

Syllabus

GIS Modeling of the Urban Environment – Fall 2013

GEOG 5520

Course Information and Requirements

Course Title: GIS Modeling of the Urban Environment (GEOG5520)

Credits: 3 credits

Prerequisites: None

Instructor: Natalia Vorotyntseva

E-mail: Natalia.Vorotyntseva@uconn.edu (After the first day of classes, students registered in the course should send all messages to the instructor via HuskyCT Messages tool.)

Office: 423 B Austin Building (formerly CLAS)

Office Hours: By email appointment, students may contact the instructor through Skype (account name is: natalia.vorotyntseva).

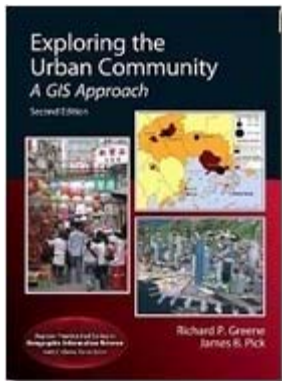
Minimum Technical Skills:

To be successful in this course, you will need the following technical skills:

- Use of electronic mail with attachments.
- Saving files in commonly used word processing program formats.
- Copying and pasting text, graphics or hyperlinks.
- Using presentation software to create and share information.
- Working within two or more browser windows simultaneously.
- Opening and accessing PDF files.

Required Text:

You can buy both the textbook and the workbook at any UConn Co-Op.



Exploring the Urban Community: A GIS Approach, 2nd Edition

By Richard P. Greene and James B. Pick

Prentice Hall College Division, Publisher

ISBN-10: 0536922012

ISBN-13: 978-0536922014

The developer of this course is Dr. Robert Cromley, Professor in the Geography Department at the University of Connecticut.

All videos, images, charts, graphs not created by the instructor are used with permission of the publisher or are in the public domain and cited under Fair Use practices.

Course Description

This course applies the tools of geographic information systems (GIS) to the study of the urban environment. GIS is used in many

countries as a planning tool by urban and regional planners. Spatial arrangements and patterns, trends, relationships can be studied in an integrative manner using digital databases containing map layers and images of the urban environment. Students completing the course readings, exercises, and examinations should be able to use GIS to analysis urban systems, structure, growth, economic development, neighborhoods, and environmental issues.

Course Goals and Objectives

After completing this course you will be able to:

- Demonstrate knowledge of basic characteristics of urban environments, their common social and physical structures, trends and issues.
- Examine the aspects and processes of the urban environments at different scale using GIS tools.
- Identify the structural features of cities in order to make analogies and compare them using the GIS environment.

Course Requirements: Activities, Grading and Exams

The final course grade will be based upon the following required components:

Grading Criteria

Course Components	Final Grade %
11 Assignments (15 points each)	35
4 Discussions	5
Midterm Exam	25
Final Exam	35
Total	100%

Activities

Assignments and discussions are designed to connect the content areas associated with readings and lectures to different geographic methods, forms of spatial analysis, and GIS techniques. You will also be asked to reflect on several major issues affecting urban areas. In doing so, you will interpret spatial patterns and trends within and between urban areas and receive a better understanding of contemporary urban geography. This active learning approach to the modeling and study of the city will enhance your analytical skill set for the job market.

There are 11 assignments associated with the 11 sessions. Each is worth 15 points. The step-by-step instructions for ten assignments are found at the end of the chapter covered by a session. These 10 assignments include both a Google Earth exercise as well as an ArcGIS 10 exercise that complement each other. You must download and install Google Earth and acquire from the instructor and install ArcGIS 10 software before you can attempt any assignment. Instructions for the 11th assignment on geocoding can be downloaded from the assignment tool associated with Session 6. This assignment includes using online geocoding services as well as Google Earth and ArcGIS 10.

Discussions

There will be four discussions in this course. The discussions have you reflect on changes in public policy with respect to the US Census and different urban issues.

Exams

There will be a mid-term and final exam. The final exam has both a hand-on component as well as a written test. Each test will consist of definitions and essay questions taken from the study review guides that are available for both the mid-term and final exam.

Academic Misconduct

Academic misconduct in any form is in violation of [The Student Code](#), which is incorporated into this document by reference, and will not be tolerated. This includes, but is not limited to, copying or sharing answers on tests or assignments, plagiarism, and having someone else do your academic work. Depending on the act, a student can receive an F grade on the test/assignment, F grade for the course, or can be suspended or expelled. In this context, let me emphasize that substantially similar submissions of an assignment from different students will be treated as an instance of academic misconduct by the students involved.

I take plagiarism seriously. If you have questions or concerns, please ask me. If you're not sure how to recognize and avoid plagiarism, [click here](#).

Students with Disabilities

Student with disabilities should contact me at the start of the semester and the [Center for Students with Disabilities](#) as soon as possible, in order for appropriate accommodations to be provided in a timely manner.

General Course Outline

Your course will be conducted online in a series of sessions. It is assumed that it might take up to one week to complete the session by submitting the assignment in the end. Every session will include an open discussion of material covered, assignments or questions about the course.

Session 1 – The Display of Urban Environment Chapter 1 (Aug 26 – Sep 1) Assignment 1 – due Sep 1 at noon	MIDTERM EXAM – Oct 14 – Oct 20
Session 2 – Defining the Metropolis Chapter 2 (Sep 2 – Sep 8) Assignment 2 - due Sep 8 at noon	Session 8 – Race, Ethnicity, Gender and Poverty Chapter 7 (Oct 21 – Oct 27) Assignment 8 - due Oct 27 at noon
Session 3 – The Internal Structure of Cities Chapter 3 (Sep 9 – Sep 15) Assignment 3 - due Sep 15 at noon	Session 9 – Industrial Location and Cities Chapter 8 (Oct 28 – Nov 3) Assignment 9 - due Nov 3 at noon
Session 4 – Systems of Cities Chapter 4 (Sep 16 – Sep 22) Assignment 4 - due Sep 22 at noon	Session 10 – Urban Core and Edge City Contrasts Chapter 9 (Nov 4 – Nov 10) Assignment 10 - due Nov 4 – Nov 10 at noon
Session 5 – Urban Neighborhoods Chapter 5 (Sep 23 – Sep 29) Assignment 5 - due Sep 29 at noon	Session 11 – Urban Environmental Problems and Issues Chapter 10 (Nov 11 – Nov 24) Assignment 11 - due April Nov 24

Session 6 – Geocoding Sep 30 – Oct 6 Assignment 6 - due Oct 6 at noon	Take Home Portion of Final Exam – Dec 2 – Dec 8
Session 7 – Migration and Residential Mobility Chapter 6 (Oct 7 – Oct 13) Assignment 7 - due Oct 13 at noon	FINAL EXAM – Dec 9 – Dec 15

Required Software

Required Software: ArcGIS 10, Google Earth, MS-Word

Click here to [download the following required plug-ins](#) :

Acrobat Reader

If you encounter technical problems, please contact the [Digital Learning Center at UConn](#) (DLC), 860-486-1187.