



URP 506: Planning Methods – Quantitative Focus Winter 2019

Course Staff and Schedule

Instructor: Prof. Robert Goodspeed (rgoodspe@umich.edu)
Office: 2384 Taubman Wing, Art & Architecture Building
Office Hours: Fridays, 2:00 – 4:30 PM (sign up via Canvas link)

GSI: Timothy Berke (tberke@umich.edu)
Office Hours: M&W 3:30 – 4:30 PM, 2208H Art & Architecture Building

Website: <https://umich.instructure.com/courses/273705>
Class times: M&W 2:00 – 3:30 PM, 2108 Art & Architecture Building

Course Description

This course introduces students to quantitative methods commonly used in urban planning practice and urban research to understand the past, present, and future of cities and regions. To be effective professionals, urban planners must be able to find appropriate data, analyze data with suitable techniques, reach sensible conclusions from their analyses, and present their results convincingly to a wide range of audiences, including the general public, clients, community leaders, public officials, and other planners. Using a variety of methods, this course prepares students to summarize, analyze, and present data they have collected themselves or have obtained from secondary sources. It also provides students with skills to critically review and evaluate quantitative analyses and recommendations from others such as consultants and scholars.

Prerequisite: The course is designed for students that have completed a graduate-level course in introductory statistics comparable to URP 504, with skills that include bivariate regression analysis.

Learning Goals and Outcomes

This section summarizes the primary learning goals and outcomes of the course. The course learning outcomes are organized under the program-level learning goals. The primary assignment(s) where student proficiency on these goals will be assessed is noted.

Planning Skills Goal 1: Collect, analyze, and interpret data from a variety of sources common to the planning profession. [Final Report]

Course Learning Outcomes:

- Demonstrate the ability to create new information needed for planning through survey design, implementation, and data analysis. [Survey Design, Final Report]
- Describe the empirical conditions of a place by identifying and analyzing official data sources commonly used in planning. [Population, Housing, and Economic Profiles]
- Proficiently use quantitative analytical techniques commonly found in professional urban planning practice, academic literature, and the American Institute of Certified Planners examination including standard economic, demographic, and statistical analysis techniques. [Regression Assignment, Final Report]
- Demonstrate skills in synthesizing results of data analysis and to communicate trustworthy results clearly and effectively to nontechnical audiences through prose, figures, and tables. [Final Report]

Values and Ethics Goal 1: Analyze arguments related to contemporary planning issues, and recognize both the underlying systems of values they promote and the specific factual claims they rely upon.

Course Learning Outcomes

- Evaluate the strengths and weaknesses of creating mathematical models to clarify complex situations and to help decide courses of action. [Exam 2, Participation]
- Critically analyze the relationship between competing perspectives on urban problems and choices about how data and models are designed and used. [Regression Assignment, Exam 2, Participation]

Materials**Textbooks**

Students should purchase these three textbooks. They can be ordered through the bookstore in Pierpont Commons, and they are also available from major online retailers.

- Klosterman, Richard E., Kerry Brooks, Joshua Drucker, Edward Feser, and Henry Renski. 2018. *Planning Support Methods: Urban and Regional Analysis and Projection*. Lanham, MD: Rowman & Littlefield Publishing Group. ISBN-13: 978-1442220294. *This text is referred to below as PSM*
- Gaber, John, Sharon L. Gaber, and American Planning Association. 2007. *Qualitative Analysis For Planning And Policy: Beyond The Numbers*. Chicago, Ill.: Planners Press, American Planning Association. ISBN-13: 978-1932364323.
- Lewis-Beck, Colin, and Michael S. Lewis-Beck. 2015. *Applied Regression: An Introduction*. Second edition. SAGE Publications. ISBN-13: 978-1483381473.

Readings

- All required readings not from the textbooks will be posted to Canvas. “Additional Readings” listed below are available from Canvas, online, or from the University Library. While not required, they are recommended for doctoral students, or students interested in exploring the topics further.

Assignments

The course assignments are as follows:

Item	Assignment	Accounts For: (%)
1	Place Identification	3
2	Survey Design	5
3	Population Profile	5
4	Housing Analysis	5
5	Economic Profile	5
6	Draft Report	10
7	Regression Assignment	10
8	Final Report	20
9	Exam 1	15
10	Exam 2	15
11	Participation	7
Total		100%

Assignments: Assignments provide opportunities to apply knowledge and practice analysis and representation skills. They are generally due one week after they are assigned. All assignments are completed individually. Unexcused late submissions will be penalized 10% each day, with no credit after five days. See course policy on late assignments below.

