

# Understanding Housing: Assessment and Analysis (HSG: 5464) Spring Semester 2015

Tuesdays 6:15-9:00 PM (146 McNeal Hall & 216 PC Lab) | 3 Credits  
University of Minnesota, College of Design | Department of Design, Housing and Apparel

Instructor: Jessica Deegan  
Mailbox: 240 McNeal Hall  
Off Campus Office: Minnesota Housing Finance Agency, 400 Sibley Street N, St. Paul, MN  
Phone: (office) 651.297.3120 (mobile) 612.578.7017  
E-mail: [jadeegan@umn.edu](mailto:jadeegan@umn.edu) or [Jessica.deegan@state.mn.us](mailto:Jessica.deegan@state.mn.us)  
Office hours: 5:15 until class time on Tuesdays (in 346 McNeal Hall), and by appointment

Course Materials are posted on Moodle site each week.

I am best reached by email, anytime. If you prefer, you can reach me by phone Monday-Friday 8-4 in my office. After these hours you may call my mobile phone. Leave a message on my voice mail if I am not in the office when you call and include your name, your number, and good times to try to reach you.

---

## Course Description

This course is designed as an introduction to housing based research and analysis with a focus on geographic information systems and mapping. Housing research lends itself well to mapping and geographic analysis because of the fixed location of housing stock and the rich information that we can gather about the structure itself, the neighborhood or city in which it resides, and the inhabitants within.

The course requires extensive use of computers in a weekly lab session. GIS analysis will be taught from the basic principals through data collection and map production. While no previous GIS experience is necessary, a familiarity with Windows and standard office software is highly recommended and will help you succeed in the course.

There are three main goals in this course:

- 1) To develop a basic understanding of how to use GIS in the analysis of spatial data, especially that which pertains to housing;
- 2) To develop the ability to design maps that effectively communicate the information that is presented;
- 3) To understand the characteristics and availability of a variety of data sources, both housing specific and spatial data, and to utilize these data in the analysis of housing issues.

## Readings and Materials

The following books can be found at Books Underground on the St. Paul campus (or through Amazon) and are required:

Clemmer, Gina. 2013. The GIS 20: Essential Skills, Redlands CA: Esri Press.

MacDonald, Heather and Alan Peters. 2011. Urban Policy and the Census, Redlands CA: Esri Press.

Monmonier, Mark. 1996. How to Lie with Maps, Chicago, IL: University of Chicago Press.

Additional readings and websites will be assigned throughout the semester, as noted on the schedule. These readings will be made available via PDF for download the course Moodle site.

Removable media, such as a flash drive is necessary to store your project data and lab exercises. There is very limited space on the computer network.

## Course Guidelines

### Teaching Method:

Our weekly class time will be split between a lecture (in 146 McNeal Hall) and a computer lab session (in 216 McNeal Hall). We will meet first for lecture to discuss the topic of the week and the weekly readings. After a break, the lab session will begin with a demonstration and tutorial pertaining to the weekly lab assignment. You will have ample time to begin the lab exercises during an open lab time each week. Learning new software can be frustrating, and you should not hesitate to ask questions of me during this time.

### Student Roles:

I hope this will be an enriching class for you; to that end, I want to be as clear as possible about my expectations. I expect you to read all the assigned readings in before our discussion of it begins. I expect you to attend class sessions unless serious circumstances prevent that, in which case, I would appreciate your speaking with me about your absence. I expect you to take yourself and the material seriously, refusing to stop at the absolute minimum requirements. In addition, I expect you to participate in class discussions about the materials and work together in lab to problem solve.

### Classroom climate:

Guiding Principles of the Course Everyone's experience and opinions will be valued. Every class has a culture influenced by the fact that students come from widely diverse backgrounds and hold different values. They also learn in different ways. I encourage you to acknowledge your diversities by listening actively to each other. It is especially important that you listen to students whose opinions differ from your own.

## Grades

### Activities:

Grades in this course are based on three primary components:

#### Lab Exercises

Lab exercises will be assigned each week at the beginning of lab session, due the following week by the beginning of class. These lab exercises will relate to the topics of the week and will teach use of ArcGIS. Additionally, a take-home final lab exercise will take the place of a traditional final exam.

#### Course Project

Each student will design and develop a poster or use ArcGIS Online to communicate a housing related research project using maps, charts, etc. More information on the project will be discussed in week 2.

#### Quizzes

Two short quizzes, one at midterm and another at semester end will test on materials from lectures and readings. Formats of the quizzes are multiple choice and short answer and will likely occur online via Moodle.

#### Workload:

Weekly course activities include approximately 30 pages of reading each week and a weekly lab assignment in addition to the final project.

#### Grading Computation:

Grades will be awarded on the following basis: Note, there will be additional requirements for graduate students enrolled in the course (a written report for project).

Lab (10 exercises):	400 points
Test (2):	200 points
<u>Project:</u>	<u>400 points</u>
Total:	1000 points

#### Grading Scale

100-90% - A    89-80% - B    79-70% - C    69-55% - D    55% below - F

## Evaluation Criteria

A	Achievement that is outstanding relative to the level necessary to meet course requirements.
B	Achievement that is significantly above the level necessary to meet course requirements.
C	Achievement that meets the course requirements in every respect.
D	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
S	Achievement that is satisfactory, which is equivalent to a C- or better (achievement required for an S is at the discretion of the instructor but may be no lower than equivalent to a C-.)
I	(Incomplete) Assigned at the discretion of the instructor when, due to extraordinary circumstances, e.g., hospitalization, a student is prevented from completing the work of the course on time. Requires a written agreement between instructor and student.
F - N	Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I (see also I).

