

Geography 4330.001: Geographical Information Systems
Monday and Wednesday 2:30 to 3:55 pm
HPR 248

Fall 2022

Instructor: Dr. E. Cory Sills

Office: CAS 142

Office hours: MW 11:10 am to 12:30 pm in person or via zoom

Via Zoom link:

<https://uttyler.zoom.us/j/99985107383?pwd=am1majlXSWh4bVNtbHBiOE9nMXlaQT09>

Passcode: **196071**

Or by appointment

E-mail: esills@uttyler.edu ph:903-566-7442

Communications: I encourage you to visit my office hours via zoom or directly after class via zoom. This is a good opportunity for you to look over your homework, exams, ask questions, or seek clarification. If you cannot attend my office hours you may set-up an alternative time to meet. I will try to respond promptly to your emails. **In your email, include your first and last name and that you are enrolled in the GIS class.**

Required texts:

1. Open Source Free Online Textbook: Essentials of Geographic Information Systems. Available on the course Canvas site.

Required materials: Computer or access to a computer.

Catalogue description: Geographic Information Systems Fundamentals of geographic information systems, including data capture, storage, processing, and output. Applications to various problems in the natural and social sciences.

Course objective: This course is a comprehensive introduction to the principles, techniques, and applications of Geographic Information Systems (GIS). The course is designed to combine lectures with practical application of the ArcGIS Pro software. Upon successful completion of this course, you will be able to (1) understand basic concepts and principles of GIS, (2) gain hands-on experience in the use of GIS techniques and software, (3) learn how to analyze information spatially. Specific skills learned include ArcGIS Pro software and SQL language.

Course format: We will meet in the classroom twice a week. You must have access to a computer or a laptop. The class will be a combination of lecture and practical application. The first half of the class will consist of lecture followed by a short break. The second part of class will consist of practical application (i.e. labs using the software program ArcGIS Pro). Prior to class time, review the schedule for the class and read the assigned chapter or article. The readings for the course allow completion of the labs. The lectures will introduce you to the fundamental principles of GIS and will not necessarily cover the same ground as the textbook. Indeed, they are intended to supplement each other rather than to completely overlap. I strongly recommend that you attend every class and complete all of the labs. I encourage relevant questions and comments during class time. A question you have other students might also have, and thoughtful remarks will make the course more interesting for everyone, including myself.

Class Etiquette: I expect everyone in the classroom to be **respectful** of each other and treat everyone with dignity. I expect comments to be positive and objective and not judgmental and rude. **I expect all students to wear a mask in the classroom for protection.**

Exams and grading: There will be two exams that will be administered in the classroom (a midterm and a final). The Midterm exam will cover material from the beginning of the semester and the Final will cover material from the second part of the semester. Exams include multiple choice, true/false, and short answer. There will also be a series of 10 labs that will be assigned each week. You have approximately one week to finish each lab. **The lab assignments are due on**

Canvas by midnight the week after they are assigned (see schedule for due dates). All lab instructions and submissions will be through Canvas.

Make-up tests will be given with a legitimate reason and in rare circumstances. Students should contact the instructor **prior** to the exam and not after if they will miss the exam. Make-up exams will not be given except when there are exceptional circumstances (be prepared to provide documentation of your circumstance, such as a doctor's note, police report, University-excused absence, *et cetera*).

- Grading scale: A 90-100% B 80-89.99% C 70-79.99%
 D 60-69.99% F 0-59.99%

Mid-term: 15%

Final: 15%

Lab Exercises: 70%

Total: 100%

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Cell Phones/Laptops: Turn off your ringer and do not use your cell phone during class – this includes text messaging. If you are expecting an important call please put your phone on vibrate and sit close to the door. This action will help minimize any disturbance to the class. Laptops are allowed for note-taking, but I reserve the right to ask you to shut your computer down (or to change my class policy) if you are using your computer for uses other than note-taking and disrupting those around you. **Any video, photographic or audio recordings of the class must be approved by me.**

University Policies

UT Tyler Honor Code

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Withdrawing from Class

Students are allowed to [withdraw](#) (drop) from a course through the University's [Withdrawal Portal](#). Texas law prohibits students who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. The number includes courses dropped at other 2-year or 4-year Texas public colleges and universities. Make sure to consider the impact withdrawing from any course has on your academic progress as well as the financial implications. We encourage you to consult your advisor(s) and financial aid for additional guidance. CAUTION #1: Withdrawing before census day does not mean students receive a full refund. Please see the [Tuition and Fee Refund Schedule](#). CAUTION #2: All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms.