Exams: Both exams are held in class, and primarily address material from the readings, lectures, and discussions. Exam 1 covers the first half of the course, Exam 2 covers the second half.

Class Participation: Full credit for participation requires completing two elements:

- Posting a minimum of **3** posts to the class discussion forum. These may 1) respond to or discuss a reading, 2) respond to another student's post, or 3) provide a link to a relevant article for the class's consideration. Regardless of the type, the posts must be at least 300 words long, and be posted before the class containing the readings discussed begins.
- Class attendance is required. Students should communicate with the instructor in the case of absences for reasons accepted in a professional environment (illness, personal emergencies, etc). My minimum expectations are that you read closely all required readings before class; you demonstrate good preparation; you offer interpretations and analysis, not just facts; and you demonstrate consistent and ongoing involvement. Good participation takes a step beyond this: you demonstrate an ability to analyze and synthesize, making connections among readings, discussions, and your own experiences; you keep discussion focused and respond thoughtfully to your colleagues; you offer new creative directions and foster a supportive learning environment.

Course Policies

In addition to those specified here, policies which apply to students in this class include those of the Urban and Regional Planning Program, Taubman College, students' home academic units, and the University.

Policy on Late Work

Late student work may be accepted due to unavoidable personal or family emergencies or religious observance. In these cases, the norms from professional workplaces will be applied. Generally, this means students are expected to communicate as they are able with course staff, complete work ahead of time for foreseeable issues, and establish timelines with course staff for completing missed or late work due to emergencies.

Class Computer Policy

Laptops or tablets may be used for taking notes, or to refer to class readings or other materials. To minimize distractions, please do not use laptops or other devices for any other purpose during class.

Academic Integrity

The Rackham Graduate School policy (<https://rackham.umich.edu/policy/section8>) states: "Integrity in research and scholarship is a fundamental value of the University of Michigan. It is the responsibility of all students to conduct research and scholarly activities in an ethical manner at all times." This requires that you are honest in all your course work.

The Taubman College Policy on Plagiarism reads as follows: "Plagiarism is knowingly presenting another person's ideas, findings, images or written work as one's own by copying or reproducing without acknowledgement of the source. It is intellectual theft that violates basic academic standards. In order to uphold an equal evaluation for all work submitted, cases of plagiarism will be reviewed by the individual faculty member and/or the Program Chair. Punitive measures will range from failure of an assignment to expulsion from the University."

Students will be provided guidance in class about academic integrity norms in data analysis, including how to appropriately cite data sources and document analyses. Students with additional questions should contact the course instructor.

Taubman College Academic and Professional Student Conduct Policies

These policies apply to all Taubman College students as well as non-Taubman College students who take courses within the college:

https://taubmancollege.umich.edu/sites/default/files/files/policies/U-M_Taubman_Academic_Conduct_Policy_Final.pdf

Accommodations for Students with Disabilities

It is Taubman College policy to "meet the educational needs of all persons, including those with physical or perceptual limitations, who are interested in the study of architecture, urban planning and/or urban design." If you think you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way the course is usually taught may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Services for Students with Disabilities (SSD) office to help us determine appropriate academic accommodations. SSD (734-763-3000; <http://ssd.umich.edu>) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. Any information you provide is private and confidential and will be treated as such.

Accommodations for Religious Holidays and Observances

The guidance on this issue issued by the Office of the Provost is as follows: "Although the University of Michigan, as an institution, does not observe religious holidays, it has long been the University's policy that every reasonable effort should be made to help students avoid

negative academic consequences when their religious obligations conflict with academic requirements. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. Students who expect to miss classes, examinations, or other assignments as a consequence of their religious observance shall be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of the dates of religious holidays on which they will be absent. Such notice must be given by the drop/add deadline of the given term. Students who are absent on days of examinations or class assignments shall be offered an opportunity to make up the work, without penalty, unless it can be demonstrated that a make-up opportunity would interfere unreasonably with the delivery of the course. Should disagreement arise over any aspect of this policy, the parties involved should contact the Department Chair, the Dean of the School, or the Ombudsperson. Final appeals will be resolved by the Provost.”

