PLANA 4208 Planning Methods

Fall 2025

Instructor: Aurash Khawarzad

Email: aak2263@columbia.edu

Time: Wednesday, 3:00PM- 5:00PM

Room: Fayerweather Hall 209

Office hours: Wednesday 2:00-3:00pm. Email to schedule your visit

Course presentations:

https://drive.google.com/drive/folders/1ZdjlYp3-OirBJTzZovt1GFdPEgOA_9Kk?usp=sharing

Teaching Assistant (TAs):

- Mauricio Enrique Rada Orellana (mer2245@columbia.edu) - Wednesday 7-8pm section
- Carolyn Swope (cbs2164@columbia.edu) - Thursday 2-3pm section
- Daniela Perleche Ugas (dp3167@columbia.edu) - Thursday 3-4pm section

Course description

This course introduces students to research methods for use in urban planning practice. Students will engage in a comprehensive study of urban conditions by selecting a specific site and theme of interest. Emphasis will be placed on the application of methods, preparing students to conduct rigorous, grounded research that informs real-world planning decisions.

Students will generate analysis from both primary and secondary data rather than starting with a predetermined hypothesis. This approach allows for a more exploratory process that responds to the complexity of urban environments. Students are encouraged to study urban space in a nuanced and holistic way, using research as a process of discovery.

Students will learn and apply both qualitative and quantitative research methods through iterative cycles of data collection and analysis. Qualitative methods will include field observation and interviews. Quantitative methods will include statistical analysis and designing and conducting surveys. Together, these methods equip students with a versatile toolkit for exploring the social, ecological, spatial, and political dynamics of urban life.

For research and presentation needs, this course will teach foundational coding skills using Python and HTML. Python will support collecting, processing, and analyzing datasets; and HTML will be used to structure and present work online. Coding will be used in concert with other commonly used productivity

software, such as Microsoft Office, Apple iWork, and Google Workspace, among others. These tools will allow students to utilize complex datasets, generate compelling visuals, and communicate research in accessible and dynamic format.

In addition to the lecture, students are strongly encouraged to attend one of the three weekly recitation sessions led by TAs.

- Session 001, Wednesdays 7-8pm, 204 Fayerweather (Mauricio Rada)
- Session 002, Thursdays 2-3pm, 202 Fayerweather (Carolyn Swope)
- Session 003, Thursdays 3-4pm, 204 Fayerweather (Daniela Ugas)

Course objectives

- Understand how research can be used to explore and interpret urban planning issues.
- Plan and complete a research project focused on a specific urban site and theme.
- Use both qualitative and quantitative methods to gather and analyze data.
- Practice key research techniques such as observation, interviews, and data analysis.
- Work with primary and secondary data to study social, spatial, and environmental aspects of cities.
- Build basic skills in coding to support data collection, analysis, and presentation. Organize research findings into a digital, interactive log using assignment deliverables.
- Communicate research clearly through visual and written formats.

Course structure

- Lectures take place weekly and will introduce research methods, explain assignment expectations, and include time for questions and discussion.
- Recitation sessions also occur weekly and will offer hands-on tutorials for applying research methods and completing assignments. These sessions will provide time for guided support, peer collaboration, and Q&A. There will be no recitation the first week (Sept 3).

Textbooks and course resources

There is no required textbook for this course. Assigned readings, including articles and book chapters, will be posted on Canvas.

Participation

Participation is key for this course. Class time will include valuable details regarding research methods, assignments and group discussions, which will not be repeated in online material. Similarly, recitation sessions will be valuable times for questions and discussion. Students not attending a full session of class without legitimate reasons will be recorded as absent. For each unexcused absence, one point will be deducted from the attendance grade. If you will be observing any religious holidays or personal days this

semester that will prevent you from attending a regularly scheduled class or interfere with fulfilling any course requirement, notify the instructor or TAs within the first two weeks of the semester. Otherwise, any unexcused absence will be treated as a missed class.

Assignments

- Bi-weekly assignments will be due starting on September 17th. Each assignment will introduce a new research method. Students will complete assignments using a mix of analog and digital tools, including some basic coding with software applications. Detailed instructions, templates, and a grading rubric will be provided for each assignment.
- All assignments will be compiled in an online research log, which will support data collection, analysis, and presentation throughout the semester. The final assignment will be the compilation of all your assignments in the research log, with the addition of a reflective analysis of your research, which will focus on how your project evolved over time and the conclusions you reached.
- Assignments will be created using the online tool Replit. By supporting Python, and HTML, Replit will allow students to produce interactive displays for the analysis of quantitative and qualitative data, including data visualizations from statistical analysis, and more.

Grading

- Attendance and participation - 10%
- Regular assignments - 65%
- Final project (research log) - 25%

Schedule

<u>September 3, 2025</u>

- Topic: Overview of course
    - The purpose and potential of research as a tool for engaging with urban life.
    - How to create a research design and formulate research questions.
    - Identifying primary and secondary sources.
    - Course structure and assignments.

