Current course

ESE 380 A/A SP15 (https://learn.illinois.edu/course/view.php?id=9554)

Participants (https://learn.illinois.edu/user/index.php?id=9554)

Badges

General

January 20 - January 26
January 27 - February 2
February 3 - February 9
February 10 - February 16
February 17 - February 23
February 24 - March 2
March 3 - March 9
March 10 - March 16
March 17 - March 23
March 24 - March 30
March 31 - April 6
April 7 - April 13
April 14 - April 20
April 21 - April 27
April 28 - May 4
May 5 - May 11

Syllabus (https://learn.illinois.edu/mod/page/view.php?id=916616)

My courses (https://learn.illinois.edu/my/)

ADD A BLOCK
Course Description

This course is designed to teach students about the analytical capabilities of geographic information systems with an emphasis on learning to solve spatial problems in both the vector and raster data formats. Students will develop the skills necessary to answer questions or solve problems in their areas of interest, with particular emphasis on problems and questions that require multiple steps to resolve. Students will learn the fundamental theory behind spatial problem solving, but also learn to execute these procedures with industry-standard software packages. Thus, this class contains both lecture/discussion elements and hands-on laboratory work.

Course Objectives

During the semester, the students will ...

1. learn the theory and techniques of vector and raster data processing.
2. learn the basics of structuring and organizing geographic data in a database.
3. learn to find geographic information online and evaluate its suitability for use different projects.
4. develop analytical capability to process and analyze geographic information in both raster and vector formats.
5. learn to complete a geographic information system project from initial project development, data acquisition, data preprocessing, analysis, to successful communication of the results.
6. learn to optimize geoprocessing for efficiency, and automate the process through graphical programing or workflows and text-based Python scripts.

Prerequisites

Students must have successfully completed GEOG: 379 - Geographic Information Systems I: Introduction to Fundamentals and Thematic Cartography (or an equivalent course) in order to enroll in this class.

Required Texts


Other Materials

Students will receive student licenses of the GIS software used in the course valid for one year which they may install on their personal computers. This can be used to complete class assignments as necessary. Additionally, students will need to have a portable USB hard drive (or thumb drive) to save their work.

Moodle and University Email

Please note that the Moodle system will be used to distribute course materials, assignments, and to keep students informed of their grades. You are responsible for checking Moodle regularly, as this is an official method for communication between the instructor and students for this course. Additionally, please check your university email account regularly. Course information may be distributed through that channel as well.

Grading Summary

<table>
<thead>
<tr>
<th>Item</th>
<th>Points Possible</th>
<th>Percent</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>200 points</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>
**Exam II**

| Exam II | 200 points | 20% |

**Labs**

| Labs | 200 points | 20% | Five Labs at 40 Points Each |

**Mini Project**

| Mini Project | 150 points | 15% |

**Major Project**

| Major Project | 250 points | 25% |

**Exams:** Exams will primarily cover the lecture material and be concerned with GIS theory. However, you may also be required to solve GIS problems on the exams, and potentially even use GIS software.

**Labs:** There will be five laboratory assignments that will be turned in for a grade. Each of these assignments will be worth 40 points. This laboratory assignments will focus on the technical aspects of using software to answer a geographic question and/or create a cartographic product.

**Mini Project:** Students will complete a mini project that involves programming or otherwise automating some kind of GIS procedure. This is an individual project, but multiple students in the class will be assigned the same project so there can be some collaboration if necessary.

**Major Project:** Students will be required to complete a major project and it will represent a significant portion of final grade. Additional information regarding this project will be provided during the semester, but completing the project will require using a large number of the techniques talked about in class.