Statement on Student Mental Health and Wellbeing

Taubman College is committed to advancing the mental health and wellbeing of its students. Studies and surveys indicate clearly that a variety of issues, such as strained relationships, increased anxiety, alcohol/drug problems, and depression, directly impact student academic performance. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, please reach out to any of the following for assistance: Karen Henry is a counseling psychologist and therapist with services for the college. She is affiliated with CAPS but works exclusively with art, design, urban planning, and architecture students. Her office is located in the Art and Architecture Building and she can be reached by email for an appointment (karhenry@umich.edu). Counseling and Psychological Services (CAPS) is dedicated to serving students. You can find their contact information and hours at the link to their website: <https://caps.umich.edu/>.

Statement on Diversity, Equity & Inclusion

This course pursues the principles of diversity, equity, and inclusion pursued by the University of Michigan and Taubman College, as described in the Taubman College Strategic Diversity Plan, through course content, classroom facilitation, assignments, and selection of topics.

The Taubman College policy reads: “Taubman College affirms the principles of diversity, equity, and inclusion as we organize resources and priorities that align with our values. We seek to have a diverse group of persons at all levels of the college - students, faculty, staff and administrators - including persons of different race and ethnicity, national origin, gender and gender expression, socioeconomic status, sexual orientation, religious commitment, age, and disability status. We strive to create a community of mutual respect and trust, a community in which all members and their respective backgrounds, identities, and views are represented without any threat of bias, harassment, intimidation, or discrimination.”

Grading

The following scale will be used for grading in this course.

Grade	Minimum %
A+	100
A	95
A-	90
B+	87
B	83
B-	80
C+	77
C	73
C-	70

D+	67
D	63
D-	60
E	50
F	40

Course Overview

Week	Mon Topic	Wed Topic	Assignments (assigned)
Module 1: Introduction, Basic Concepts, and Qualitative Techniques			
1	-	Knowledge About Urban Places: Past, Present & Future	1. Identify Place
2	Intro. to Quant & Qual. Inquiry	Knowledge in Decision-Making	-
3	MLK Symposium	Qualitative Methods: Interviews, Focus Groups, & Field Research	2. Survey Design
4	Survey Design and Data Analysis	Regression: Assumptions and Bivariate Regression	-
5	Regression: Multiple Regression	Regression: Goodness of Fit and Reporting Results	3. Regression Assignment
Module 2: Quantitative Data Sources, Concepts & Basic Analysis Techniques			
6	U.S. Census and Related Concepts	Population Analysis	4. Population Profile
7	American Community Survey	Presenting Quantitative Information	5. Balanced Housing Analysis
8	Economic Data	Economic Base Model and Overview of Advanced Methods	6. Economic Profile
9	Spring Break		
10	Big Data and Ethics	Midterm Exam	
Module 3: Envisioning Possible Futures and Advanced Methods			
11	Urban Modeling – Planning Support Systems	PSS Guest	7. UrbanFootprint Lab
12	Analyzing Spatial Inequality	Place Futures Event	
13	Urban Modeling – Systems Models	Urban Modeling Guest	Draft Report Due
14	Scenario Construction with Multiple Methods	Case Examples	
15	Crowdsourcing & Big Data	Spatial Surveys and Photographic Research	
16	Ethics Revisited	-	Final Place Report Due
17	Final Exam - Tues., 4/30, 10:30 am-12:30 pm		

Schedule

Module 1: Introduction and Basic Concepts

Week 1

Wed., Jan. 9: Knowledge About Urban Places: Past, Present & Future

- PSM, Ch. 1
- Isserman, A. M. (1984). Projection, forecast, and plan on the future of population forecasting. *Journal of the American Planning Association*, 50(2), 208–221
- Reese, Laura A., Jeanette Eckert, Gary Sands, and Igor Vojnovic. 2017. "'It's safe to come, we've got lattes": Development disparities in Detroit." *Cities* 60:367-377. doi: <https://doi.org/10.1016/j.cities.2016.10.014>.

Assignment 1: Identify Place

Week 2

Mon., Jan. 14: Quantitative and Qualitative Research Methods and Concepts

- Ch 1 in Gaber, John, Sharon L. Gaber, and American Planning Association. 2007. *Qualitative Analysis for Planning and Policy: Beyond the Numbers*. Chicago, Ill.: Planners Press, American Planning Association.
- Ch 4 & 5, Babbie, E. R. (2011). *The Basics of Social Research*. Belmont, CA: Wadsworth.
- McGrath, J.E. 1981. "Dilemmatics: The Study of Research Choices and Dilemmas." *American Behavioral Scientist* 25 (2):179-210.

