

University of Guelph  
Department of Geography

WINTER 2012 - **Provisional**

## **GEOG\*4480 APPLIED GEOGRAPHIC INFORMATION SYSTEMS**

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Office Hours: 10:30 – 11:30 AM, Mondays and Wednesdays

### ***COURSE CONTENT***

This is a project-oriented course, focused on using geographic information systems (GIS) to address practical problems in resource management, planning (rural, urban or regional), and *any* other area where a spatial approach is appropriate. In addition to GIS project design, students will learn about and use various GIS functions, and will develop skills relating to data creation and manipulation, data quality assessment, and the presentation of the findings of analytical work.

### ***APPROACH***

Most of the learning in the course will take place in a hands-on manner. Classroom sessions are used selectively to lay the foundation for project design and problem solving. Labs are used to demonstrate techniques and approaches. The core of the course is a team project. The students in a team will identify a problem, design a solution, gather the necessary data, and implement a solution, and present results.

### ***WHAT YOU CAN EXPECT FROM THE COURSE***

At the end of the course, you should have acquired the following:

- Knowledge on a wide range of GIS applications
- Ability to locate data sources for GIS applications and assess data quality
- Skills on processing real-world data for a GIS project
- Experience with project design and proposal writing
- Skills on GIS-based problem solving
- Experience preparing professional research reports and web publishing
- Presentation skills
- Enhanced teamwork skills

### ***PREREQUISITE***

- GEOG\*3480 GIS and Spatial Analysis.
- Good computer skills are essential, as is familiarity with the ArcGIS software package used extensively in the course.

## **EVALUATION**

This section briefly describes assignments. Additional details are provided in separate handouts.

<b>Item</b>	<b>Value</b>
Labs (individual, 5 x 2% each)	10%
Project proposal, first version (team)	10%
Project proposal, final version (team)	15%
Project report, first version (team)	25%
Project report, final version (team)	35%
Presentation (team)	5%

### **Labs**

Five labs are scheduled in the first five weeks of the course. The purpose is to familiarize you with computer setup, data preparation, GIS functions, and GIS modelling techniques that are essential for your course projects. **Attendance is mandatory.**

### **Project Proposal, First and Final Versions**

The aim of the project proposal is to establish a firm foundation for the course project. The team should **review literature and extensively examine data** to develop a strong grasp both of the research problem being addressed, and of GIS implementation. The first version of the proposal should represent the best work that could be accomplished during the time available. By incorporating comments from the first version, teams will prepare the final version of the project proposal. Both versions of the proposal should be approximately 3,000 words in length. Each group must meet with me *before* preparing the first version of the proposal to discuss your topic

### **Project Report, First and Final Versions**

The project report will take the form of a **web-based** summary of the problem, the research approach, and the findings. The first version of the report must be complete and polished; **it is not a rough draft!** Based on evaluation of the first version, teams will revise their reports to prepare the final report, which will be posted on the **Department of Geography Web Server**. Typically the report should be approximately 3,000 words, not including tables and figures.

### **Presentation**

The purpose of the presentation is to share your research findings with your colleagues. The presentation should be concise and build on your project report.

### **LAB FEE**

There is a \$15 lab fee to cover course-related expenses. Each student is allocated a **\$10 allowance for printing**. Software is installed to count your printing with a charge of **10-15 cents for a black-and-white page and 15 cents for a colour page**.

### **COURSELINK PAGE**

This course has a *Courselink* page that contains data sources, GIS resources, selected copies of overheads used in lectures, information about readings, and other useful materials. You can access the page from any computer that has a web browser. You'll also need Adobe Reader.

### **OFFICE HOURS**

The office hours are 10:30 – 11:30 am Mondays and Wednesdays. You can drop by during my office hours without an appointment. *On other days, I'd very much appreciate your respecting my work time by not stopping by unless you have an emergency.* Of course, you can email, call, or fax me at any time.

