CRP 438 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS IN PLANNING PRACTICE

Course Code: 1210438
METU Credit (Theoretical-Laboratory hours/week): 3(3-0)
ECTS Credit: 5.0
Department: City And Regional Planning
Language of Instruction: English
Level of Study: Undergraduate
Course Coordinator: Levent Ucuzal - B.Gözde Özacar
Offered Semester: Fall and Spring Semesters.

Course Description

CRP 438 is an introductory course in the design, development and application of geographic information systems (GIS) and related technologies for students in a wide range of disciplines. The course is 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 various GIS software products, that are used in the analysis of geographically-referenced data sets.

Course Objective

The goal of the course is to provide students with experiences in the design, development, analysis, and visualization of geographic data. Upon completion of the course, students should be able to:

- demonstrate an understanding of critical concepts used in GIS
- develop conceptual designs for GIS databases
- utilize informed field data collection and management techniques
- conduct spatial and logical queries on geospatial data
- describe and communicate analytical findings to a non-technical audience
- demonstrate a working knowledge of GIS software capabilities
- meet the prerequisite skill requirements of advanced GIS courses

Course Content

The topics listed below indicate the general sequence of content areas presented in the lecture portion of the course. Lab content will be coordinated with the lecture topics, as possible, to provide reinforcement of the material as well as hands-on use of software in a supervised environment.

- Geographic data concepts
- GIS data structures
- Database design concepts
- Data acquisition
- Data preprocessing considerations
- Spatial data integration
- Data Modeling
• Data visualization
• GIS analysis, implementation and outputs

Textbooks and Lab Materials

There is no required textbook incase for any interest.


John E. Harmon, Steven J. Anderson, The Design and Implementation of Geographic Information Systems

Stan Aronoff
Geographic Information Systems: A Management Perspective

Lab handouts will be available in .pdf or .doc format during the lab sessions.

The instructors reserve the right to make additional required reading or lab materials available from time to time.

Grading

The assessment of student achievement in the course will be based on attendance, seminar presentation and paper, completed laboratory exercises, final project presentation and report, and a final exam.

There will be four problem sets and a comprehensive final examination. The point distribution for the problem sets, exams and lab assignments is as follows:

Lab Exercises + Seminar presentation and paper + Attendance \( \rightarrow \%30 \)

Project and Report \( \rightarrow \%30 \)

Final Exam \( \rightarrow \%40 \)

Exam Policies

The presentations of the final projects are scheduled for xxx 2013 at 4.30 p.m at ARCH lab. All students need to be at the lab 15 minutes earlier than the presentation time, to upload the power point presentations to the computer and submit their reports and CDs.

The final examination will be cumulative and is scheduled for xxx 2013 at 4.30 p.m.

Early or rescheduled presentation and final exam dates are not offered.

Make up exam will be given, after the finals period, only to those students who have a valid, officially documented excuse.

(METU Academic Catalog, Article 9, http://www.oidb.metu.edu.tr/english/regulations/oidb41a.htm)

Late Work Policy

In general, submitting laboratory assignments after the specified completion date is not considered acceptable for University students. Late labs or papers will be penalized as follows:

1 day late -- evaluated points MINUS 10%
2 days late -- evaluated points MINUS 20%
Late work will NOT be accepted more than two weekdays past the due date. In extreme cases of personal misfortune this policy can be extended ONLY by special arrangement with the instructor.

Laboratory Work

Lab work is due one week after it is assigned, unless otherwise specified. Most students will be able to complete all lab work during the laboratory period. If you are unable to complete a lab during regular lab hours, there can be some scheduling with the GIS lab. Please see the lab assistant to arrange proper time.

Academic Integrity

Students are encouraged to share intellectual views and freely discuss principles and applications of the course materials. Graded lab work and other exercises must be executed independently, except as authorized by the instructor. This course will conform to the University Academic Rules and Regulations (http://www.oidb.metu.edu.tr/english/regulations/oidb41a.htm).

Classroom Behaviour

Students and instructors each have responsibility for maintaining an appropriate learning environment. Our class shall maintain high standards of student and instructor conduct. The use of cell phones and pagers during lecture or lab sections is inconsistent with an appropriate learning environment and is, therefore, prohibited. Disrespectful or threatening behavior by students toward other students or instructors is unacceptable and is governed by University policies on such behavior.

Absence Policies

Students are expected to attend and participate in all lecture and lab section meetings.

Prerequisites

All students enrolling in this course must demonstrate computer competency to the satisfaction of the instructors. The course is not intended for those students having no computer literacy or those who are otherwise challenged by information technology. Deficiencies in computer literacy will be the responsibility of the student.

Office Hours

The instructors are available outside of class for students only if students scheduled meetings previously.

Levent UCUZAL - leventu@bilgigis.com

B. Gozde OZACAR - bgozacar@gmail.com

Instructions for Subscribing to the CRP 438 Mail Group

One of the requirements in this class is for every student to subscribe to the class Mail Group. A Mail Group is a tool used to send information (e.g., class assignments, exam information and schedule changes) on to a group of people. One assumption being made is that everyone has an email account and knows how to access it. If you do not have an email account please get one as soon as possible.
Subscribing to the CRP438 Mail Group

1. Start your email software and create a new email message.

2. The "To:" address to use to subscribe to the list is crp438@googlegroups.com

   You can leave the "Subject:" of the message blank or if your email software forces you to have a message subject type in anything you like. The Mail Group will ignore it.

   The text of the message is a single command line that the computer that manages the list understands. The line is: subscribe crp438

Send the message

CRP 438 Introduction to Geographic Information Systems in Planning Practice 2013

<table>
<thead>
<tr>
<th>Lab Schedule</th>
<th>DATE</th>
<th>LAB</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Int to GIS Software</td>
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<tr>
<td>2</td>
<td></td>
<td>Int to GIS Software</td>
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<tr>
<td>3</td>
<td></td>
<td>What is Database?</td>
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<tr>
<td>4</td>
<td></td>
<td>Building Geodatabase</td>
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<tr>
<td>5</td>
<td></td>
<td>Editing Geodatabase</td>
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<tr>
<td>6</td>
<td></td>
<td>Editing</td>
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<td>7</td>
<td></td>
<td>Georeferencing</td>
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<tr>
<td>8</td>
<td></td>
<td>Spatial Analysis</td>
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<tr>
<td>9</td>
<td></td>
<td>Spatial Analysis</td>
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<tr>
<td>10</td>
<td></td>
<td>Geoprocessing</td>
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<tr>
<td>11</td>
<td></td>
<td>Term Projects-Last Day of Classes</td>
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</tbody>
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Notes:
1. The instructors reserve the right to revise this schedule.
2. Project Presentations and reports are due on xxx 2013 at 4:30 pm.
3. The final exam is scheduled for xxx 2013 at 4:30 pm.