Optional:

- Galster, George, Royce Hanson, Michael R. Ratcliffe, Harold Wolman, Stephen Coleman, and Jason Freihage. 2001. "Wrestling Sprawl to the Ground: Defining and measuring an elusive concept." *Housing Policy Debate* 12 (4):681-717. doi: 10.1080/10511482.2001.9521426.
- Morgan, G, and L Smircich. 1980. "The case for qualitative research." *Academy of Management Review*: 491-500.
- Straatemeier, Thomas, Luca Bertolini, Marco te Brömmelstroet, and Perry Hoetjes. 2010. "An Experiential Approach to Research in Planning." *Environment and Planning B: Planning and Design* 37 (4):578-591. doi: 10.1068/b35122.
- te Brömmelstroet, Marco. 2015. "A Critical Reflection on the Experimental Method for Planning Research: Testing the Added Value of PSS in a Controlled Environment." *Planning Practice & Research* 30 (2):179-201. doi: 10.1080/02697459.2015.1023077.
- Ch 3 "Photographic Research," in Gaber, John, Sharon L. Gaber, and American Planning Association. 2007. *Qualitative Analysis for Planning and Policy: Beyond the Numbers*. Chicago, Ill.: Planners Press, American Planning Association.

Wed., Jan 16: Knowledge in Decision-Making

- Innes, Judith E. (1998). Information in Communicative Planning. *Journal of the American Planning Association*, 64(1), 52-63.

- Corburn, Jason. 2003. "Bringing Local Knowledge into Environmental Decision Making: Improving Urban Planning for Communities at Risk." *Journal of Planning Education and Research* 22 (4):420-433. doi: 10.1177/0739456x03022004008.
- Schadt, Rob. "Communicating Your Ideas: Designing and Delivering Technology Enhanced Presentations." Online Resource (PDF).

Week 3

Mon., Jan. 21: MLK Symposium (no class)

Wed., Jan. 23: Qualitative Methods: Interviews, Focus Groups, and Field Research

- Ch 2, and 4 in Gaber, John, Sharon L. Gaber, and American Planning Association. 2007. *Qualitative Analysis for Planning and Policy: Beyond the Numbers*. Chicago, Ill.: Planners Press, American Planning Association.
- Ch. 4, "Ethics," in Phillips, Richard and Jennifer Johns. *Fieldwork for Human Geography*. New York: Sage.
- Gehl Studio NY and J. Max Bond Center on Design for the Just City. 2015. Public Life & Urban Justice in NYC's Plazas. (Read 1-19, skim remainder)

Optional:

- CDC. 2006. "Gaining Consensus Among Stakeholders Through the Nominal Group Technique. Evaluation Briefs.

Assignment 2: Survey Design

Additional Readings:

- Faria, Carolina and Sharlene Mollett. (2016). Critical feminist reflexivity and the politics of whiteness in the 'field'. *Gender, Place and Culture*. 23:1, 79-93. doi: 10.1080/0966369X.2014.958065
- Lunn, Jenny. (2017). Ethics in geography fieldwork. In *The International Encyclopedia of Geography*, eds. Richardson et al. John Wiley & Sons. doi: 10.1002/9781118786352.wbieg0974

Week 4

Mon., Jan. 28: Survey Design and Data Analysis

- Ch 3, "Covering the Population and Selecting Who to Survey," Dillman, Don A, Jolene D Smyth, and Leah Melani Christian. 2014. *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. John Wiley & Sons.
- Ch 10, "Survey instrumentation," in Singleton, Royce A. and Bruce Straits, *Approaches to Social Research*, 5th Ed. Oxford University Press.
- Ch 6 and 7 in Healey, Joseph F. (1996). *Statistics: A Tool for Social Research* (4th ed.). Belmont, CA: Wadsworth.

Wed., Jan. 30: Regression: Assumptions and Bivariate Regression

1. Ch 1-2., Lewis-Beck, Colin, and Michael S. Lewis-Beck. 2016. *Applied regression : an introduction*. Second edition / ed, Quantitative applications in the social sciences.

