IA 310 Mapping World Cities

Lafayette College Syllabus, Fall Semester 2024

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COURSE INFORMATION

Catalog Description: This course takes a transnational perspective on the "Urban Century," in which, for the first time in human history, the majority of people live in urban areas. Students will study the development and changing footprint of world cities and world city networks, considering issues including migration, diasporas, land use, transportation, gentrification, agglomeration, and sustainability. This course takes a hands-on approach, investigating topics through a close engagement with mapping and geospatial data through laboratory exercises.

Times: 2:45-4:00, Mondays and Wednesdays.

Location: AEC 200.

Drop-In Lab Hours: 2:00 - 4:00 PM, Fridays, in Oeschle Center for Global Education 101

FACULTY INFORMATION

Instructor: Caleb Gallemore, Ph. D.
Pronouns: He/him/his; dia, if you speak Bahasa
Office Location: Oechsle Center for Global Education 217
Office Hours (times you can drop in without an appointment): Mondays, 11:00 AM to 1:00 PM; Tuesdays, 12:30 PM - 2:15 PM, or by appointment: 30 minute meeting; 15 minute meeting
Office Phone: 610-330-5368 (Ext. 5368)
Email (My preferred mode of contact): gallemoc@lafayette.edu

COURSE OVERVIEW

Many have designated the 21st Century the "Urban Century." For the first time, the majority of the world's population live in urban areas. Cities are not only sites of high population density, they play a commanding role in global economics, politics, and culture. In this course, we will study the emergence of world cities - urban areas that have emerged as hubs of transnational connections that have an outsize influence on global society.

We will study world cities both in terms of the growth of their physical infrastructure, such as public transportation networks and housing, and on the basis of their social infrastructure, the economic, financial, political, and cultural processes that make them so important.

To ground our study of world cities, we will tend to use a combination of theoretical discussion, a case study, and in-depth mapping and geospatial analysis. Most weeks combine discussion of a general topic using case-study examples, which will inform a geospatial laboratory exercise in following weeks.

This course is a seminar, and we spend time working in teams as well as all together in discussion. I am committed to creating a learning environment that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, nationality, etc.) We will honor the diversity of our classmates.

Course Objectives:

1. Introduce students to the role of world cities in contemporary global society
2. Discuss the social, economic, political, and physical processes driving the evolution of world cities
3. Explicate the transnational connections in which world cities are embedded
4. Develop students' skills in mapping and geospatial data analysis and interpretation

Learning Outcomes:

Upon completing this course, you should be able to do the following:

1. Explain why world cities have emerged and why they are an important force in global society
2. Evaluate policy and political questions regarding world cities and urbanization more broadly
3. Describe spatial patterns within cities and explain how these patterns interact with difference and inequality
4. Produce effective maps at urban, national, and global scales

5. Conduct basic geospatial analysis using both raster and vector data

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COURSE MATERIALS

All materials will be made available via links in this syllabus or on the course Moodle site.

COURSE ASSIGNMENTS

Assignments:

***Tutorials (200 points)*:** The five tutorials are short assignments that we will work through in part in class that will help you learn how to apply the techniques we learn about on your own. Tutorials will feature a series of activities and questions that you must complete by the start of class on the following tutorial day. I will grade these items with a ✔-, ✔, or ✔+. ✔- indicates that you have not adequately fulfilled all the tasks in the tutorial. ✔ indicates that you met my expectations for the tutorial. ✔+ indicates a particularly excellent job. You are allowed to redo a ✔- tutorial to receive a ✔. When we have completed all the tutorials, I will assign points based on the number of each type of check you have. If you have all ✔s, you will receive full credit, and ✔+s will balance out ✔-s. If you have more ✔+ scores than you need to balance out your ✔-s, I will apply them to your quiz grade.

***GIS Paper Methods Explanation* (100 points):** Once over the course of the semester, you will lead a discussion on an example cutting-edge GIS paper dealing with urban geography. We'll assume that folks in the class are able to understand the main ideas and findings in the paper. Your job is to go through the methods section of the paper and figure out what data they used - and how they used it - to come to their conclusions. You should provide us some type of visual aide/s (slides, etc.) to help us understand what the authors did, walk us through the methods, and help us start a discussion about how the analysis was conducted. You should also connect the work to some of our previous discussions of urban history, geography, and politics.

