

GEOG 3340/5340: Introduction to Research in Human Geography

FALL 2015

Lectures: *Tuesdays 6:00pm-8:50pm, Science 284*

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This syllabus is tentative and subject to change

1 Course description

The function of this course is to provide students with a comprehensive overview of the central components involved in developing a geographic research project with a particular focus on application of GIS in human geography research. We will draw from other disciplines such as sociology, demography and public health for methodological insights, but our goal is to focus our attention on approaches that are particularly appropriate to human geography. Thus, one of our goals will be to explore how to translate abstract concepts like scale, region, place, spatial interaction, and mobility into viable field methods. The students will explore how a topic is selected, relevant literature for developing a project idea, the range of methods that can be utilized, and the production of a research report.

Additionally, the course will give students an appreciation of and facility with the kinds of research methodologies and techniques employed by human geographers. The goal of the course is for students to develop an understanding of basic concepts, issues, and procedures involved in conducting research. Examples of the methodological issues that will be covered in this class include: questionnaire design, secondary data sources, reviews of literature, descriptive statistics, Geographic Information Systems (GIS), spatial analysis, the interviewing process, descriptive and inferential statistical analysis and data processing. Exemplar research conducted in various fields of social science will be reviewed and analyzed. The primary objective of this course is to provide students with the necessary skills to conduct independent research. The student will find that the skills they acquire in this course will be invaluable later in their careers in the private sector, the public sector, or in academia.

2 Prerequisites

Prerequisites of this course include basic concepts in human geography, quantitative methods including understanding of basic algebra, general statistics and working knowledge of at least one GIS software packages, e.g. ArcGIS, which could be fulfilled with *GIST 3300/5300*. However, students from different disciplines are welcome, please contact the instructor should there any question about the prerequisites.

3 Learning outcomes

After completing this course, the undergraduate students of this class are expected to be able to :

- Formulate real-world problems in the context of human geography research
- Apply quantitative and qualitative research analysis tools to various research problems.
- Apply computer technologies (open-source or commercial) to conduct necessary analysis.
- Create a research proposal, and communicate the result findings in the form of writing and presentation.

4 Readings

Although no textbook is required for this class, the following books will be frequently referred to for some topics of this class. Additional readings and handouts will be suggested as the class progresses.

- Phillips, Richard & Johns, Jennifer(2012), *Field Work for Human Geography*, SAGE Publications.
- O'Sullivan, David and David J. Unwin (2010), *Geographic Information Analysis, 2nd Edition*, John Wiley & Sons.
- Cromley, E. K., & McLafferty, S. L. (2011). GIS and public health. Guilford Press.
- Mitchell, A. (2009), *The ESRI Guide to GIS Analysis, vol. 2: spatial measurements and statistics*, ESRI Press.

5 Assessment

There are one written exams in this course (a final), lab exercises and reception papers, and a final project that includes a project proposal, project presentation and final report. The exams are used to assess your understanding of the basic concepts discussed in the lecture, and the format of the exams will consist of a combination of multiple choice, short answer and short essay questions.

The purpose of the final project is to provide experiences for students to apply the methods and tools learned from this class to real-world human geography problems. Topics could vary in different aspects of social sciences (e.g., public health, sociology, history and demography). The proposal associated with the final project should include a clear description of the proposed problems with appropriate background literatures justifying the motivation, description of the collected data sources, and methodology adopted to address the problem. The project must include a component of questionnaire design, survey, GIS mapping and analysis. Students are encouraged to start thinking of project ideas early in the semester, and communicate them with the instructor for feedbacks and comments.

6 Grading

Each exam, lab exercise and final project is worth 100 points, and the final points will be a combination of these three elements according to the following weights:

- one written exams: 30%
- lab exercises or reception papers: 30%
- final project proposal (10 %), presentation (10%) and paper (15%) : 40%

To ensure a specific grade in this course you must meet the following minimum requirements: A - 90%, B - 80%, C - 70%, D - 60%.

7 University policy

- Academic honesty (OP 34.12): <http://www.depts.ttu.edu/opmanual/OP34.12.pdf>
- Students with disabilities (OP 34.22): <http://www.depts.ttu.edu/opmanual/OP34.22.pdf>
- Students absence for observance of a religious holy day (OP 34.19): <http://www.depts.ttu.edu/opmanual/OP34.19.pdf>

8 Course outline

Week#	Date	Lecture Topics	Readings	Lab/Discussion Topics	Assignments	Note
1	Aug. 25	Overview of the course, fundamental laws in Geography	Goodchild et al. (2000)	Spatially integrated social sciences		
2	Sept. 1	Representing social process in GIS, fundamentals of GIS	Sui (2004), Tobler (1970)	Spatially integrated social sciences	Lab	
3	Sept. 8	Working with census survey data	ACS handbook	Understanding and Using American Community Survey Data	Lab	
4	Sept. 15	Using remote sensing in social science (guest lecture)				on conference travel
5	Sept. 22	Working with location-based social media data, address geocoding, Google Earth/Maps	Leetaru et al (2013)	Location-based social media	Lab	
6	Sept. 29	Fieldwork, questionnaire design, IRB process	Phillips and Jones (2012)			
7	Oct. 6	Exploratory spatial data analysis	O'Sullivan and Unwin (2010)		Lab	
8	Oct.13th	Human geography topics (guest lecture)	Cutter et al. (2003)	Social vulnerability to disaster, environmental justice	reflection paper	
9	Oct. 20	Human geography topics	Hagstrand (1970), Gonzalez (2008)	human mobility, segregation, accessibility	reflection paper	
10	Oct. 27	Human geography topics	Cromley and McLafferty (2011) and Richardson et al. (2014)	public health and environmental health	reflection paper	project proposal due
11	Nov. 3	Human geography topics	Michel et al. (2011)	GIS and digital humanities	reflection paper	survey questions due
12	Nov. 10	Project progress report				
13	Nov. 17	Project progress report				
14	Nov. 24	Project progress report				
15	Dec. 1st	Class presentation				