Week 5

Mon., Feb. 4: Multiple Regression, Goodness of Fit,

1. Ch. 3., Lewis-Beck and Lewis-Beck, 2016

Wed., Feb. 6: Multicollinearity, Nonlinearity, Reporting Results and Regression in Action

1. Ch. 4., Lewis-Beck and Lewis-Beck, 2016
2. Lee, Stephanie M. 2018. "Here's How Cornell Scientist Brian Wansink Turned Shoddy Data Into Viral Studies About How We Eat." BuzzFeed News. <https://www.buzzfeednews.com/article/stephaniemlee/brian-wansink-cornell-p-hacking>
3. Donegan, Mary, Joshua Drucker, Harvey Goldstein, Nichola Lowe, and Emil Malizia. 2008. "Which Indicators Explain Metropolitan Economic Performance Best? Traditional or Creative Class." *Journal of the American Planning Association* 74 (2):180-195. doi: 10.1080/01944360801944948.

Assignment 3: Regression

Module 2: Sources of Quantitative Data and Basic Analysis Techniques

Week 6

Mon., Feb. 11: U.S. Census Concepts and Geography

- Ch. 1 and 2, Williamson, C. (2008). *Planners and the census: Census 2010, ACS, Factfinder, and understanding growth*. Planning Advisory Service report. Chicago, IL: American Planning Association

Wed., Feb. 13: Population Analysis and Forecasting

- Ch 1, 2, 9 (these are short chapters): Haupt, Arthur, and Thomas T. Kane. (2004). *Population Handbook* (5th ed.). Washington, DC: Population Reference Bureau.
- PSM, Ch. 5
- Guide: "Creating population pyramids using Microsoft excel"

Optional:

- Siegel, Jacob S. 2002. *Applied Demography: Applications To Business, Government, Law and Public Policy*. San Diego: Academic Press.
- Wiechmann, Thorsten. 2008. "Errors Expected—Aligning Urban Strategy with Demographic Uncertainty in Shrinking Cities." *International Planning Studies* 13 (4):431-446.

Assignment 4: Population Profile

Week 7

Mon., Feb. 18: American Community Survey and Housing Analysis

1. Jurjevich, Jason R., Amy L. Griffin, Seth E. Spielman, David C. Folch, Meg Merrick, and Nicholas N. Nagle. 2018. "Navigating Statistical Uncertainty: How Urban and Regional Planners Understand and Work With American Community Survey (ACS) Data for Guiding Policy." *Journal of the American Planning Association* 84 (2):112-126. doi: 10.1080/01944363.2018.1440182.

2. U.S. Census Bureau. (2008). A compass for understanding and using American Community Survey data: What general data users need to know. (Skip pp. 16–25)
3. Ch. 6 in Myers, D. (1992). *Analysis with Local Census Data: Portraits of Change*. San Diego, CA: Academic Press.

Wed., Feb 20: Presenting Quantitative Information

1. Ch 5, Strategies of Presentation. Myers, Dowell. (1992). *Analysis with Local Census Data: Portraits of Change*. San Diego, CA: Academic Press.
2. PSM, Ch. 9

Optional:

- MacDonald, H. (2006). The American Community Survey: Warmer (more current), but fuzzier (less precise) than the decennial census. *Journal of the American Planning Association*, 72(4), 491–503
- Ch 12 (Communicating Evidence Visually): Booth, Wayne C., Gregory G. Colomb, and Joseph M. Williams. (1995). *The Craft of Research*. Chicago: University of Chicago Press.
- Vanderbilt University: Reporting Quantitative Results - http://virg.vanderbilt.edu/AssessmentPlans/Results/Reporting_Results_Quantitative.aspx
- United Nations Economic Commission for Europe: Making Data Meaningful. Read Pages 12–30. http://www.unece.org/fileadmin/DAM/stats/documents/writing/MDM_Part2_English.pdf
- Ch 4, Data-Ink and Graphical Redesign: Tufte, Edward R. (1983). *The Visual Display of Quantitative Information*. Cheshire, CT: Graphics Press.

Assignment 5: Balanced Housing Analysis

Week 8

Mon., Feb. 25: Economic Data Sources and Analysis

1. Ch 6 in Blakely, Edward J., and Nancey Green Leigh. *Planning local economic development : theory and practice*. Fifth edition. ed. (Skip 160-180)
2. PSM, Ch. 6

Wed., Feb. 27: Economic Base Model, Location Quotient, and Intro. to Advanced Methods

1. Isserman, Andrew M. 2007. "Forecasting to learn how the world can work." In *Engaging the future: Forecasts, scenarios, plans, and projects*, edited by L. Hopkins and M.A. Zapata, 175-97. Cambridge, Mass.: Lincoln Land Institute.
2. Ch 9 in Smith, Stanley K., Jeff Tayman, and David A. Swanson. 2012. *A Practitioner's Guide to State and Local Population projections*. Springer.