***Quizzes (200 points)*:** Every Monday, except where noted in the syllabus, we will use some randomization game to determine if we have a quiz. Quizzes will consist of three short-answer questions and, while they will focus on the readings for the class day in question and concepts from the previous week, may be comprehensive. You can find possible question banks for the quizzes linked from this syllabus. Like the tutorials, I will grade the quizzes using a ✔-, ✔, or ✔+. ✔- indicates that you have not adequately answered all three questions. ✔ indicates that you have adequately answered all three questions. ✔+ indicates a particularly excellent job. At the end of the semester, I will assign points based on the number of each type of check you have. If you have all ✔s, you will receive full credit, and ✔+s will balance out ✔-s. If you have more ✔+ scores than you need to balance out your ✔-s, I will apply them to your tutorial grade.

World City Journal *(200 points)*: By the second day of week 2 of the semester, you must pick a city to study throughout the class. It can be any city you want so long as 1) you are interested enough in it to want to approach it from a bunch of different angles and 2) it is not located in a country you consider home (in other words, it should be international, from your point of view). It is often helpful to select cities that have good data portals, though this is not necessary. Every other week between weeks 4 and 10 of the semester, you will submit a 2-3-page, double-spaced response to a prompt about your city. The prompts are designed to help guide you through the early phases of brainstorming and research to develop an interesting final project. Responses should be cited in APA format and should rely on peer-reviewed sources whenever possible. Each response will be worth 50 points. They will be due by 11:59 PM on Sundays.

Final Project (300 points)

Your primary individual course project will be to build on your World City Journals to create your own webpage using Quarto (we'll get lots of practice with it in this class) tracing an issue of interest in your city over time using geospatial tools. The final output should be narrative, aimed at a broad audience interested in the spatial analysis of cities. It should contain historical and theoretical analysis, using at least 10 reputable sources (either peer-reviewed or produced by a credible research organization), cited in APA format, as well as maps and graphics that you create yourself using R. The final part of the webpage should include a "Methods and Data" section that describes how you generated your maps and graphics and includes citation information for your data sources (you can look at how I have set up our tutorials for an idea of how to approach this). When you are done, your webpage should be about 2500 to 3500 words (counting the code you use to generate graphics and conduct analyses), but I'm not too picky about length, within reason. The finished product should be polished, tell a clear and engaging story, and invite the viewer to explore your city from a geospatial perspective. I will encourage you to post your finished product on R Pubs for others to use and learn from.

Grading Policy:

Your final grade will be based on the total points you have earned by the end of the semester, as follows:

Grade	Points Range
A	934-1000
A-	900-933
B+	867-899
B	834-866
B-	800-833

C+	767-899
C	734-766
C-	700-733
D+	667-699
D	634-666
D-	600-633
F	0-599

COURSE POLICIES AND STATEMENTS

Absence Policy: Attendance is of course very important for the class. Lecture and discussion days will be your opportunity to dig into the course materials. You get two absences for free, no questions asked, but after that you will lose 100 points from your final grade for each additional unexcused absence (that is, each absence either without a Dean's excuse or due to a religious holiday). If you have a legitimate reason for your absence, please be sure to talk to me well in advance (or if there is an emergency, as soon after the absence as possible).

Academic Integrity: To maintain the scholarly standards of the College and (of equal importance) ethical standards, it is essential that written assignments be your own work, just as is expected in examinations and class participation. Any student who practices academic dishonesty is subject to a range of penalties and instances of academic dishonesty (including plagiarism) will be referred to the Office of the Dean of the College for appropriate action in accordance with the most recent version of the Lafayette College Student Handbook.

Disability Statement: In compliance with Lafayette College policy and equal access laws, I am available to discuss appropriate academic accommodations that you may require as a student with a disability. Requests for academic accommodations need to be made during the first two weeks of the semester, except for unusual circumstances, so arrangements can be made. Students must register with the Office of the Dean of Advising and Co-Curricular Programs for disability verification and for determination of reasonable academic accommodations.

Due Dates and Late Work: Late work will not be accepted and will receive zero points, with three exceptions:

- Dean's Excuses: Any Dean's Excuses allowing for late work are acceptable.

