PPD 427L
Geographic Information Systems & Planning Applications
Units: 4
Spring 2025 | Mondays 6:00 PM - 9:20 PM
Section: 51145R | Location: VPD 106

Instructor: Pedro Spindler-Ruiz, Ph.D.
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Office Hours: By appointment (in person, by phone or Zoom)

Course Description/Overview

The purpose of this course is to introduce students to GIS technologies and increase their understanding of the varied ways these capabilities are leveraged by cities, non-profits and the public sector to advance their missions and work. While students about various GIS mapping tools, the core mapping program used will the ESRI's ArcGIS Pro. The students will also learn how to download, clean and import data into ArcGIS to create maps. Ultimately, the students will use online tools like ArcGIS StoryMaps to share their maps to enrich their analysis. No prior coding or GIS experience necessary.

Readings
There are two required readings for this course with an option third book. The books are:

- Brewer, Cynthia (2015). *Designing Better Maps: A Guide for GIS Users*. Redlands, CA: ESRI Press.
- Gorr, Wilpen and Kurland, Kristen. 2021. *GIS Tutorial for ArcGIS Pro 20.8*. Redlands, CA: ESRI Press.
- Acock, Alan. *A Gentle Introduction to Stata*. College Station, TX: Stata Press.

Learning Objectives

- ✓ Students will develop skills for organizing and creating ArcGIS StoryMaps that integrate maps to help tell a story of a problem and potential solutions
- ✓ Students will become familiar with data and GIS methods to analyze neighborhoods and other places by collecting and analyzing census data and become competent in using state-of-the-art tools like Social Explorer and ArcGIS Pro.
- ✓ Students will learn how to use maps to create a narrative that describes social phenomena in communities and change over time
- ✓ Students will improve their communication skills through oral and visual presentations of their work.
- ✓ Students will gain marketable skills in the workplace

Prerequisite(s): none
Co-Requisite(s): none
Concurrent Enrollment: none

Recommended Preparation: It is recommended that students come in with some background, experience, or interest in conducting quantitative research, or at least have a broad interest in creating maps and/or learning GIS. The course is multi-disciplinary and intended for students of all concentrations. No prior experience necessary.

Course Notes
Each class will roughly consist of a 60 minute lecture, followed by a 20 minute break, then a 60 minute exercise, then the rest of class will be dedicated to individual/group work. In-class assignments require that students in-class computers in order to conduct research and to complete written assignments. Alternative accommodations can be made with the instructor. Class information will be posted on Blackboard or DropBox, including assignments, readings, and lecture slides.

Technological Proficiency and Hardware/Software Required
Lab computers are available for all students during class time. If needed, laptops can be rented out from Leavey Library (see University protocols for COVID-19). Computers at Leavey Library have ArcGIS and State built into them.

Required Readings and Supplementary Materials
All readings and supplemental materials will be provided via Blackboard or DropBox.

Description and Assessment of Assignments
Required assignments will include weekly readings and individual written assignments usually due the week after. All assignments are designed to help students gain skills that will ultimately allow them to finish the final report (i.e., ArcGIS StoryMap).

Grading Breakdown
Assignments will be weighted using the following breakdown:

In-class participation (e.g., attendance, engaged in discussions, presentations)	20%
Individual Assignments	25%
Midterm	20%
Final Project - ArcGIS StoryMap	35%

Key Assignments

Weekly readings/assignments: Students must complete assigned readings and review of background materials. This will be evaluated based on participation in class discussions and integration of assigned readings into submitted assignments.

In-class Group assignments: Students are expected to contribute to class discussions during class time. These activities are meant to keep you accountable and help you complete the midterm and final.

Class participation: All students are expected to contribute to class discussions and in-class assignments.

Best Practice/Precedent: Students will conduct a 10-minute presentation on a topic of their choosing using ArcGIS StoryMap to tell a story.

Midterm: Students will present data and analysis they have collected on a specific topic of their choosing. By this point, the research question has been well-defined and students are reporting their major findings.

Final Project: Building off in-class assignments, readings, lectures, and data analysis, students will develop and present their suggestions their final assignment. Students should address social, information, physical and/or political challenges their project may encounter, and provide possible solutions.

Grading Scale
Course final grades will be determined using the following scale:
A   95-100
A-   90-94
B+   87-89
B   83-86
B-   80-82
C+   77-79
C   73-76
C-   70-72
D+   67-69
D   63-66
D-   60-62
F   59 and below

Assignment Submission Policy
All assignments must be uploaded to Blackboard by deadline provided, or emailed to the professor.

