

Department of Geography
Fall 2015

GEO221: GEOGRAPHIC INFO. SYSTEMS (I) (3.0 CREDIT HOURS)

Dr. Ahmed Bin Touq

CRN: III06
Section: 01
Time: Monday/Wednesday 11:00 AM - 12:15 PM
Venue: S- Lab.0038/ T-Lec.0004
Date Range: Aug 23, 2015 - Dec 19, 2015
Office hours: By appointment: Email OR Call
Tel.: (03) 7135902
Email: abintouq@uaeu.ac.ae
Language of instruction: English

1. COURSE DESCRIPTION

This course exposes students to the principles of GIS (hardware, software, people, data, and methods) and its environmental applications. The course includes hands-on GIS state-of-the-art software.

This course introduces the fundamentals of GIS including the history of automated mapping. The course will include a brief introduction to basic cartographic principles including maps scales, coordinate systems and map projections. An in depth review of the necessary hardware and software elements used in GIS will be made.

The course will presented in a lecture/laboratory format. The lecture portion will deal with conceptual issues in GIS database design and development, analysis, and display. The laboratory portion will provide students with hands-on contact with GIS software products such as ArcGIS.

2. TEACHING METHODS

Course material consists of (1) class lectures and discussions, (2) Textbook readings, and (3) labs assignments. Course material focused on training students to use GIS software and interpret selected GIS spatial data

3. COURSE OBJECTIVES AND COURSE OUTCOMES

Objectives	Outcomes
To develop an understanding of GIS (hardware, software, data, people, methodology)	Integrate different sources of data for map creation
To expose the students to the applications of GIS in various geographical areas such as physical, environmental, and local planning	Evaluate the differences between vector and raster structures for data representation
To provide students with the opportunity to learn and master basic and fundamental GIS concepts necessary for further GIS education or experiences.	Demonstrate proficiency in the use of GIS software to build database, perform spatial analysis, prepare maps, reports, and charts for presentation of results.
Provide awareness of the value of spatial data and information.	Apply GIS to investigate geographical problems

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. Mid Term Exam	25%
2. Final Exam	30%
3. Course work (Labs)	15%
4. Quiz, Report and Presentation	20%

6. COURSE OUTLINE – SUBJECT TO CHANGE

Class Website:

http://faculty.uaeu.ac.ae/abintouq/GEO_221_Fall2015/Lecture%20Outlines221.htm

7. QUIZ AND ASSIGNMENT SCHEDULE – SUBJECT TO CHANGE

<u>Week</u>		<u>Week</u>	
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

- Longley, P.A., Goodchild, M.F., Maguire D. J, and Rhind D. W., 2004. Geographic Information Systems and Science. John Wiley & Sons, Ltd., London.

9. ADDITIONAL RESOURCES

- Longley, P. A., M. F. Goodchild, D. J. Maguire, and D. W. Rhind, 1999. Geographical Information Systems: Principles, Technical Issues, Management Issues, and Applications. vol. 2, John Wiley and Sons, Inc., New York.

- Burrough, P. A. and R. A. McDonnell, 1998. Principles of Geographical Information Systems. Oxford University Press, London.

- DeMers, M. N. 2005. Fundamentals of Geographic Information Systems. John Wiley & Sons. Inc, New York.

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.