

Sociology 403: Tutorial: Socio-Spatial Analysis

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Course Description: While demography has long been a subspecialty within sociology, the development of geographic information systems (GIS) presents a new media on which to display demographic information as well as perform spatial analysis. Sociology students are exposed to sophisticated statistical analysis in Sociology 302: Quantitative Research Methods and sociological theory in Sociology 301: Socio-Cultural Theory. This course builds on both of these skill sets by asking students to design and test real-world hypotheses, using spatially-linked data (especially from the U.S. Census). In the process, students will be introduced to ESRI's ArcGIS, the most widely used software package for GIS. The first third of the course allows students to learn this software, which tends to focus on geographic displays of data. The second third of this course introduces students to demography as a field of study. This is done in two stages: first, students become familiar with the US Census and other forms of demographic data (such as the UNSO). The final section of the course is organized as a workshop, in which students complete a research project of their own design, demonstrating their mastery of the software as well as their ability to propose and test spatially-linked hypotheses. The workshop culminates in a final report by student groups, presented orally to the entire class.

Learning Goals: Upon completion of this course, students will:

1. have a familiarity with ArcGIS that allows them to generate maps and perform spatial analysis of novel queries, data, and hypotheses
2. understand demography as a sub-discipline in sociology
3. have extensive knowledge of the US Census as a data base, as well as other sources of relevant demographic data
4. be able to link new data sets to GIS map-making software
5. be able to design, create, and critique spatial displays of descriptive and analytic data
6. incorporate spatial displays in text appropriate for professionals within sociology and for lay readers
7. have designed and conducted an independent research project involving spatial queries and demographic data, based on a contemporary social issue
8. have conducted enough research on a contemporary social issue to be considered a sort of expert on the topic
9. have developed skills in written and oral presentation of research

GIS Technical Advisor: Patrick Meola, the GIS manager at the Municipal Land Use Center at TCNJ, has graciously agreed to serve as the technical advisor for this course, and has greatly assisted in the development and design of this entire course. When you have questions regarding ArcGIS, he will be an excellent source of information and help. He can be reached at x2802 or at meola@tcnj.edu. His office hours and location will be announced in class.

Required Texts:

Frey, Bill. 2003. *Investigating Change in American Society, 2nd edition*. New York: Wadsworth. ISBN 053462281X \$43 (paper)
English, Kim Zanelli and Laura S. Feaster. 2003. *Community Geography: GIS in Action*. Redlands, CA: ESRI. ISBN 1589480236 \$25 (paper with CD-ROM)

Strongly Recommended:

Ormsby, Tim, Eileen Napoleon, Robert Burke, Carolyn Groess, and Laura Feaster. 2004. *Getting to Known ArcGIS Desktop: The Basics of ArcView, ArcEditor, and ArcInfo, Updated for Version 9*. Redlands, CA: ESRI. ISBN 158948083X \$59.95 (list; available on Amazon.com for \$35.88).

AND/OR

Gorr, Wilpen, and Kristen Kurland. 2005. *GIS Tutorial: A Workbook for ArcView 9.0*. Redlands, CA: ESRI. ISBN 1589481275 \$69.95 (list; available on Amazon for \$44.07).

Details on Assignments and Assessment:

Your final grade will be based on three principle components: eight quizzes, one exam, and one semester research project.

Exams: There is a single exam in this course on November 14. It is worth 100 points and covers the material from both textbooks as well as instruction in class. The exam will include material on all aspects of the course, including GIS skills.

Quizzes (8 at 25 points each = 200 points): Students must complete in-class, closed-book quizzes on the English and Feaster and Frey exercises. Students must submit these exercises before leaving class to earn credit. However, unsatisfactory submissions must be repeated until they are completed correctly.

Research Project (150 points): The research report is a semester-long project that demonstrates your ability to merge social and spatial research concerns. These reports require both individual and group work, and will assess students’ ability to use ArcGIS and spatially-linked tabular data to generate a sociologically and socially relevant report. The last two pages of this syllabus provide details about the research report.

Final Grade Computation:

Quizzes	200
Exam	100
Proposal	25
Info. Needs. Assess.	25
Final Paper	100
Final Presentation	50

Course policies:

Academic integrity: Any student suspected of violating TCNJ's academic integrity code will be investigated fully and subject to the most severe penalties, including failing this class and being expelled from the college. This is particularly a problem with plagiarism. Not knowing what constitutes plagiarism is no defense. If you have any doubts about whether something is plagiarism, it probably is but you should feel free to check with me. And don't be stupid about the Internet: anything you can find out there, I can find, too. To facilitate academic integrity and enforcement, students must post an electronic copy of all written assignments on SOCS by each assignment's due date.