<u>September 10, 2025</u>

- Topic: Identifying a research site and theme
    - Designing a research project that considers the social and ecological dimensions of place.
    - Combining quantitative and qualitative research for a mix methods approach.
    - Introduction to literature review: Identifying and synthesizing existing research.
    - Instructions for Assignment #1.
- Reading for this week:

- Zamani, B., & Babaei, E. (2020). A Critical Review of Grounded Theory Research in Urban Planning and Design. *Planning Practice & Research*.
- Creswell, J.W., 2014. *Research design: Qualitative, quantitative, and mixed methods approaches*. 4th ed. Los Angeles: Sage. Ch. 1: The Selection of Research Design (pp. 22-39 of pdf).

<u>September 17, 2025</u>

- Topic: Data collection for environmental and social research
  - Collecting digital and analog primary and secondary data.
  - Identifying and accessing open-source datasets for both environmental and social research, including government databases, NGOs, academic portals, and crowdsourced platforms.
  - Environmental data: air and water quality, climate change indicators, pollution levels.
  - Social data: demographics, public health, economic indicators, housing statistics.
- Reading for this week
  - Groat, L. & Wang, D. (2013). *Architectural Research Methods*, 2nd ed. Wiley. Ch. 3: "Systems of Inquiry and Standards of Research Quality " (pp. 63–99).
  - Creswell, J.W., 2014. *Research design: Qualitative, quantitative, and mixed methods approaches*. 4th ed. Los Angeles: Sage. Ch. 2: Review of the Literature (pp. 39-58 of pdf).

<u>September 24, 2025</u>

- Topic: Fieldwork methods part 1
  - Site observation: documenting spatial patterns, land use, and everyday activities
  - Engagement with place: building insight through repeated presence and attention to physical and social environments
  - Incorporating lived experience: centering personal and community perspectives in field observation and analysis
- Reading for this week:
  - Corburn, J., 2005. Street science: Characterizing local knowledge. *Street Science: Community knowledge and environmental health justice*. Cambridge: MIT Press. Ch. 2.
  - Gehl, J., & Svarre, B. (2013). *How to study public life*. Island Press.
- Assignment #1 due: Site Selection and Overview
  - Select a research site and compose your research question. Begin compiling data in your research log.
  - Detailed instructions: https://shorturl.at/G5lmq

<u>October 1, 2025</u>

- Topic: Fieldwork methods part 2

    - Interviews: structured, semi-structured, and informal conversations to gather in-depth qualitative data
    - Sketching and field notes: documenting observations through writing and visual methods
    - Walking/traversing methods: using movement through space as a mode of inquiry
- Reading for this week:
    - Duminy, J., 2014. Using the case study approach to inform planning practice and research in Africa. In Silva, E.A. et al., eds. *The Routledge Handbook of Planning Research Methods*. London: Routledge. Ch. 5.5.
    - Sorkin, M. (2009). *Twenty Minutes in Manhattan*. London: Reaktion Books.

October 8, 2025

- Topic: Preparation and organization of primary data collected
    - Interviews: structured, semi-structured, and informal conversations to gather in-depth qualitative data
    - Transcribing and categorizing data from notes
    - Formatting and cataloging data for analysis
    - Other
- Reading for this week:
    - Emerson, R., Fretz, R., & Shaw, L. (2011). *Writing Ethnographic Fieldnotes*. Chicago: Univ. of Chicago Press. Ch. 2.
    - Bazeley, P. (2013). *Qualitative Data Analysis: Practical Strategies*. Sage. Ch. 3 Managing and preparing data for analysis.
- Assignment #2 due (October 10th):
    - Conduct one site visit and produce detailed field notes + sketches. Submit a short narrative with scans/photos of sketches documenting spatial patterns and social activity.
    - Submit a literature review for five of the ten sources you submitted in the bibliography for your first assignment. Include the source and a brief annotation summarizing the central research question, methods, and relevance to your topic.
    - Download one dataset for your research project. Process the data by cleaning and formatting it in preparation for analysis.
    - Detailed instructions: https://docs.google.com/document/d/1s6IMeSHpvYqCeHEQhv1J9kUfDqFfbg1oYy-yZywhz8Q/edit?usp=sharing

October 15, 2025

- Topic: Processing, organizing, and applying secondary data sets
    - Downloading and managing large datasets

- Cleaning and repurposing data from public agencies, NGOs, and academia
- Integrating large data sets for social and environmental research

October 22, 2025

- Topic: Statistical analysis part 1
  - Introducing foundational statistical concepts for urban research.
  - Exploring types of data, frequency distributions, and graphical representation.
  - Understanding measures of central tendency (mean, median, mode) and variability.
  - Using descriptive statistics to summarize patterns in planning related datasets.
- Reading for this week:
  - Ewing, R. and Park, K., 2020. Basic quantitative research methods for urban planners. Chicago: APA. (Ch. 4: Planning Data and Analysis and Ch: 5: Conceptual Frameworks)

October 29, 2025

- Topic: Statistical analysis part 2
  - Basic principles of probability and statistical inference.
  - Introduction to hypothesis testing
  - Exploring correlation as tools for detecting association.
- Reading for this week:
  - Ewing, R. and Park, K., 2020. Basic quantitative research methods for urban planners. Chicago: APA. (Ch. 9: Hypothesis Testing and Ch 10: Association Between Variables).