Optional:

- Ch 4, Analyzing the Structure and Dynamics of a Local Economy, READ ONLY pp. 51-66: McLean, Mary L., and Kenneth P. Voytek. (1992). *Understanding Your Local Economy*. Chicago: American Planning Association.
- Ch. 4 in Quinterno, John. 2014. *Running the numbers: a practical guide to regional economic and social analysis*.
- Klosterman, Richard E. 1990. *Community Analysis and Planning Techniques*. Savage, Md.: Rowman & Littlefield.

Assignment 5: Economic Profile

Week 9

No Class - Spring Break

Week 10

Mon., March 11: Data Ethics

1. Wachs, Martin. (1989). When Planners Lie with Numbers. *Journal of the American Planning Association*, 55(4), 476-479.
2. Schweitzer, Lisa A., and Nader Afzalan. 2017. "09 F9 11 02 9D 74 E3 5B D8 41 56 C5 63 56 88 C0: Four Reasons Why AICP Needs an Open Data Ethic." *Journal of the American Planning Association* 83 (2):161-167. doi: 10.1080/01944363.2017.1290495.

Optional:

1. Ch 8, Stone, Deborah. (2012). *Policy Paradox: The Art of Political Decision Making* (3rd ed.). New York: WW Norton.

Wed., March 13: Midterm Exam

Module 3: Advanced Methods

Week 11

Mon., March 18: Urban Modeling: Planning Support Systems

1. Klosterman, Richard E. 1997. "Planning Support Systems: A New Perspective on Computer-Aided Planning." *Journal of Planning Education and Research* 17 (1):45-54.
2. Klosterman, R.E., and C.J. Pettit. 2005. "An update on planning support systems." *Environment and Planning B: Planning and Design* 32 (4):477-484.
3. Condon, Patrick, Duncan Cavens, and Nicole Miller. 2009. Urban Planning Tools for Climate Change Mitigation. *Policy Focus Report*. Cambridge: Lincoln Institute of Land Policy.

Wed., March 20: PSS Guest

Assignment 7: UrbanFootprint Lab

Week 12

Mon., March 25: Analyzing Spatial Inequality

1. Boone, Christopher G., et al. (2009). Parks and People: An Environmental Justice Inquiry in Baltimore, Maryland. *Annals of the Association of American Geographers*, 99(4), 767 - 787.
2. Sections 1-3, from Mohai, Paul, David Pellow, and J. Timmons Roberts. 2009. "Environmental Justice." *Annual Review of Environment and Resources* 34 (1):405-430. doi: 10.1146/annurev-environ-082508-094348.

Optional:

- Schweitzer, Lisa, and JR Max Stephenson. 2007. "Right Answers, Wrong Questions: Environmental Justice as Urban Research." *Urban Studies* 44 (2):319-337. doi: 10.1080/00420980601074961.
- Ch 8, Liu, Feng. (2001). *Environmental Justice Analysis: Theories, Methods, and Practice*. Boca Raton: Lewis Publishers.

Wed., March 27: Place Futures Event (advance preparation required)

Week 13

Mon. April 1: Urban Modeling – Systems Models

1. Klosterman, R. E. 2012. "Simple and complex models." *Environment and Planning B: Planning and Design* 39 (1):1-6.
2. Landis, J.D. 2011. "Urban Growth Models: State of the Art and Prospects." In *Global Urbanization*, edited by Eugenie L. Birch and Susan M. Wachter, 126-150. Philadelphia: University of Pennsylvania Press.
3. Lee, Douglass B. 1973. "Requiem for Large-Scale Models." *Journal of the American Planning Association* 39 (3):163.
 - Skim through also: Lee, Douglass B. 1994. "Retrospective on Large-Scale Urban Models." *Journal of the American Planning Association* 60 (1):35.

