Arts & Humanities, STEM, Social Sciences & Economics, and data tools & resources. Ask us how we can assist you in developing a research question and formulating a research strategy, to selecting databases, requesting materials, and citing your sources. Visit [shanghai.nyu.edu/library](http://shanghai.nyu.edu/library) for more information on:

* 24/7 access to e-books, e-journals, streaming media, and databases
* Booking one-on-one consultations for research help
* [Asking the Library](https://shanghai.nyu.edu/academics/library/services/aal) questions via chat or email

##### Electronic Reserves

Students can access course readings using their NYU credentials for courses they currently enrolled in at <https://ares.library.nyu.edu/>.

##### Interlibrary Loan Service

For materials not available to you immediately, you can request scanned copies of a book chapter or journal article through our [Interlibrary Loan (ILL) service](https://ill.library.nyu.edu/). If you don't know which chapter you need, you can request a Table of Content through ILL.