Grading Timeline
Grading will be done in a timely manner to provide feedback that will inform the final project.

Additional Policies

The instructor may revise the syllabus depending on progress and student feedback throughout the course.

Course Schedule: A Weekly Breakdown

Class # - Date	Description	Deliverable/ Due Dates (Assignments due by start of class unless otherwise noted) NOTE: Readings subject to change as announced by instructor.
Week 1 – Jan 13 Welcome and Introductions	Welcome and introductions, review syllabus, goals and learning objectives, class flow, expectations. Assigned readings and where to access them. Introduction to the field and practice of GIS, and cartography in general	Survey of students interests, skills (e.g., design, real estate finance), and objectives Take-Home Assignment: Qualtrics Survey
Week 2 – Jan 20	No Class (MLK Day)	n/a
Week 3 – Jan 27	Social Explorer: US Census/ACS Pt. 1 - cleaning data	Social Explorer Training Pt. 1 (maps) Excel exercises
Week 4 – Feb 10	Social Explorer: US Census/ACS Pt. 2	Social Explorer Training Pt. 2 (tables) Excel exercises
Week 5 – Feb 17	No Class (President's Day)	TBD
Week 6 – Feb 24	Data cleaning basics	- *Data cleaning* - Start using Stata
Week 7 – Mar 3	Combining Data Sources - joining Census/ACS data	Data processing in Stata and how to present data analysis *Guest lecturer
Week 8 – Mar 10	Intro to ArcGIS; Map Design and Outputs	TBD
Week 9 – Mar 17	No class (Spring Break)	TBD
Week 10 – Mar 24	File geodatabases; Spatial data Map Projections; Intersect, Select, and Aggregate	n/a
Week 11 – Mar 31	Geoprocessing; Digitizing; Geocoding Union, Dissolve, and Merge	Map products
Week 12 – Apr 7	StoryMaps	TBD
Week 13 –Apr 14	Advanced Spatial Analysis: Areal Interpolations	TBD *Guest lecturer
Week 14 – Apr 21	Raster GIS	TBD
Week 15 – Apr 28	3D GIS	TBD

Study Days May 3-6	Using other tools to create and analyze maps (R, Python, GeoDa, etc.) - Last day of class	TBD
Week 17 - May 12	No Class	Final StoryMap due May 5 (submit via email) by 5 pm PST (no exceptions)

Statement on Academic Conduct and Support Systems

Academic Conduct
Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

Support Systems
Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

National Suicide Prevention Lifeline – 1 (800) 273-8255
Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call
Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

Sexual Assault Resource Center
For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086
Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

Bias Assessment Response and Support
Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support and Advocacy – (213) 821-4710
Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

Diversity at USC
Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

USC Emergency Information
Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.
Provides overall safety to USC community. dps.usc.edu

Price Student Resources

Prepared by the Price Student Leaders' Online Education Subcommittee (OES)
*USC's Student Basic Needs Department offers a variety of food, housing, financial, and technological resources, including the *Trojan Food Pantry* and *Student Basic Needs Emergency Relief Gran*t, learn more here: https://studentbasicneeds.usc.edu
*Price's Terry L. Cooper Scholarship Fund offers small awards for emergency financial situations, more information: https://priceschool.usc.edu/students/financial-aid/
*Internet hotspots and laptops can be rented by students through USC Student Basic Needs Department by emailing basicneeds@usc.edu or filling out the following link: https://studentbasicneeds.usc.edu/resources/technology-assistance/
*Comprehensive compilation of USC's university-wide resources: https://we-are.usc.edu/students/

Health:
- USC Covid-19 testing: https://studenthealth.usc.edu/pop-testing-hours-and-locations/
    - For non-USC household members, there are a variety of testing services, including the following: https://la.curativeinc.com/welcome
- USC student health services and Covid-19 updates: https://we-are.usc.edu/health-and-safety/student-health-services/

Academic:

- USC Disability Services and Programs is here to support students during remote classes and exam delivery: https://dsp.usc.edu/
- USC's Kortschak Center offers free virtual academic support services, such as workshops for online learning and time management strategies Korshack Center study center, explore here: https://kortschakcenter.usc.edu/programs-services/
- USC DSP online learning guidance for current DSP students: https://dsp.usc.edu/coronavirus-update-students/
  - New DSP student registration steps: https://dsp.usc.edu/new-to-dsp/main-facilities/
- USC's Writing Center offers free virtual services, such as workshops for proofreading and polishing essays, as well as one-on-one reviews of assignments with a consultant: https://dornsife.usc.edu/writingcenter/
- USC Keep Teaching Student Toolkit with tips for basic troubleshooting and getting started with software such as Zoom and Slack for online learning: https://keepteaching.usc.edu/students/student-toolkit/

