

PLAN614/GEOG535/GEOG635

**REAL-ESTATE MARKET ANALYSIS/
GIS & RETAIL SITE ANALYSIS**

General Information:

Class meets: Tuesday, Thursday 4:00-5:15pm
Room: USI (CO) 117
Sem. Hours/Credits: 3

Instructor:

Sumei Zhang

Office hours: Tuesday, Thursday 3pm-4pm or by appointment
Office location: USI 211
Office phone: 852-7915
Email: sumeizhang@louisville.edu

Please free to email me at any time. I will respond to email within 24 hours in most cases, 48 hours on weekends or holidays. If you do not receive a response within that time period, please reach out again.

Course Overview:

This course introduces concepts, methodologies and analytical tools used in urban real-estate market analysis, with a particular emphasis on site selection for proposed real-estate investments. Detailed subjects include the conceptual framework of market analysis, principles of location theory, methods to analyze demand and supply, and applications of market analysis to various real-estate development, including residential, retail, office, industrial, and mixed-use. The course also provides students with in-depth and hands-on training and the application of a desktop GIS software, ArcGIS Pro, in real-estate site analysis.

Desired Learning Outcomes:

By the end of this course, students are able to:

- (1) Understand the basic concepts and theories in real-estate market analysis;
- (2) Analyze local economic and demographic trends;
- (3) Analyze the supply and demand of a real-estate market;
- (4) Propose site selection criteria for various development;
- (5) Be aware of data sources and limitations;
- (6) Use ArcGIS Pro proficiently*; and
- (7) Identify the proper location of sites*;

* This desired outcome is optional for GCRED students.

Course Format:

The course will follow a **hybrid** model, with half traditional in-classroom discussion and half distance learning. Seven project assignments are designed to provide opportunities to apply the theories and techniques that you learned in real-world scenarios in ArcGIS. Students are expected to attend class weekly and keep up with distance learning and project assignments.

Textbook (optional):

Fanning, Stephen F. (2014). *Market Analysis for Real Estate*. Appraisal Institute. 2nd Edition.

You may, but are not required to, buy the book.

I will provide you online readings from the SoftChalk system. These readings are required.

Required Assignments:

Students in this class come from different programs, including Urban Planning, Geography, Industrial Engineering, and Real Estate Development. The following lists the evaluation criteria for all students, which involves 13 SoftChalk lessons, 8 project assignments, 1 final project, and class participation. Stand-alone GCRED (Graduate Students in Real Estate Development) students have the option to choose a different set of evaluation criteria, as listed on the right side of the table below. GCRED students can complete the course online asynchronously. For a GCRED student, if you choose the online option, you must email me to indicate the interest and get my approval in the first week.

<u>All students</u>		<u>GCRED grading option (the online option)</u>	
SoftChalk Lessons (13)	52 points	SoftChalk Lessons (13)	52 points
Project Assignments (8)	24 points	Blog Assignments (5)	10 points
Final Project	15 points	Skill Exercises (5)	10 points
<u>In-class Participation</u>	<u>9 points</u>	<u>Exams (2)</u>	<u>28 points</u>
Total points	100	Total points	100

Grading will be on a straight point system (i.e., no curve):

A+ = 98-100%	A = 94-97%	A- = 90-93%
B+ = 88-89%	B = 84-87%	B- = 80-83%
C+ = 78-79%	C = 74-77%	C- = 70-73%
D+ = 68-69%	D = 64-67%	D- = 60-63%
F = below 60%		

SoftChalk Lessons (Distance Learning)

There are 13 asynchronous online lessons. Every lesson consists of a set of online readings. There are quiz questions embedded in these lessons to test your learning progress. When you finish a learning session, you finish a quiz as well. Most quiz questions (e.g. multiple choice, true/false, matching) are automatically graded. Essay questions will be manually graded by me. All SoftChalk lessons take place on Thursdays.

Project Assignments

The purpose of project assignments is to provide you opportunities to familiarize yourselves with new knowledge, apply them in real-estate decision-making, and learn ArcGIS. Detailed instructions will be provided.

I will provide you a student license of ArcGIS Pro to install on your personal computer. If you have a Mac OS, you cannot install this software.

We have a lab (USI 121). All machines in the lab are part of active directory, so users can login using their Ulink ID and Passwords. Students should NOT leave any files on the machines. At some point the machines will be wiped and re-imaged. If students leave files on the machine they may or may not be there for class next week. They should assume the files will be erased and therefore make copies on personal flash drives. Once a machine is re-imaged there is no chance of file recovery. The lab combination code is 81919.

