

Department of Geography
Spring 2014

GEO440: GIS FOR URBAN & REGIONAL PLAN (3.0 CREDIT HOURS)

Dr. Ahmed Bin Touq

CRN: 23630/21214
 Section: 01/51
 Time: Sunday/Tuesday (**Sec.01**): 03:30 PM - 04:45 PM/(**Sec.51**): 12:30pm – 1:45pm
 Venue: (**Sec.01**: S- Lab.0038/ T-Lec.0057) /(**Sec.51**: S - Lab.0054 / T-Lec. 1025)
 Date Range: Feb 16, 2014 - Jan 19, 2014
 Office hours: By appointment: Email OR Call
 Tel.: (03) 7135902
 Email: abintouq@uaeu.ac.ae
 Language of instruction: English
 Prerequisites: GIS.1 - GEOG321

1. COURSE DESCRIPTION

This is an intermediate-level GIS course that focuses on the application of geographic information systems in the practice of urban and regional planning, with a focus on land use and environmental issues. Topics covered will include data models and structures, coordinate systems and projections, thematic mapping, spatial analysis, acquisition and integration of spatial data from various sources, spatial data policy issues, and GIS application development.

The central component is a class Poster covering the collection, formatting, analysis, and presentation of land use data for a GIS application.

2. TEACHING METHODS

Course material consists of (1) class lectures and discussions, (2) online and handout readings, and (3) labs assignments. The course involves learning and practical training designed to identify, describe, explain, and try to solve a specific geography problem/issue using GIS.

3. COURSE OBJECTIVES AND COURSE OUTCOMES

Objectives	Outcomes
To introduce students to the principles of urban studies and GIS related environmental applications	Evaluate and critically identify the strength, weakness, and constraints of applying remote sensing, GPS, and GIS in urban planning.
To expose the students to the applications of GIS in various geographical areas such Urban and local planning	Demonstrate ability in using GIS software to build urban planning database, perform spatial analysis, and prepare maps, reports, and charts for presentation of results.
To develop an understanding of the applications of GIS in urban planning.	Integrate different GIS data to solve real urban problem.
To review GIS models and spatial analysis related to the application of GIS in urban planning field.	Students will demonstrate ways in which these approaches can be applied

4. STUDENTS' RESPONSIBILITIES

1. Students must attend class regularly.
2. Students must do the readings before they come to class (ways to test this may be used)
3. Students are expected to actively participate to class discussions (this would count in the evaluation) and complete lab assignments on time.
4. Students are responsible for all announcements made in class.
5. All electronic devices (MOBILE phones or laptops, etc.) must be turned off BEFORE entering the classroom and kept out of sight.

5. GRADING SCHEME

1. Exam.1	25%
2. Exam.2	30%
3. Poster and Presentation	10%
4. Course work Quizzes, Participations, Labs and summary	35%

6. COURSE OUTLINE – SUBJECT TO CHANGE

Class Website:

[http://faculty.uaeu.ac.ae/abintouq/GEO440 Spring2014/gis for urban regional plannin Spring%202014.htm](http://faculty.uaeu.ac.ae/abintouq/GEO440%20Spring2014/gis%20for%20urban%20regional%20planning%20Spring%202014.htm)

Week 1	Introduction to the course
Weeks 2 & 3	GIS Lab .1 and Reading: GIS Case Studies
Weeks 4 & 5	GIS Lab .2, Reading: GIS Case Studies, and Ch.(01): Need for GIS in Decision Support
Weeks 6	GIS Lab .3 and Ch.(02): GIS in Decision Support Situations
Week 7	GIS Lab .4, Ch.(03): GIS Decision Support Methods and Workflow
Week 8	Exam.1
Weeks 9 & 10	Poster outline, Dubai SP 2015, and UAE Vision 2021
Weeks 11 & 12	Poster workshop, Abu Dhabi and Al Ain Plan 2030
Weeks 13 & 14	Western Region Plan 2030 and Ch.(04): GIS-Based Decision Situation Assessment
Week 15	Exam.2

7. QUIZ AND ASSIGNMENT SCHEDULE – SUBJECT TO CHANGE

Week		Week	
2	Assignment 1 (Lab–Summary)	3	Quiz 1
4	Assignment 2 (Lab–Summary)	5	Quiz 2
6	Assignment 3 (Lab–Summary)	7	Quiz 3
8	Exam.1	9	Quiz 4
10	Assignment 4 (Summary)	11	Quiz 5
12	Assignment 5 (Summary)	13	Poster presentation
14	Assignment 6 (Summary)	15	Exam.2

All homework is due on blackboard forum on time every week. No late homework.

8. REQUIRED READING

- Regional and Urban GIS - A Decision Support Approach
By: Timothy L. Nyerges, Piotr Jankowski

9. ADDITIONAL RESOURCES

- Juliana Maantay and John Ziegler, 2006. GIS for the Urban Environment. ESRI Press, Redlands, California.
- Karen C. Hanna and R. Brian Culpepper, 1998. GIS and Site Design: New Tools for Design Professionals, John Wiley & Sons

10. STUDENTS WITH SPECIAL NEEDS

If a student has a documented disability that may affect performance in the class, a request can be made for reasonable accommodations. The student is expected to schedule an appointment with the instructor (no later than the second week of classes) so provisions can be made to assure s/he has an equal opportunity to meet all the requirements of the course.

II. ACADEMIC HONESTY

Students are bound by the UAEU policy prohibiting plagiarism or other forms of cheating. Students who would like advice on what plagiarism is should seek advice from the instructor before submitting assessed work.