## Policies

### Attendance:

Attendance is mandatory. Unexcused absences will be docked from final grade by 1 percentage point. Bottom line, come to class, and if you can't, get in touch with me.

### Late Submissions:

Late submissions will be accepted for reduced points. 10% of the grade will be docked for each day a submission is late. If other circumstances prevent you from submitting a lab assignment or project on time, please discuss with me so we can work something out.

### Incompletes:

Incompletes will be evaluated on a case by case basis.

### Grading Disputes:

If you have a dispute of a grade I have given you on a test or project, please discuss with me within one week for re-evaluation.

#### Scholastic Misconduct:

Scholastic misconduct can be grounds for dismissal from the university and includes: cheating on assignments, acquiring or using test materials without faculty permission, plagiarizing (representing as your own work any part of what was done by another person), submitting the same paper or substantially similar papers to meet the requirements of more than one course without the written approval and consent of all the instructors involved, depriving another student of necessary course materials or otherwise interfering with another student's work, falsifying a record, or any other act that violates the academic rights of another student or involves misrepresentation of a student's own work.

#### Disability accommodation statement:

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to bring this to my attention early in the semester to discuss their individual needs. Further information is available from Disabilities Services, 612.626.1333.

All of us learn in different ways and with varying degrees of success. If you know of any factors in your life which hinder your abilities to learn up to your potential in this course, please notify me at once. If these factors are recognized disabilities under the ADA, please provide me with appropriate notification. If they fall outside official categories, stop in my office to discuss them so that we may arrive at a satisfactory program of study/performance for you in this course.

#### Inclusivity:

The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Reports of harassment are taken seriously, and there are offices and individuals to help.

#### Release of Work Statement:

Students understand that enrollment in this course grants consent for their work to be selected for inclusion in college or departmental publications (online or in print). Your instructor may select to use your work to represent her/his skills as an instructor in a teaching portfolio (online or in print).

## Schedule (subject to change)

	Readings & Resources	Lab
WEEK 1 – January 20		
Intro to course		Lab 1 - PolicyMap introduction: <i>Housing Data for Policy Analysis</i>
WEEK 2 – January 27		
Basic Concepts of GIS & Cartography in Context of Housing Studies	Clemmer, 1,2, Data Types Monmonier 1,2,3	Lab 2 – Downloading Data and Creating a Reference Map: <i>Mapping the Section 8 Housing Portfolio in the Twin Cities</i>
WEEK 3 – February 3		
Data Types & Symbolization	Clemmer, 3,4, Metadata Monmonier 4,5	Lab 3 – Preparing Data and Data Management
WEEK 4 – February 10		
Data Classification and Categorization Methods.	Clemmer, 5,6,7 Monmonier 10,11,12	Lab 4 – Joins and Thematic Mapping: <i>Evaluating Historic Landscapes and Current Housing Trends</i>
WEEK 5 – February 17		
Community GIS	Clemmer, 8,9, Custom Symbology	Lab 5 – Geocoding & Categorical Maps: <i>Mapping Community Housing Assessments</i>
WEEK 6 – February 24		
The US Census and American Community Survey	Clemmer, 12,13, Multiple Data Frames MacDonald 1&2	Lab 6 – Queries
WEEK 7 – March 3		
Environmental Justice (guest lecture at Humphrey co-with PA 5444)	Clemmer, 14,15,16 MacDonald 3 &4 Additional Reading: TBD	No formal Lab, Project Time: <b>Project Proposals Due Next week</b>
WEEK 8 – March 10		
Mid Term Test		Lab 7 – Geoprocessing, Geodatabases, and Spatial Joins
SPRING BREAK – March 17		

WEEK 9 – March 24		
Housing Multi-Criteria Analysis: Gentrification Typologies (guest lecture)	Clemmer, 17,18,19 MacDonald 5 Additional Reading: <b>TBD</b>	Lab 8 – Reports, Sharing, and Publishing Maps
WEEK 10 – March 31		
The Commuting Conundrum: Workforce Housing, Transit, and Jobs	Clemmer, Advanced labeling, time series, and map books. MacDonald 6&7 Additional Reading, website: <a href="#">Longitudinal-Employer Household Dynamics</a>	Lab 9 – Advanced Mapping Techniques
WEEK 11 – April 7		
Geographic Priorities of Federally Assisted Housing	Readings: Distribution of Low Income Housing Tax Credits through Qualified Allocation Plans ( <a href="#">Minnesota’s QAP</a> )	Lab 10 – PolicyMap revisited
WEEK 12 – April 14		
Mortgage Markets and Real Estate Analytics	Resources: <a href="#">Home Mortgage Disclosure Act</a>   <a href="http://www.directionsmag.com/pressreleases/gis-technology-helps-real-estate-industry-professionals-make-smarter-busine/272480">http://www.directionsmag.com/pressreleases/gis-technology-helps-real-estate-industry-professionals-make-smarter-busine/272480</a>	Lab 10 – PolicyMap revisited (continued)
WEEK 13 – April 21		
Metropolitan Council’s Housing Policy Plan & Fair Housing Equity Assessment	Reading: Metropolitan Council’s Housing Policy Plan: <a href="http://www.metrocouncil.org/Housing/Planning/Housing-Policy-Plan.aspx">http://www.metrocouncil.org/Housing/Planning/Housing-Policy-Plan.aspx</a>	Project Time
WEEK 14 – April 28		
Test 2		Project Time
WEEK 15 – May 5		
Project Presentations		No Lab