The Final Project Assignment

Students will work on the final project as a team. More information will be provided in class.

In-class Participation

For Tuesday in-person sessions, I will lead discussions with topics related to what you have just learned and its application in the final project. From week 9, we will use Tuesday in-person sessions to work on the final project. Students are expected to participate in these discussions, contribute ideas, and share responsibilities of the final project.

Blog Assignments

If a GCRED student chooses the GCRED grading option, there will be 5 blog assignments. These blog assignments are to encourage you to continue to explore various topics or issues that are connected to the real world.

Skill Exercises

If a GCRED student chooses the GCRED grading option, there will be 5 skill exercises. These exercises are created to introduce additional knowledge points and tests to prepare you for the Kentucky Real Estate License exam. Note that these assignments only address several areas of the license exam.

Exams

If a GCRED student chooses the GCRED grading option, there will be two exams. These exams will be delivered online. Additional information related to the exam (e.g. format, number of questions) will be provide.

DETAILED SCHEDULE (TENTATIVE)

Orange indicates in-person meeting.

Wk	Date	Non-GCRED Students	GCRED Students
1	August 23 (Tu)	<ul style="list-style-type: none"> • Course Introduction • Introduction to ArcGIS 	Distance Learning 1 (DE1) <ul style="list-style-type: none"> • Data, Basic Concepts in Real Estate, GIS DE1 assignments due at 11:59pm on August 28.
	August 25 (Th)	Distance Learning 1 (DE1) <ul style="list-style-type: none"> • SC: Data, Basic Concepts in Real Estate, GIS • Install ArcGIS DE1 assignment due at 11:59pm on August 28.	
2	August 30 (Tu)	<ul style="list-style-type: none"> • Application of GIS in real estate • Introduction to the Final Project (Pharmacy Retail Market Analysis of Jefferson County) 	Distance Learning 2 (DE2) <ul style="list-style-type: none"> • Real Estate Development, Market Analysis vs. Appraisal Blog Assignment 1 (BLOG1): Space Market vs. User Market DE2 and BLOG1 assignments due at 11:59pm on September 4.
	September 1 (Th)	Distance Learning 2 (DE2) <ul style="list-style-type: none"> • Real Estate Development, Real Estate Market, Market Analysis vs. Appraisal Project 1: Introduction to ArcGIS DE2 and Project 1 assignments due at 11:59pm on September 4.	
3	September 6 (Tu)	<ul style="list-style-type: none"> • Meet the clients to discuss the focus and extent of the final project (may be virtual) 	Distance Learning 3 (DE3) <ul style="list-style-type: none"> • Trend analysis, the concept of location, four scales of location Skill Exercise 1 (EXE1): Trend analysis in Excel DE3 and EXE1 assignments due at 11:59pm on September 11.
	September 8 (Th)	Distance Learning 3 (DE3) <ul style="list-style-type: none"> • Trend analysis, the concept of location, four scales of location Project 2: Market Trend Analysis (in Excel) DE3 and Project 2 assignments due at 11:59pm on September 11.	

Wk	Date	Non-GCRED Students	GCRED Students
4	September 13 (Tu)	<ul style="list-style-type: none"> The importance of location in real estate development Discussion of Louisville Demographic and Economic trends in relation to the final project 	Distance Learning 4 (DE4) <ul style="list-style-type: none"> Important land use theories, situs analysis Project 3: Thematic Mapping of Land Use Distribution in Louisville
	September 15 (Th)	Distance Learning 4 (DE4) <ul style="list-style-type: none"> Important land use theories, situs analysis Project 3: Thematic Mapping of Land Use Distribution in Louisville DE4 and Project 3 assignments due at 11:59pm on September 18.	Blog Assignment 2 (BLOG2): The Concept of Location DE4 and BLOG2 assignments due at 11:59pm on September 18.
5	September 20 (Tu)	<ul style="list-style-type: none"> Implications of land use theories Work on the final project 	Distance Learning 5 (DE5) <ul style="list-style-type: none"> Productivity analysis at the site level Skill Exercises 2 (EXE2): Describe a property
	September 22 (Th)	Distance Learning 5 (DE5) <ul style="list-style-type: none"> Productivity analysis at the site level Project 4 – Productivity analysis (nearest distance, buffer) DE5 and Project 4 assignments due at 11:59pm on September 25.	DE5 and EXE2 assignments due at 11:59pm on September 25.
6	September 27 (Tu)	<ul style="list-style-type: none"> Productivity analysis of pharmacy retailing 	Distance Learning 6 (DE6) <ul style="list-style-type: none"> Market delineation, real estate demand Blog Assignment 3 (BLOG3) – Impacts of external investment on real estate demand
	September 29 (Th)	Distance Learning 6 (DE6) <ul style="list-style-type: none"> Market delineation, real estate demand Project 5 – link population distribution to real estate demand (hot spot analysis) DE6 and Project 5 assignments due at 11:59pm on October 2.	DE6 and BLOG3 assignments due at 11:59pm on October 2.

