Fall 2010 Syllabus for Geography 385

<u>GIS Primer</u>: Introduction to basic concepts and applications of geographic information science (GIS), lab exercises on PC-based GIS packages. This course meets for two lectures and 2 hours of lab a week. Prerequisite: Basic knowledge of PC-based operating system.

COURSE LOGISTICS AND MEETING TIMES

122 EP (Engineering Physics) T/TH 12:30PM - 1:20PM 08/24/2009-12/16/2009

PROFESSOR

Dr. Tim G. Frazier 405B McClure Hall Telephone: (208) 885-6238 Email: **tfrazier@uidaho.edu** (Do not expect a response to email after 10 pm on weekdays or on weekends) Office Hours: 2-4 Tuesdays or by Appointment

TEACHING ASSISTANTS

Kenneth Peters (Monday and Friday Labs) 227 McClure Hall Telephone: 208-885-5314 Email: **pete9281@vandals.uidaho.edu** (Email is not to be a substitute for coming to class) Office Hours: Wednesdays 1:00-2:00 and Fridays 1:00-2:00 or by Appointment

Courtney Thompson (Tuesday and Thursday Labs) 227 McClure Hall Telephone: 208-885-5314 Email: <u>thom7660@vandals.uidaho.edu</u> (Email is not to be a substitute for coming to class) Office Hours: Mondays 10:30-11:30 or by Appointment

LAB SCHEDULES

12014 – Section 1 meeting at 11:30-1:20 Monday in 206 McClure Hall – TA is Thompson 21436 – Section 2 meeting at 1:30-3:20 Monday in 206 McClure Hall – TA is Peters 33373 – Section 3 meeting at 10:30-12:20 Friday in 206 McClure Hall - TA is Thompson 33374 – Section 4 meeting at 3:30-5:20 Thursday in 206 McClure Hall - TA is Peters 33375 – Section 5 meeting at 3:30-5:20 Tuesday in 206 McClure Hall - TA is Peters

TEXTBOOK

The required textbook for Geography 385 is: *GIS Fundamentals:* A First Text on Geographic Information Systems / 3^{rd} Edition / Paul Bolstad. The text is on reserve in the Library. There are additional texts posted on Blackboard that you are responsible for reading.

COURSE OBJECTIVES AND OUTCOMES

The purpose of this course is to familiarize you with how GIS can be used as a methodology for geographic data handling and analysis and to provide you with a firm basis for further work in Geographic Information Science in practical application or in follow-on courses. Certainly, in the short term, this includes the ability to

appropriately use whatever GIS software package you have access to or need to use for a specific data handling or analytical task. A key component of this is to be able to easily adapt to changes in technology and software environments given an understanding of the concepts involved.

More specifically, when you are finished with this course, you should:

- have a broad-based understanding of the principles of Geographic Information Science
- have an understanding of how GIS can be used as a methodology for geographic data handling and analysis for a variety of applications
- have an understanding of the overall capabilities, as well as the limitations of current GIS software packages
- be able to use the more important and frequently used capabilities of the ArcView GIS software package
- be able to design and carry out spatial analyses using GIS
- be able to communicate the results of geographic analyses to others, both in oral and in written from.

COURSE STRUCTURE

This course has a laboratory as well as a lecture component. The purpose of the laboratory component is to elaborate upon the concepts covered during the lecture times and to provide practical, hands-on experience. Because GIS concepts are so interrelated and any current GIS package also presents a set of "mechanical" issues, you should not expect an exact correspondence in the sequencing of the material at all times. You will find, however, that these two strands reinforce each other as elements are repeated and interrelated.

The Lecture Component:

The topic sequence for the lecture portion of the course is given in the calendar which gives the lecture topic for each day and the readings associated with that topic. Due to the possibility of unexpected changes in scheduling the calendar may change at various times during the semester with the exception of exam dates. Exam dates are firm and will not change. A current copy of the calendar will always be available on Blackboard.

The Laboratory Component:

The lab portion of the course will use ArcView by ESRI, Inc. of Redlands, CA. This is the basic component of a commercially available GIS package (ArcGIS) that is very common in industry, government, and academic settings. Students will work individually, although helping each other on the 'mechanics' of software commands is in no way discouraged. The conceptual work however, is expected to be your own. Most of these labs have assignments (noted as deliverables at the end of the lab exercise) that you will complete and post to a drop box on Blackboard by the assigned due dates (as noted in the course calendar). Twenty percent of your course grade will come from the lab assignments you upload to Blackboard. An additional twenty percent of your course grade will come from a final project that will be assigned late in the semester. More details concerning the final project will be forthcoming.