Attendance and participation: Because students are expected to meaningfully participate in class, attendance does not count towards the grade. When you come to class, come prepared and expect to participate in a meaningful and constructive way. If you cannot or decide not to come to class, you must deal with the consequences of this decision. It is YOUR responsibility to get missed notes from another student (mine are NOT available), to find out about any changes in the syllabus, and to accept any late penalties. Final grades will be lowered at the discretion of the instructor for non-attendance, non-participation, disruptive behavior, leaving early or arriving late consistently, leaving during class, falling asleep, reading in class, etc., et al. NOTE: There is a great deal of instruction in this class which is not available anywhere else. This is a bad class to skip.

Cell phones: If you bring a cell phone to class and it rings, I reserve the right to answer it. If a cell phone rings during a student presentation, you will automatically lose 5 points for each ring. Your best bet is to turn it off during class.

Differing Abilities: Any student with special needs in the classroom should contact me within the first three weeks of class. All possible allowances and accommodations will be made.

Electronic submissions: Students must post an electronic copy of all written assignments on SOCS by each assignment's due date. Electronic submissions should be uploaded as MS Word or .txt files. Electronic submission times are based on the SOCS clock, even if this clock is incorrect. If an electronic submission is unreadable, late penalties will accumulate until a readable file has been uploaded onto SOCS. No written comments will be provided for electronic submissions.

E-mail and voice-mail: I greatly prefer e-mail to voice-mail. Although I usually check my e-mail several times a day, please don't expect me to check my e-mail over the weekends, at night, or during breaks. I have dial-up service at home and it's really slow and clogs up my home phone line. I never check voice-mail from home. You should expect at least a 48 hour turn-around on any e-mail or voice-mail message sent to me during the week and longer on the weekend. Sending an e-mail or leaving a voice-mail message is no guarantee that I will respond affirmatively; wait for my reply before you assume anything.

Final grades: Final grades are based on a 500 point scale and NOT on percentages posted on SOCS: 465-500 = A; 451-464 = A-; 435-450 = B+; 415-434 = B; 400-414 = B-; 390-399 = C+; 370-389 = C; 350-369 = C-; 340-349 = D+; 325-339 = D; 0-324 = F. The official gradebook is

kept off-line to prevent tampering; in the event of a discrepancy between the grade on SOCS and the off-line gradebook, the official gradebook will always be used. I reserve the right to raise and lower borderline grades based on overall performance (a borderline grade is within 1 percent or 5 points of a grade boundary). To protect your privacy and my sanity, grades will NOT be discussed in class or over the phone.

Grade estimates throughout the semester: Scores will be posted on SOCS, so you can keep track of your performance. If there is a discrepancy between the score written on an assignment and the grade posted on SOCS, please contact me immediately and be prepared to show me the written score. Note that SOCS gives you two percentages: relative and absolute. You can estimate your current letter grade by looking at the relative percentage: 0-59% = F; 65-67% = D; 68-69% = D+; 70-73% C-; 74-76% = C; 77-79% = C+; 80-82% = B-; 83-86% = B; 87-89% = B+; 90-92% = A-; 93-100% = A. If you have questions about your grades or how to figure your grades, please visit my office hours or make an appointment. Please keep in mind that grading takes time—grades do not instantaneously appear on SOCS. Expect at least one week after submission before a grade shows up on SOCS.

Group Grades: There are some assignments that will require you to work in groups. For group work, unless otherwise specified, all group members will receive the same grade.

Late policies: If you miss an assignment or quiz for a legitimate reason, secure the necessary documentation BEFORE you try to turn in late assignments or reschedule a quiz. Documentation includes notes from your doctor, dean, or other official or printed records of critical events (such as funerals). Without documentation, assignments lose 10% of the potential value of the assignment per calendar day late, including Saturdays and Sundays to a minimum of 10% of the original value. For example, a 100 point assignment would lose 10 points per day until it was nine days late. After nine days, the assignment would be worth a maximum 10 points no matter when it was turned in. Late penalties begin accumulating five minutes after the beginning of the course period for which an assignment is due. This means that you will lose 10% of the value of your assignment if you come six minutes late to class that day! Late penalties will be based on the SOCS clock if no paper copy is turned in, even if the SOCS clock is wrong. If an electronic submission is unreadable, late penalties will accumulate until a readable file has been uploaded onto SOCS. No written comments will be provided on electronic copies.