Mental Health & Well Being
- For a compilation of USC's mental health, well-being, and support services, including counseling services, therapy groups, mindfulness practice, and crisis intervention, explore here: https://we-are.usc.edu/mental-health-well-being-and-support-for-students/
- USC Student Health Counseling and Mental Health Services: https://studenthealth.usc.edu/counseling/
- Relationship and Sexual Violence Prevention Service (RSVP) https://studenthealth.usc.edu/sexual-assault/
- USC Recreational Sports online classes, including free live classes: https://recsports.usc.edu/programs-classes/fitness/group-ex-classes/
  - USC Recreational Sports paid virtual physical therapy, pilates, private instruction: https://recsports.usc.edu/programs-classes/fitness/private-instruction/
- USC Religious Life sponsors a variety of opportunities for exploring spiritual dimensions of life and learning: https://orsl.usc.edu/

International Students:
- International Student FAQ: https://we-are.usc.edu/faqs/faq-international-students/

- USC Office of International Services (OIS) offers updates, guidance, various forms, and information about living in Los Angeles and the United States for international students: https://ois.usc.edu/
  - OIS guidance for newly arriving students, including Passport Verification (PPV): https://ois.usc.edu/new-students/
  - OIS contact information, including appointment scheduling: https://ois.usc.edu/contact/

BIPOC and LGBTQ+ Students and Allies:
- La CASA works with all USC Latinx students to provide academic, personal, and cultural support, including hosting a virtual welcome week, calendar on their website: https://lacasa.usc.edu/
- USC Center for Black Cultural and Student Affairs provides spaces online for students to connect and build community through virtual engagement opportunities: https://cbcsa.usc.edu/
- USC Asian Pacific American Students Services offers programming to educate, engage, and empower Asian Pacific American students and facilitate cross-cultural programming: https://apass.usc.edu/
- USC LGBT Resource Center provides support, education, advocacy, and connection to community for all students at USC: https://lgbtrc.usc.edu/about/

Incoming Students:
- For new and incoming students, including a calendar for programming with events such as virtual tours and a Black & Latinx New Student Symposium, welcome site here: https://we-are.usc.edu/welcome-experience/

Current Subscriptions and Software Licenses:
- At the start of the fall semester, Price students will have access to free Grammarly Premium and VoiceThread software for collaborative presentations
- USC students have free access to the New York Times, sign up here: http://nytimesaccess.com/usc/
- A compilation of software available to USC students to download for free can be found here: https://software.usc.edu/free-to-campus/

USC Homelessness Initiative
https://homelessness.usc.edu/general-resources/

USC Homelessness Initiative

ABOUT ⌄   GET HELP NOW ⌄   GET INVOLVED ⌄   RESEARCH TOOLS ⌄   NEWS AND EVENTS ⌄   🔍

General Resources

- **WIN App**
  - WIN is a free mobile and web app designed to connect *homeless or resource insecure youth ages 12-25, families and adults* to essential services- all accessible without a referral. Developed by Our Children LA with guidance from our region's unaccompanied youth, WIN users can search a database of over 1800 essential service providers and connect to 12 categories of resources.
  - https://www.ourchildrenla.org/win-app/
- **211**
  - 211 LA is the central source for providing information and referrals for all health and human services in LA County. The 2-1-1 phone line is open 24 hours, 7 days a week, with trained Community Resource Advisors prepared to offer help with any situation; website for more info
  - If you are calling from outside Los Angeles County or cannot directly dial 2-1-1, call (800) 339-6993
  - https://www.211la.org/
- **Department of Public Social Services**
  - "DPSS 2018 RESOURCE GUIDE":
    - http://file.lacounty.gov/SDSInter/dmh/1037112_DPSSResourceGuide_V3_030818.pdf
  - https://yourbenefits.laclrs.org/ybn/Index.html
    - CalFresh Fact Sheets
    - California Department of Social Services
    - CalWORKS Fact Sheets
    - CBO/FBO listing
    - Contact DPSS
      Covered California
    - Customer Satisfaction Survey
    - Department of Children and Family Services
    - Department of Health Care Services
    - DPSS Program Information
    - EatFresh.org
    - EBT ATM locator

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JULY 29, 2020

Link Between Homelessness and Racism
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