### **TEACHING ASSISTANTS**

The TAs will provide instruction during lab periods and will be your primary contact for practical 'how-to' GIS advice for your projects. They will have office hours, to be posted, which will vary over the course of the semester in accordance with student work-load.

### **STAY IN TOUCH**

All University of Guelph students have an **@uoguelph.ca email account**. Please note that I will **only** use your **university email account** for course-related correspondence or announcements. It is your responsibility to check this account for these messages.

### **STUDENT RESPONSIBILITIES**

**Attendance at scheduled class meetings and lab sessions is mandatory.** Furthermore, I expect that you will be prepared to participate in class discussions. Assignments must be submitted in class or lab sessions, on time. **Late assignments will be penalized at the rate of 10 percent per day, NOT including Saturday and Sunday.** Students whose assignments are late because of a valid medical reason, family emergency, or other reason *accepted by me* will not be penalized. I may require a note from a physician or from Counselling Services (x53244).

### **LAB SAFETY**

Safety in the computer laboratory (Room 231) is a priority at all times. In order to ensure safety of all participants, the safety procedures/guidelines provided by the instructor must be followed. It is the responsibility of each student to attend the safety orientation that is provided during the initial lab sessions.

### **UNIVERSITY POLICY ON ACADEMIC MISCONDUCT**

Academic misconduct, such as plagiarism, is an extremely serious offence at the University of Guelph. Consult the *Undergraduate Calendar* for offences, penalties, and procedures relating to academic misconduct.

**PROVISIONAL SCHEDULE OF CLASSES**

<b>Weeks</b>	<b>Schedules Activities</b>	<b>Assignment Due in Class</b>
January 9-13	<ul style="list-style-type: none"> <li>• Course overview, Introduction to GIS applications</li> <li>• Team formation</li> <li>• Literature review</li> </ul>	
January 16 - 20	<ul style="list-style-type: none"> <li>• Structure of the project proposal</li> <li>• GIS applications</li> </ul>	
January 23 - 27	<ul style="list-style-type: none"> <li>• Project design</li> <li>• GIS applications</li> </ul>	
January 30 - February 3	<ul style="list-style-type: none"> <li>• Project design</li> <li>• GIS applications</li> </ul>	Project proposal, first version
February 6 - 10	<ul style="list-style-type: none"> <li>• Project proposal (first version) feedback</li> <li>• GIS applications</li> </ul>	
February 13 - 17	<ul style="list-style-type: none"> <li>• GIS applications GIS applications</li> </ul>	Project proposal, final version
February 20 - 24	WINTER BREAK – NO CLASS	
February 27 - March 2	<ul style="list-style-type: none"> <li>• Project proposal (second version) feedback</li> <li>• GIS applications</li> </ul>	
March 5 - 9	<ul style="list-style-type: none"> <li>• TBA</li> </ul>	
March 12 -16	<ul style="list-style-type: none"> <li>• TBA</li> </ul>	
March 19 - 23	<ul style="list-style-type: none"> <li>• TBA</li> </ul>	Project report, first version
March 26 - 30	<ul style="list-style-type: none"> <li>• Presentation</li> </ul>	
April 2- 6	<ul style="list-style-type: none"> <li>• Presentation</li> </ul>	Project report, final version

## **Appendix: Standard Statements on University Policies**

### **E-mail Communication**

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

### **When You Cannot Meet a Course Requirement**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

### **Drop Date**

The last date to drop one-semester courses, without academic penalty, is Thursday Nov 3. For regulations and procedures for Dropping Courses, see the Undergraduate Calendar: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

### **Copies of out-of-class assignments**

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

### **Accessibility**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible.

For more information, contact CSD at 519-824-4120 ext. 56208 or email [csd@uoguelph.ca](mailto:csd@uoguelph.ca) or see the website: <http://www.csd.uoguelph.ca/csd/>

### **Academic Misconduct**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

### **Recording of Materials**

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

### **Resources**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs:

<http://www.uoguelph.ca/registrar/calendars/index.cfm?index>