Wed., April 3: UrbanSim Discussion and Southeast Michigan Case Study, Guest: Guangyu Li, SEMCOG

1. Waddell, P. 2002. "UrbanSim - Modeling urban development for land use, transportation, and environmental planning." *Journal of the American Planning Association* 68 (3):297-314.
 - See also Waddell, Paul. 2013. "Draft Technical Documentation: San Francisco Bay Area UrbanSim Application"
2. SEMCOG, "Stabilizing and Sustaining: The Economic and Demographic Outlook for Southeast Michigan through 2045" (skim)

Optional:

- Schwarz, N., D. Haase, and R. Seppelt. 2010. "Omnipresent sprawl? A review of urban simulation models with respect to urban shrinkage." *Environment and Planning B: Planning and Design* 37 (2):265-283.
- Ch 10 in Smith, Stanley K., Jeff Tayman, and David A. Swanson. 2001. *State and local population projections : methodology and analysis*. New York: Kluwer Academic/Plenum Publishers.

Draft Place Report Due

Week 14

Mon. April 8: Scenario Construction with Multiple Methods

1. Avin, Uri P., and Jane L. Dembner. 2001. "Getting Scenario-Building Right." *Planning* 67 (11):22.
2. Chakraborty, Arnab, Nikhil Kaza, Gerrit-Jan Knaap, and Brian Deal. 2011. "Robust Plans and Contingent Plans -- Scenario Planning for an Uncertain World." *Journal of the American Planning Association*.

3. Plan Bay Area 2040, Scenario Planning Final Supplemental Report (See all reports: <http://2040.planbayarea.org/reports>)

Wed., April 10: Plan Bay Area 2040 and NYC RPA Analysis

1. Plan SF, Performance Assessment Report, Executive Summary (p. 5-6), P. 25-32, Pick one performance target and read section explaining it.
2. Lane, Robert. "The Impossible Task of Mapping the Future." *Planning*. January 2017.
 - o Skim related report, "Chart a New Course: A Vision for a Successful Region," RPA, May 2016.

Week 15

Mon., April 15: Crowdsourcing, Big Data and Spatial Surveys

1. Thakuria, Piyushimita, Nebiyu Y. Tilahun, and Moira Zellner. 2017. "Big Data and Urban Informatics: Innovations and Challenges to Urban Planning and Knowledge Discovery." In *Seeing Cities Through Big Data: Research, Methods and Applications in Urban Informatics*, edited by Piyushimita Thakuria, Nebiyu Tilahun and Moira Zellner, 11-45. Cham: Springer International Publishing.
2. Goodspeed, Robert, and Xiang Yan. 2017. "Crowdsourcing street beauty: Visual preference surveys in the big data era." In *Big Data for Regional Science*, edited by Laurie A. Schintler and Zhenhua Chen. London and New York: Routledge.
3. Afzalan, Nader, and Thomas Sanchez. 2017. "Testing the Use of Crowdsourced Information: Case Study of Bike-Share Infrastructure Planning in Cincinnati, Ohio." *Urban Planning 2* (3):33.

Wed., April 17: Meta-Analysis and the High Stakes of Planning Knowledge

1. Chapter 5 in Gaber, John, Sharon L. Gaber, and American Planning Association. 2007. *Qualitative Analysis for Planning and Policy: Beyond the Numbers*. Chicago, Ill.: Planners Press, American Planning Association.
2. Stevens, Mark R. 2017. "Does Compact Development Make People Drive Less?" *Journal of the American Planning Association* 83 (1):7-18. doi: 10.1080/01944363.2016.1240044.
3. Ewing, Reid, and Robert Cervero. 2017. "'Does Compact Development Make People Drive Less?' The Answer Is Yes." *Journal of the American Planning Association* 83 (1):19-25. doi: 10.1080/01944363.2016.1245112.
4. Stevens, Mark R. 2017. "Response to Commentaries on 'Does Compact Development Make People Drive Less?'" *Journal of the American Planning Association* 83 (2):151-158. doi: 10.1080/01944363.2017.1287588.

Week 16

Mon., April 22: Ethics, Data and Algorithmic Governance, Course Feedback and Conclusion

- Review ethics readings from weeks 3 and 10
- Powells, Julia. 2017. "New York City's Bold, Flawed Attempt to Make Algorithms Accountable" *The New Yorker*.
- Diakopoulos, Nicholas and Sorelle Friedler. 2016. "How to Hold Algorithms Accountable." *MIT Technology Review*.

Final Place Report

Final Exam Tues., 4/30, 10:30 am – 12:30 pm