Wk	Date	Non-GCRED Students	GCRED Students
7	October 4 (Tu)	<ul style="list-style-type: none"> • Fall break 	
	October 6 (Th)	Distance Learning 7 (DE7) <ul style="list-style-type: none"> • Competitive supply, market cycle Project 6 – Distribution of jobs and Real Estate Demand (3D mapping) DE7 and Project 6 assignments due at 11:59pm on October 9.	Distance Learning 7 (DE7) <ul style="list-style-type: none"> • Competitive supply, market cycle Skill Exercises 3 (EXE3): Market cycle DE7 and EXE3 assignments due at 11:59pm on October 9.
8	October 11 (Tu)	<ul style="list-style-type: none"> • Work on the final project 	
	October 13 (Th)	Distance Learning 8 (DE8) <ul style="list-style-type: none"> • Retail Market Analysis I Project 7 – Retail Analysis I DE8 and Project 7 assignments due at 11:59pm on October 16.	Distance Learning 8 (DE8) <ul style="list-style-type: none"> • Retail Market Analysis I Exam 1 DE8 and Exam 1 assignments due at 11:59pm on October 9.
9	October 18 (Tu)	<ul style="list-style-type: none"> • Work on the final project 	
	October 20 (Th)	Distance Learning 9 (DE9) <ul style="list-style-type: none"> • Retail Market Analysis II Project 8 – Retail Analysis II DE9 and Project 9 assignments due at 11:59pm on October 23.	Distance Learning 9 (DE9) <ul style="list-style-type: none"> • Retail Market Analysis II Blog Assignment 4 (BLOG4) – Is retail dying? DE9 and BLOG5 assignments due at 11:59pm on October 9.

Wk	Date	Non-GCRED Students	GCRED Students
10	October 25 (Tu)	<ul style="list-style-type: none"> Work on the final project 	Distance Learning 10 (DE10)
	October 27 (Th)	Distance Learning 10 (DE10) <ul style="list-style-type: none"> Residential market analysis DE10 assignment due at 11:59pm on October 30.	<ul style="list-style-type: none"> Residential market analysis Blog assignment 5 (BLOG5): Westend housing supply DE10 and BLOG6 assignments due at 11:59pm on October 30.
11	November 1 (Tu)	<ul style="list-style-type: none"> Work on the final project 	Distance Learning 11 (DE11)
	November 3 (Th)	Distance Learning 11 (DE11) <ul style="list-style-type: none"> Office market analysis DE11 assignment due at 11:59pm on November 6.	<ul style="list-style-type: none"> Office market analysis Skill Exercises 4 (EXE4): Appraisal methods DE11 and EXE4 assignments due at 11:59pm on November 6.
12	November 8 (Tu)	<ul style="list-style-type: none"> Work on the final project 	Distance Learning 12 (DE12)
	November 10 (Th)	Distance Learning 12 (DE12) <ul style="list-style-type: none"> Mixed use market analysis DE12 assignment due at 11:59pm on November 13.	<ul style="list-style-type: none"> Mixed use market analysis Skill Exercises 5 (EXE5): Real Estate math DE12 assignment due at 11:59pm on November 13.
13	November 15 (Tu)	<ul style="list-style-type: none"> Work on the final project 	Distance Learning 13 (DE13)
	November 17 (Th)	Distance Learning 13 (DE13) <ul style="list-style-type: none"> Industrial market analysis DE13 assignment due at 11:59pm on November 20.	<ul style="list-style-type: none"> Industrial market analysis DE13 assignment due at 11:59pm on November 20.
14	November 22 (Tu)	Work on the final project	Happy Thanksgiving
	November 24 (Th)	Happy Thanksgiving	
15	November 29 (Tu)	Finalize the project document	Exam
	December 1 (Th)	Final project presentation	