**Grading Scale**

<table>
<thead>
<tr>
<th>Point Total</th>
<th>Grade</th>
<th>Point Total</th>
<th>Grade</th>
<th>Point Total</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>970-1000</td>
<td>A+</td>
<td>800-839</td>
<td>B-</td>
<td>640-669</td>
<td>D</td>
</tr>
<tr>
<td>940-969</td>
<td>A</td>
<td>770-799</td>
<td>C+</td>
<td>600-639</td>
<td>D-</td>
</tr>
<tr>
<td>900-939</td>
<td>A-</td>
<td>740-769</td>
<td>C</td>
<td>\leq 599</td>
<td>F</td>
</tr>
<tr>
<td>870-899</td>
<td>B+</td>
<td>700-739</td>
<td>C-</td>
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</tr>
<tr>
<td>840-869</td>
<td>B</td>
<td>670-699</td>
<td>D+</td>
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</tr>
</tbody>
</table>

Minor adjustments to this scale may be made based on the performance of the class as a whole.

**Extra Credit**

There is no extra credit available for this course. Please *do not* request any from the instructor. The request will be denied.

**Make-Up Exam and Late Work Policy**
The Department of Geography and GIScience does not allow make-up exams, except for students in special circumstances and at the discretion of the faculty member teaching the course. These circumstances include (1) the death or illness of a family member, (2) illness of the student, (3) three or more final examinations on the same day, and (4) participation in a university sponsored activity at the same time as the regularly scheduled examination. Make-up exams will not be granted for personal convenience or for personal travel. Make-up exams will also only be granted if the student can document one of the situations described above. Advanced arrangements must be made for situations (3) and (4).

If you miss an exam for situations (1) or (2), the instructor must be notified the day of the exam either by phone or by email. The missed exam must be made up within one week. Contact the instructor in order to schedule the make-up exam. Tests that are not made up within a week will be graded as a zero.

Lab assignments which are turned in late will be penalized 25% if they turned in late. However, after one week past the deadline the labs will no longer be accepted and can receive no credit. Completion of the labs is a vital part of the class. Students who do not keep up with laboratory exercises cannot be expected to perform well on exams of the projects. Please be sure your labs are turned in on time.

It is very important for students to complete the assigned tutorials and labs on time. The laboratory instructor will provide more detail regarding the due dates for individual assignments and penalties for late assignments. However, generally speaking, late tutorials are not accepted. They must be completed on time. Depending on the nature of the lab assignment, they might be accepted up to one week late, at a penalty. With others, it might not be possible to accept late work, especially for those which are gone over and the answers discussed in class.

Incomplete Policy

Grades of “incomplete” are generally not given for the course. In accordance with the College of Liberal Arts and Science policies, granting a student a grade of incomplete is appropriate only when a student must delay the completion of a final assignment of the course. A student cannot receive an incomplete simply because he or she has not been able to complete all or some of the coursework throughout the semester. A student who is granted an incomplete has until the midterm of the following semester to complete the outstanding assignment. If the student fails to complete the assignment in time, the incomplete is converted to a grade of “F”.

Only the dean of the student’s academic college may authorize a grade of incomplete for an undergraduate student, and ordinarily, such requests will only be entertained for documented medical emergencies or other extraordinary circumstances beyond the student’s control. Also in accordance with the college’s policy, the instructor of this course will not entertain any private requests from students to assign a temporary grade for the class to be altered with a change of grade submission at a later time. In the event that you find yourself in a situation where you believe a grade of incomplete may be necessary and appropriate, you are referred to the LAS Student Academic Affairs Office in Lincoln Hall Room 270, or, if you are an undeclared major, the Campus Center for Advising and Academic Services. Please do not petition for a grade of incomplete without a just cause that is in compliance with university policy.

Laboratory Policies

Students are to obey all department policies regarding the use of the GIS lab. NO FOOD OR DRINK IS PERMITTED IN THE LABS. Because of the number of classes taught in the lab, it is generally not available for use outside of class time. However, ArcGIS software is available on nearly every computer on campus, but the recommended location for working on lab exercises outside of lab sessions is ATLAS’s G8 Computing Lab, located in the basement of the Foreign Languages Building.