STUDENT RESPONSIBILITIES AND GRADES

This course will teach the fundamentals and theory of geographic information science (GIS). Lectures on the theory of GIS will be combined with practical laboratory exercises utilizing ESRI's ArcGIS 9.3 to illustrate these concepts. Emphasis will be placed on comprehending the theoretical background rather than memorizing software buttons – students should focus on linking the lecture and laboratory exercises for a successful semester.

Students are responsible for the following work (with percentages of their grades listed below):

Exam 1	(30%)
Exam 2	(30%)
Lab	(20%)
Final Project	(20%)

Accommodating Disabilities. The University of Idaho encourages persons with disabilities to participate in its programs and activities. Contact the instructor promptly at the outset of the course if you need any type of accommodation.

GRADES

All grades in Geography 385 are based on the following percentages:

Letter Grade	% Range
А	90-100
В	80-89
С	70-79
D	60-69
F	Below 60

GRADE SCALE

EXAMS

There will be two exams for geog 385. Students may have the entire class period to take each exam. The exams are **NOT** cumulative (covering the entire course) although knowledge acquired is cumulative. All exams will include material covered in both the lecture and lab portions of the course, as well as the required readings. **Caution**: There may be questions on the exams concerning material from the readings that was not covered in class. The exam schedule is:

- Tuesday, October 14th Exam 1
- Thursday, December 2nd Exam 2

Make-up exams. No make-up exams will be given in Geography 385 unless (1) *prearranged with the Instructor* 24 hours prior to the exam or (2) *resulting from a <u>documented</u> emergency* (such as an illness). *Documentation is necessary in any and every case.* For example, for a death in the family, a copy of the obituary with the student's name or of the death certificate is required (sorry but we have way too many good people dying every semester and I have to do my part to help them hang on). *The exam will be a zero unless these conditions are met.* Any other excuses, such as oversleeping, getting the exam or quiz date wrong, having other tests or papers on the same day, or choosing to be out of town, are not valid. Extra assignments to compensate for poor exam grades or incomplete/poor lab grades are not available (Translation there will be NO extra credit offered in this course). **Make up exams, when offered, will be administered in essay format.**

ASSIGNMENTS

Policy for Late Lab Exercise. Labs will be assigned nearly every week and all exercises are due at the times indicated in the *Course Calendar*. Late assignments will be penalized, so get in the habit of turning them in on time! Lab assignments turned in after the due date will be accepted by the TA for grading with a **10**% per day penalty (weekends count as one day). No lab assignment will be accepted if it is more than 2 weeks late. It is your responsibility to ensure your assignments reach the TAs. A lab checklist will be kept by the TAs on Blackboard that will indicate when they receive your lab assignments so please make sure you are credited with submitting labs to the drop box on Blackboard. If the exercise is not handed in by this time, you will receive a grade of zero.

PARTICIPATION

The lecture topics and readings are found in the *Course Calendar*. To get the most out of this course, you should read the assigned material before coming to class. The lab component of this course is designed to complement the substantive material discussed in class. Once again, the *Course Calendar* contains details concerning the labs. The TAs are available to answer questions regarding the exercises – please direct your questions to them. They are also responsible for grading the labs, so they should be contacted for questions regarding lab grades.

COURSE ACADEMIC INTEGRITY POLICY

While working with other students in the class on the general material or help in overcoming specific problems (e.g., with ArcView commands) is encouraged, copying someone else's work verbatim without citation is plagiarism and will not be tolerated.

Academic dishonesty will not be tolerated and will result in an automatic 'F' for the assignment and/or the course grade, as well a possible disciplinary action by the University. This consists of cheating on exams or plagiarism on papers, posters or lab assignments. Plagiarism includes using another author's work as your own or fabricating information or citations in your paper.

The Professor will levy penalties for academic dishonesty in accordance with published university policies. Please read <u>http://www.webs.uidaho.edu/fsh/2300.html#ARTICLE%20II</u> for more information about what constitutes academic dishonesty.

BLACKBOARD

Course material such as lectures and lab exercises will be available on blackboard each week. Other material such as additional readings will also be provided. This material can be accessed at the following web address: http://www.blackboard.uidaho.edu (Login: UI Account & Password) (same as Novell). The user forum on blackboard is available for students to answer each other's questions regarding exercises or course content. Please note: This is not the appropriate place to ask questions regarding grades. Placing PowerPoint lectures and other course information on Blackboard is not done so with the intent to facilitate missing class. PLEASE do not attempt to use this material as a substitute for attending class.

SOFTWARE

In the past, the university bookstore has provided free copies of ArcGIS to facilitate students working on their lab assignments on their personal computers. Please feel free to take advantage of this free software but do not expect your TA to "walk you through" your lab assignments via email. Having ArcGIS on your personal computer does not allow you to be absent from your scheduled lab.