- Serious Emergencies: For serious emergencies, I will decide whether your late work may be accepted for full or reduced credit. Serious emergencies include things like serious illness, accidents, natural disasters, and university server outages. Email me information about your emergency and request approval to make up the assignment or exam. If you receive approval, we will make a plan for you to make up the work.
- All Other Unexcused Late Work: Unexcused late work includes coursework that is turned in late because of things like job-related, technical, or other personal issues. To request an extension on an assignment for these reasons, you must request approval **before** the final deadline.

Course Communication:
All pertinent class communication between the instructor and students must be conducted exclusively through Lafayette College email. Thus it is the responsibility of students to check their Lafayette College email account for all significant information and updates on class cancellations in the event of threatening weather conditions. Communication between the instructor and students via personal email accounts (e.g., @gmail.com or @yahoo.com) will not occur.

I try to be available to students as much as possible, but I cannot help you if you do not let me know when you need help. Please use my office hours - or email me to schedule an appointment at another time - whenever you feel like something in the class is unclear, you are concerned about your performance in the class, or would like to talk about anything else about the course - or, for that matter, about anything else.

I really like it when people email me or ask me things about the class. It makes me feel like you are interested and that you care about the course, which makes me happy, so please talk to me about whatever interests or concerns you. Generally I respond to email quite quickly, certainly within 2 days, except over the weekend. I can try to answer questions about course materials via email, but I have found that email is not very good for explaining things in detail, so it is probably best if you have several substantive questions to come by my office hours or schedule an appointment.

Proper Use of Course Materials: At Lafayette College, all course materials are proprietary and for class purposes only. This includes posted recordings of lectures, worksheets, discussion prompts, and other course items. Such materials should not be reposted. Online discussions should also remain private and not be shared outside of the course. You must request my permission prior to creating your own recordings of class materials, and any recordings are not to be shared or posted online even when permission is granted to record. Because Pennsylvania is a two-party consent state, you also need permission of your fellow classmates to record Zoom meetings. If you have any questions about proper usage of course materials feel free to ask me. Also, if you have any concerns with being recorded during the course please let me know.

Policy on Privacy and Moodle: Moodle contains student information that is protected by the Family Educational Right to Privacy Act (FERPA). Disclosure to unauthorized parties violates federal privacy laws. This course uses Moodle; Moodle will make student information visible to others in this class. Please remember that this information is protected by these federal privacy laws and must not be shared with anyone outside the class.

Generative AI Policy: Students are allowed to use advanced automated tools (artificial intelligence or machine learning tools such as ChatGPT or Dall-E 2) on assignments in this course if that use is properly documented and credited. For example, text generated using ChatGPT-4o should include a citation such as: "Chat-GPT-4o. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI. https://chat.openai.com/" Material generated using other tools should follow a similar citation convention. This also applies if you use a tool for coding assistance as part of your tutorial or project work.

Credit Hours: The student work in this course is in full compliance with the federal definition of a four credit-hour course. Please see the Lafayette College Compliance webpage for the full policy and practice statement.

Preferred Pronouns: I ask of you to please be mindful and respectful at all times of preferred gender pronouns and the names each of us wants to be called. Keep in mind that those are not fixed and can change over the course of the semester. Kindly correct anyone who gets your preferred gender pronoun and name wrong.

Unforeseen Circumstances: I reserve the right to change this syllabus in the event of unforeseen circumstances.