November 5, 2025

- Topic: Statistical analysis part 3
  - Using regression analysis for identifying and measuring relationships between variables.
- Reading for this week:
  - Continue from previous week
- Assignment #3 due:
  - Design a 10-question survey relevant to your research site/theme. Pilot survey with at least 3 classmates, revise based on feedback and submit.
  - Process data collected from primary and secondary sources. Produce two tables and/or visualizations from your analysis.
  - Detailed instructions: https://docs.google.com/document/d/1E1vFgB6QNfezAFn35fhD-kqarv8b1j-BU2p-WbM9-s0/edit?usp=sharing

November 12, 2025

- Topic: Interpretation and application
    - Synthesizing findings across methods to develop coherent analyses.
    - Translating research into planning practice, recommendations, and design proposals.
    - Understanding the politics and ethics of interpretation and communication.
    - Engaging critically with dominant frameworks of planning knowledge.

November 19, 2025

- Topic: Statistical analysis exercise and TA presentations
    - Communicating complex issues to both planning professionals and the general public.
- Assignment #4 instructions: Include quantitative analysis in the final assignment. See detailed instructions here: https://docs.google.com/document/d/1z8GMioE18yA8livToytwqZGWt71AhyEiJl5Y0SyiHxo/edit?usp=sharing

November 26, 2025

No Class — Thanksgiving Break

December 3, 2025 (Last class)

- Topic: Student presentations

Final assignment due December 14th

See instructions here: https://docs.google.com/document/d/1W-Xg7kzVPClCUrh6f3MvKAHqy-yWwgEZAn4pF7CEBnw/edit?usp=sharing

Writing Assistance

The strength of GSAPP and the urban planning program is the diversity of experiences among its community members. However, with the diversity of languages, academic writing in English is a difficult art to master. While you will gain practice in communicating to diverse audiences in this class, 1) the writing center is a great resource that you should feel welcome to take advantage of: https://www.college.columbia.edu/core/uwp/writing-center and TAs can provide assistance.

Statement of academic integrity

Any test, paper or report submitted by you and that bears your name is presumed to be your own original work that has not previously been submitted for credit in another course unless you obtain prior written approval to do so from the instructor.

In all of your assignments, including your homework or drafts of papers, you may use words or ideas written by other individuals in publications, web sites, or other sources, but only with proper attribution. "Proper attribution" means that you have fully identified the original source and extent of your use of the words or ideas of others that you reproduce in your work for this course, usually in the form of a footnote or parenthesis.

As a general rule, if you are citing from a published source or from a web site and the quotation is short (up to a sentence or two) place it in quotation marks; if you employ a longer passage from a publication or web site, please indent it and use single spacing. In both cases, be sure to cite the original source in a footnote or in parentheses. If you are not clear about the expectations for completing an assignment or taking an examination, be sure to seek clarification from the instructor or your assigned TAs beforehand.

Specific instructions will be provided in this course for using Artificial Intelligence (AI) tools. It is recommended to use AI Large Language Models, such as OpenAI ChatGPT and Google Gemini, as a search engine for identifying information that warrants further investigation, and for technical tasks, such as coding. Note that the information produced by AI generative tools may be unreliable, inaccurate, biased, outdated, or copyrighted. If you find yourself uncertain about the appropriate ways and circumstances to employ it, please feel free to seek guidance from your instructor. Please be aware that each student is responsible for assessing the validity and applicability of any submitted AI output, and violations of this policy will be considered academic misconduct.

Finally, you should keep in mind that as a member of the campus community, you are expected to demonstrate integrity in all of your academic endeavors and will be evaluated on your own merits. So be proud of your academic accomplishments and help to protect and promote academic integrity at Columbia University. The consequences of cheating and academic dishonesty - including a formal discipline file, possible loss of future internship, scholarship, or employment opportunities, and denial of admission to another graduate program - are simply not worth it. Students must adhere to the principles of academic honesty (https://www.arch.columbia.edu/honor-system) and ensure that all work submitted is fully theirs and adhere to the GSAPP Plagiarism Policy (https://www.arch.columbia.edu/plagiarism-policy) set forth. Students found guilty of plagiarism or academic dishonesty will be subject to appropriate disciplinary action.