University of Cincinnati

1Geography 693: Advanced GIS, Spring 2007
Tuesday 2:00 pm – 5:00 pm Braunstein Hall 415

Professor: Lin Liu, Ph.D.
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Phone: 556-3429
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Office: Braunstein Hall 416
Phone: 556-3433
Office hours: M 11-12, T 1-2, W 1-2

Lab Hours: The lab is usually open during the work hours. If you need access to the lab in weekend or evening, please check out a key for the lab from the secretary of Geography Department in Braunstein Hall 401. When you open the door, make sure that the door can be locked without a key. Lock the door when you are the last one to leave at any time.

Required Materials:
1) Lecture Notes, available on Blackboard.
   (There is an updated version of this book. Check for “Updated for ArcGIS 9.1 and 9.2” at the top of the cover page. It was updated in December, 2006, but still shares the same ISBN as the 2003 edition.)

Course Description:
This course is designed for students who are motivated to further their knowledge on advanced GIS applications development. The focus is on the design and implementation of GIS applications using GIS macro languages. Specifically you will learn Visual Basic for Applications (VBA) and ArcObjects Programming in the ArcGIS 9.1 environment. Topics include user interface design, GIS application design, programming in VBA, and selected algorithms and applications. Thorough knowledge of ArcGIS 9.1 is essential.

Course Evaluation and Grading Policy:

1) Quizzes (20 points)
   There are two quizzes, each of which counts for 10 points.

2) Assignments (20 points)
   There are two graded assignments on VBA programming.

1 Disclaimer: The professor reserves the right to modify this syllabus.
3) Term Project (60 points)
For the term project, students will work on implementing a selected model in ArcGIS 9.1 using VBA and ArcObjects programming. The students in this class will be grouped into teams, each consisting of 3-5 students. On week ten, teams will present their application in class. The VBA programs will be tested by using a data set to be provided. All documentations of the implementation and VBA/ArcObject programs must be submitted to Blackboard. Details of the term project will be announced separately in class.

4) Grading Policy
The total for the course is 100 points (20 + 20 + 60 = 100). Final grade is determined by the natural breaks on of accumulated scores. Undergraduate students are graded separately. I do not assign “I”, “N”, or “IP” grades, except under rare and special circumstances that must be documented. Those who audit the class must attend all classes and complete all exercises to receive a “T” grade.

Attendance is required. Unexcused absence may result in penalty.

Tentative Schedule:

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<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>5th week</td>
<td>Assignment 1</td>
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<tr>
<td>6th week</td>
<td>Quiz 1</td>
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<td>8th week</td>
<td>Assignment 2</td>
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