COURSE OUTLINE

Week	Monday	Wednesday
1 Aug. 26, 28	**Why do we have cities? (Slides)**	**Cities before globalization (Slides)** Evans, et al. (2013). Uncovering archaeological landscapes at Angkor using Lidar. *PNAS*, 110(31), 12595-12600. Thompson, et al. (2022). Ancient Maya lowland neighborhoods: Average nearest neighbor analysis and kernel density models, environments, and urban scale. *PLoS One*, e0275916. (Discussant: Baris) **Sign up for an article to cover on this sheet.**
2 Sept. 2, 4	**Globalizing and commercializing cities (Slides; Lecture Video; Quiz Question Bank)** Rahman, et al. (2016). Translating text into space for mapping the past territory of a city: A study on spatial development of Dhaka during the Mughal period. *City, Territory, and Architecture*, 3(7). Bai, X., et al. (2024). Mapping the past with historical geographic information systems: Layered characteristics of the historic urban landscape of Nanjing, China, since the Ming Dynasty (1368-2024). *Heritage Science*, 12, 283.	**Tutorial: Introducing geospatial analysis in R (Slides; Lecture Video)** Lovelace, et al. (2024). *Geocomputation in R*. CRC Press. Chapter 2, Chapter 3 (Sections 3.1 and 3.3). Equitable Equations (2023). Learn R in 39 Minutes. **Please watch this twice!** **Sign up for a city for your journal and final project on this sheet.**
3 Sept. 9, 11	**Imagining life in pre-industrial cities 1 (Quiz Question Bank)** Kanisetti, A. (2019). A day in ancient Ujjain. *Echoes of India Podcast*. Metzger, D. (2016). Ancient Greek theater. *Literature and History Podcast*. (Stop about an hour in, when he starts talking in detail about Greek dramatic meter). Virtual Angkor: Angkor 360 Virtual Angkor: Scenes	**Imagining life in pre-industrial cities 2** *The epic of Gilgamesh*, Opening passage Aristotle, *The politics*, Book 7, Excerpts Kamo no Chōmei, *Hojoki*, Excerpts Ibn Khaldun, *The Muqqadimah*, Excerpts Machiavelli, *The prince*, Chapter 10

	DECIMA (2021). Maps and mini-projects. University of Toronto. Maina, et al. (2021). Seoke: First capital of the Bangwaketse.	
4 Sept. 16, 18	**Industrialization and urban transformations (Slides, Lecture Video, Quiz Question Bank)** Kim, et al. (2019). Competing space and place identity with landscape change analysis using Web GIS through Singapore historical maps (1828-2015). *Singapore Journal of Tropical Geography*, 40, 181-198. (Discussant: Sidath) Bogart, et al. (2022). Railways, divergence, and structural change in 19th century England and Wales. *Journal of Urban Economics*, 128, 103390. (Discussant: Peyton)	**Tutorial: Basic vector geoprocessing in R: Public Transportation in 20th Century Manila (Slides)** Lovelace, et al. (2024). *Geocomputation in R*. CRC Press. Chapter 4 (Section 4.1-4.2); Chapter 5 (Section 5.1-5.2). Rimban, et al. *Tranvia: Ang mga Riles sa Kamaynilaan*. (30 minutes; subtitled) **Due by 11:59 PM Sunday: World City Journal response: Summarize the most important points in the history of the city you have chosen. How does its current shape and/or culture reflect historical events and pressures that have affected its evolution? Are there any notable historical accounts of the city that help us understand what it was like in different time periods?**
5 Sept. 23, 25	**Imagining commercializing and industrializing cities (Quiz Question Bank)** Buyō Inshi (1816). *Matters of the world: An account of what I have seen and heard*. Excerpts Engels, F. (1845 [1887]) *Condition of the working class in England*. Pp. 44-49 (stop when he starts talking about Dublin). De Bois, W. E. B. (1899). *The Philadelphia negro: A social study*. Pp. 287-299 (stop at section 45).	**Guest lecture: John Clark, Lafayette College Libraries: Cities and their Hinterlands: The case of pulp and paper in the American Northeast** **MEET IN OESCHLE CENTER FOR GLOBAL EDUCATION 101**
6 Sept. 30, Oct. 2	**What and why are cities? Combined class discussion with FYS 87, MEET IN AEC 315 (Class Slides)** Bevan, R. (2014). What makes a city a city - and does it really matter anyway? *The Guardian*, 8 May.	**Tutorial Introduction: Historical urban GIS: Easton Cemetery Project** **Due by 11:59 PM Sunday: World City Journal response: What data sources are available that can help you understand the historical evolution of the city you have chosen? Have there been any historical or archaeological GIS projects of note in the city,**