Make-up Quizzes: Students who miss an in-class quiz and do not have appropriate documentation will be automatically penalized 20 percent (5 points). Make-up quizzes must be completed BEFORE the next class meeting, at a time to be arranged by the professor and student. Students who do not complete the quiz before the next class meeting and cannot provide documentation for such will not be allowed to make up the quizzes and will receive zero for the missed quiz.

Office Hours: Every week Patrick and I will have scheduled office hours, but we are often available at other times. However, so that we might be able to dedicate large blocks of time to research, grading, and preparing for class, we ask that if you would like to meet with either one

of us outside of scheduled office hours that you set an appointment. You can set an appointment in class, or through e-mail or voice-mail.

Religious holidays and college-related obligations: If you will miss class for religious holidays or obligations related to TCNJ, you must notify me in writing ASAP to avoid late penalties. Notifying me of religious holidays or TCNJ obligations after the fact will leave you liable for missed work, late penalties, etc. Assignments due on religious holidays will be due on the next day that class meets. Assignments due on dates when students have TCNJ obligations must be submitted before the due date.

SOCS: I rely heavily on SOCS for this course, especially for e-mail announcements. All students are expected to access their TCNJ account for this purpose. If you are unfamiliar with SOCS, let me know and I'll walk you through it.

Submission standards: All papers must be submitted as word-processed or typed in standard, 10-12 point fonts. Margins should be one inch on all sides (note that MS Word defaults with left and right margins of 1½ inches). Papers that are not stapled together prior to submission will receive a ten percent penalty. Do not use special binders or folders, although this is optional for the final report (since it will likely be too long to staple together). Except for the final paper, do not use cover sheets; simply make certain your full name and the course number (e.g., SOC 101) appear in the upper LEFT corner. All submissions should be essentially free of spelling and grammatical errors. If you cannot submit an assignment in person, you may submit it electronically (see above) OR by bringing it to the Sociology Office during office hours OR by faxing it to the Sociology Office (609-637-5186). Assignments left in the box on my door or pushed under my door will NOT be accepted. All written assignments must be posted to SOCS by the due date in addition to submitting paper copies. If ONLY an electronic submission is sent (i.e., if you do not turn in a paper copy of the assignment), you will receive an automatic deduction of ten percent of the total. Also, if you ONLY submit on SOCS, please let me know (via e-mail) that you have posted it, so I will know to retrieve it for grading purposes.

Reading and Assignment Schedule: Readings should be completed by the following dates. Assignments are due at the beginning of the class period indicated.

Learning GIS:

Tuesday, Sept. 6: English and Feaster 1: GIS Basics; the I-Map; Quiz 1

M, Sept. 12: English and Feaster 2-4: Simple GIS Queries; Quiz 2

M, Sept. 19: English and Feaster 5-6: Spatial GIS Queries; Quiz 3

M, Sept. 26: English and Feaster: 7-8: Statistics and Spatial Analysis; Quiz 4

M, Oct. 3: English and Feaster "On Your Own"; Proposal due; Project Meetings

Demography:

M, Oct. 10: Frey 1-3: Age, Cohorts, Race, Ethnicity, Immigration, and the US Census; Quiz 5

M, Oct.17: Frey 5-7: Gender, Marriage, and Households; Quiz 6

M, Oct.31: Frey 4, 8: Labor Force and Poverty; Information Needs Assessment Due; Quiz 7

M, Nov. 7: Frey 9-10: Youth and Elderly Populations; Quiz 8

M, Nov.14: Exam

Socio-Spatial Research Workshop

M, Nov.21: Creating Layers Workshop and Project Support

M, Nov. 28: Demographic and Community Analysis Workshop and Project Support

M, Dec. 5: Policy Report Workshop and Project Support

M, Dec. 12: Report Due (No class)

Final Presentations to be given during the scheduled final exam period.