Plagiarism and Academic Dishonesty
To claim as one’s own the ideas or words of another is plagiarism. Plagiarism is defined as the following:

- using the exact words of another person’s work/writing without acknowledgement of your source through the use of quotation marks and correct citation/documentation;
- rephrasing a passage of another writer without giving proper credit;
- using someone else’s facts or ideas without acknowledgement;
- using a piece of writing for one course that was already used in a previous course (or in courses in which you are simultaneously enrolled) without express permission from both instructors to do so;
- turning in papers or other assignments from “paper mills” or “paper banks” such as those available for purchase from online databases, or where “ghostwriting” services can be acquired;
- presenting fabricated or falsified citations or materials.

Please consult with the instructor if you are unsure about how to document sources. The instructor of this course may employ different methods of detecting plagiarism and other academic dishonesty, including the use of electronic plagiarism detection software. In accordance with University policies, students who submit a plagiarized assignment shall receive an “F” with a numerical value of zero on the item submitted, and “F” shall be used to determine the final course grade. The instructor also has the option to fail the student in the course.

Other forms of academic dishonesty will not be tolerated in class, including, but not limited to, cheating on exams, the fabrication of data, information, or citations in any formal academic exercise, deception (such as providing false information to the instructor concerning exercises - e.g. giving a false excuse for missing a deadline or falsely claiming to have submitted work), the sabotage of other students from completing their assignments, or the impersonation of another student for the purposes of completing an exam or other assignment.

Please review the University’s academic dishonest policies and procedures. They are all in force for this course. If you have any questions about where an activity might constitute academic misconduct, ask the instructor before you engage in the activity.

Classroom Conduct

Beyond the requirements of academic honesty, as a member of the learning community, each student has a responsibility to other students who are members of the community. As students are expected to comport themselves in a dignified and professional manner. It is particularly important to this instructor that students treat one another with respect, which includes not taking part in any behavior which will disrupt the learning environment or inhibit other students’ ability to learn or fully participate in class. Please do not talk a while others are talking, while the lecture is ongoing (except for asking questions of course!), and if you finish an exam or other assignment before others, please find a way to keep yourself silently occupied while they finish.

When a cell phone rings in class, it is immediately disruptive to the class. Therefore, cell phones and other such communication devices should be turned off or put on silent (not simply vibrate), and ordinarily should not be taken out during class. Refrain from talking on the telephone, sending text messages, IMing using Facebook, Twitter, personal email, etc., while in class. Students may choose to use electronic methods for note taking, or use technology (such as internet access) to find information relevant to the lecture or classroom discussion. Such technology usage is permissible.

Style Guide for Written Assignments
Students are welcome to use any style guide to format for essays and other written assignments that is recognized within their discipline, so long as the style guide is followed and the format (especially regarding in text citations and the references) is consistent throughout the document. For those students in geography, the style guide for the *Annals of the Association of American Geographers* is recommended. It is available online. ([http://www.aag.org/galleries/default-file/ANNALSSTYLESHEET.pdf](http://www.aag.org/galleries/default-file/ANNALSSTYLESHEET.pdf)) It is also recommended for any student who does not otherwise have a preferred style guide.

**Policy Regarding Lecture Recordings**

Students may make audio recording of the lecture materials only with the expressed permission of the instructor. Such recordings may *only* be used for the personal study or research and may not be distributed or otherwise circulated to any third party in any manner whatsoever. Video recordings are prohibited. The lecture material is the intellectual property of the instructor and holds the copyright for it. Under no circumstances are notes or recordings from the class authorized to be sold.

**Disability Policy**

Students with a disability in this class are encouraged to meet with the instructor privately during the first week of class to discuss reasonable accommodations. Course requirements cannot be waived, but reasonable accommodations may be provided based on disability documentation and course objectives. Accommodations cannot be made retroactively. Students seeking reasonable accommodations due to disability are referred to the university's disability office in order to discuss their particular needs and also to obtain any documentation necessary for the instructor. Please submit any necessary documentation to the instructor from the disability office within the first two weeks of the start of the course.

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