	Scarborough, V. L., & Isendahl, C. (2020). Distributed urban network systems in the tropical ecological record: Toward a model for urban sustainability in the era of climate change. *The Anthropocene Review*, 7(3), 208-230. ("An Integrated Past to Present…" & "An integrated model for…") UN SDG 11 Targets **No quiz!**	**and, if so, what types of information have they made available? Are any archival maps of the city available from sources like the David Rumsey map collection or from local library archives? What periods do these cover and what uses might you make of them? Can you use any of this information to shed light on important points in the city's history that you discussed in your previous journal? How?**
7 **Oct.** **7, 9**	**Historical urban GIS: Easton Cemetery Visit** **No quiz!**	**Tutorial: Advanced vector geoprocessing in R: Redlining in Chicago** The Root. (2019). Redlining: The origin story of institutional racism. 25 April. Planet Money (2020). Rethinking Black Wealth. 07 October.
8 **Oct.** **14, 16**	**No class - Fall break!**	**The state of play: World cities and "winner take all" urbanism (Slides)** Sassen, S. (2005). The global city: Introducing a concept. *Brown Journal of World Affairs*, 9(2): 27-43. Leffel, et al. (2022). Divergence of the world city system from national economies. *Global Networks*, 23(2), 459-477. **Due by 11:59 PM Sunday: World City Journal response: What are some of the most pressing and/or interesting issues in your chosen city at present? How prominent is your city in the global world-city network? How are these current issues connected to the historical issues you addressed in your previous journal entries? Which of these issues do you think you would want to pursue in your final project? Why?**
9 **Oct.** **21, 23**	**Contemporary urban spatial forms (Slides; Quiz Question Bank)** Zhou, et al. (2022). Satellite mapping of urban built-up heights reveals extreme infrastructure gaps and inequalities in the Global South. *PNAS*, 119(46), e2214813119.	**Tutorial: Data Cleaning and Downscaling in R: Public Housing and Ethnic Geographies in Singapore** Bocquet, D. (2015). Living in Singapore: Housing policies in nation building processes, social control, and the market. *Territorio*, 74, 35-43.

	Sun, et al. (2024). Recognizing urban shrinkage and growth patterns from a global perspective. *Applied Geography*, 166, 103247. (Discussant: Prem)	
10 Oct. 28, 30	**Rural-urban migration and informal housing (Slides)** Gizelis, et al. (2021). Conflict on the urban fringe: Urbanization, environmental stress, and urban unrest in Africa. *Political Geography*, 86, 102357. Owusu, et al. (2021). Towards user-driven earth observation-based slum mapping. *Computers, Environment and Urban Systems*, 89, 101681.	**Tutorial Catch-up Workday** **Due by 11:59 PM Sunday: World City Journal response: Reflecting on all your previous journal entries, select an issue in your city that you can explore over time using geospatial analysis? What types of data and analytic techniques could you apply in your work? What overall narrative or message do you think might emerge?**
11 Nov. 4, 6	**Intracity transport networks (Slides, Slides)** Mwesigwa, et al. (2024). Evaluating the level of access and equity of the bus rapid transit (BRT) system: The case of Dar-Es-Salaam, Tanzania. *Journal of Transport Geography*, 119, 103953. (Discussant: Maggie)	**Extra Credit Tutorial: Urban Transportation Modeling in R** Lovelace, et al. (2024). *Geocomputation in R*. CRC Press. Chapter 13. **Reproduce all graphics with the provided code and answer exercises E1-E5**.
12 Nov. 11, 13	**Intercity transport networks (Quiz Question Bank)** Rodrigue, J.-P. (2022). The geography of maritime ranges: Interfacing global maritime shipping networks with hinterlands. *GeoJournal*, 87, 1231-1244. (Discussant: Nick) Odell, et al. (2022). Detecting shifts in metropolitan structure: A spatial network perspective. *Environment and Planning B*, 49(7). (Discussant: Aidan)	**Guest Lecture: Prof. Bernhardt: Urban Transportation in the US, AEC 315** 9 reasons the US ended up so much more car-centric than Europe. *Mother Jones*. (2014)
13 Nov. 18, 20	**Tutorial Catchup/Final Project Workday** Leffel, et al. (2023). Not so polycentric: The stratified structure and national drivers of transnational municipal networks. *Cities*, 143, 104597. (Emil)	**Final Project Workday** **Transportation Modelling Tutorial Due**
14 Nov. 25, 27	**Comparative cities exercise with FYS 87, AEC 315** **C40 Cities Summit Materials** **No quiz!**	**Thanksgiving Break - No Class!**

15 Dec. 2, 4	**Final Project Workday** **No quiz!**	**Final Project Workday**
Finals	**Final Projects Due Wed. Dec. 18, by 11:59 PM**	