Details on the Research Report

Forming student teams: September 26

Students will be divided into five teams of three. Each team, over the course of the semester, will be considering the proposed use of a site near TCNJ. The five proposals are:

1. Big box/franchise retail (e.g., Walmart, or a strip center mall with chain stores)
2. “Boutique” retail or entertainment complex (e.g., a walkable mall containing locally-owned restaurants, stores, and the like)
3. Open or recreational space (e.g., a youth recreation center or a park)
4. Social services (e.g., a homeless shelter or a senior center)
5. Housing (apartments, town homes, or single family homes)

Proposal: Due October 3 (25 points)

The proposal should be a 2-3 page narrative indicating:

1. A summary of the proposed use of the site, specifying exactly what you will propose on this site—including what type of stores, facilities, or housing that your group intends to recommend.
2. A preliminary description of the types of data that you will need to perform your analysis.
3. There are three substantive areas that must be covered briefly in your proposal: 1) a needs assessment (documenting the “need” for your proposed land use); 2) a demographic profile of the study area as you define it; and 3) a community profile of the job market, housing, and environment of the surrounding area.

Proposal Briefs: October 3

Each team will schedule a meeting to discuss their proposal, and the data that it would require. This conference will also allow a discussion of the division of responsibilities within the group and how “freeloaders” will be handled.

Information Needs Assessment: Due October 31 (25 points)

This assessment must identify the type of non-demographic, non-spatial information necessary to complete a holistic proposal. The types of information may include: secondary documents; websites; public data; federal, state, or local laws; newspaper accounts; and/or first-person accounts. Each group should organize their Information Needs Assessment as a group, but specify which individuals are responsible for each component. Examples:

Barry Gibb will review all *Local Times* articles from January 2000 until September 2005 that are identified with the key words “Big Box,” “Company X Supercenter” and “Retail.” He will also review the company websites and other documents of ten prominent Big Box retailers to understand the advantages of big box retail from their perspective.

Maurice Gibb will review the relevant regulations (and potential variances) required for establishing big box retail on this site. He will assess the financial benefits associated with the proposal, based on estimates provided by similar or existing studies. He will contact public officials at the municipality and county level and provide transcripts of these interviews.

Robin Gibb will produce a case study of a similar community where a big box retail store was built. He will do observational research and conduct a minimum of six key informant interviews (two with employees, two with neighbors, and two with non-neighbor shoppers).

In addition, this assessment **MUST** include at least 10 academic sources that will be consulted for the project per student, of which at least 8 must be recent academic journal articles (less than ten years old, greater than 10 pages in length, indexed in JSTOR, Sociological Abstracts, or Social Science Abstracts). Each student must submit a list of ten academic sources that he or she will read and report on, and none of these sources may duplicate sources of other group members. Sources must be organized according to ASA citation standards (see ASA Style Guide, available on SOCS). This individual section of the INA will be graded individually, as 60 percent of the INA grade.

Final paper: Due December 12 (100 points)

The final paper represents the culmination of each group's ability to perform socio-spatial analysis. The final paper should follow the format of an applied research report (see Chambliss and Schutt 2003) with a short literature review added. A grading rubric will follow later in the semester.

It must have the following components:

1. A title page, including the names of each group member
2. Executive Summary (2 page, often bulleted summary of the report and its findings)
3. Introduction, including background, report objectives, and the organization of the report.
4. A brief literature review of relevant social science literature
5. Study design and methods, including limitations
6. A profile of the study area's people (including at least one map)
7. A profile of the study area's institutions (including at least one map)
8. A recommendation/needs assessment (including at least one map)
9. A discussion section reviewing the report's findings and reinforcing the recommendation
10. Appendixes
 - a. List of works cited in report (in ASA format)
 - b. List of resources consulted, but not cited
 - c. Supporting maps, tables, charts (as necessary)
 - d. Individual literature reviews
 - e. Details of data collection methods for each individual
 - f. Case Studies (as necessary)
 - g. Interview transcripts (as necessary)
 - h. Additional supporting documents (as necessary)

Final Presentation: Scheduled Period for the Final Exam (50 points)

The final presentation should represent a group effort. Each group should plan for a 20 minute PowerPoint presentation, with roughly 10 minutes available for questions and answers. Consider the presentation a pitch to the region's decision makers (such as politicians, community leaders, or community members). In other words, it should be a slick, persuasive presentation targeted towards a knowledgeable audience, but one which will not likely have a great deal of technical knowledge. A rubric for how the presentation will be graded will be distributed later in the semester.