Final Exam Policy

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members are required to maintain student final examination papers for a minimum of three months following the examination date.

Incomplete Grade Policy

If a student, because of extenuating circumstances, is unable to complete course requirements by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in lieu of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all course work or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor; and (c) the student presents these reasons prior to the time that the final grade roster is due.

The semester credit hours for an Incomplete will not be used to calculate the grade point average for a student.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to complete the work for the course within the time limit, the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has not been assigned within one year, then the Incomplete will be changed to an F or to NC, if the course was initially taken under the CR/NC grading basis.

Grade Appeal Policy

UT Tyler's Grade Appeal policy requires the completion of a Grade Appeal form for this action to take place. The grade appeal begins with the instructor of the course. If a student does not agree with the decision of the instructor, the student may then move the appeal to the department chair/school director for that course. If the student is still dissatisfied with the decision of the chair/director, the appeal moves to the Dean of the College offering that course, who has the final decision. Grade appeals must be initiated within sixty (60) days from the date of receiving the final course grade. The Grade Appeal form is found on the [Registrar's Form Library](#).

Covid Policy

It is important to take the necessary precautions to ensure a healthy and successful year. UT Tyler continues to urge you to protect yourselves against the flu, COVID and any new threats that may be developing. Be diligent about preventive measures such as washing hands, covering sneezes/coughs, social distancing and vaccinations, which have proven to be successful in slowing the spread of viruses. Encourage those who don't feel well to stay home, and if they show symptoms, ask them to get tested for the flu or COVID. Self-isolation is important to reduce exposure ([CDC quarantine/isolation guidelines](#)). Please work with your faculty members to maintain coursework and please consult [existing campus resources](#) for support.

Disability/Accessibility Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), The University of Texas at Tyler offers accommodations to students with learning, physical and/or psychological disabilities. If a student has a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, the student is encouraged to visit <https://hood.accessiblelearning.com/UTTyler> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact the student when the application has been submitted and schedule an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <http://www.uttyler.edu/disabilityservices>, the SAR office located in the University Center, # 3150 or call 903.566.7079.

Military Affiliated Students

UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. Campus resources for military-affiliated students are in the [Military and Veterans Success Center \(MVSC\)](#). The MVSC can be reached at MVSC@uttyler.edu or via phone at 903.565.5972.

Academic Honesty and Academic Misconduct

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

FERPA

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course

instructor will follow all requirements in protecting your confidential information.

Recording of Class Sessions

Class sessions may be recorded by the instructor for use by students enrolled in the course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in the course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

Absence for Official University Events or Activities

All courses follow the practices related to approved absences as noted by the Student Manual of Operating Procedures ([Sec. 1 -501](#)).

Absence for Religious Holidays

Students who anticipate being absent from class due to a religious holiday are requested to inform the instructor by the second-class meeting of the semester.

Campus Carry

We respect the right and privacy of students who are duly licensed to carry concealed weapons in all courses. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.

UT Tyler Resources for Students

[UT Tyler Counseling Center](#) (available to all students)

[TAO Online Support Center](#) (online self-help modules related to mental & emotional health)

[Military and Veterans Success Center](#) (supports for our military-affiliated students)

[UT Tyler Patriot Food Pantry](#)

[UT Tyler Financial Aid and Scholarships](#)

[UT Tyler Registrar's Office](#)

[Office of International Programs](#)

[Title IX Reporting](#)

[Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

Incidence of Scholastic Dishonesty: You will receive an automatic zero on the assignment.

All cases of plagiarism or cheating will result in an automatic zero for the assignment.

What we cover in the lecture on a day-to-day basis may differ from the attached schedule. I will inform the class if topics change. All lab instructions are on Canvas. All labs will be submitted via Canvas.

Course Schedule

Week	Day	Date	Topic	Reading
1	M	8/22	Lecture: Mapping the Course/What is GIS? Activity: Mental Mapping Access the remote desktop and start ArcGIS Pro	Syllabus/Chapter 1: 1.1 and 1.2
	W	8/24	Start Lab 1 (Due 8/31)	Lab 1 Instructions on Canvas
2	M	8/29	Lecture: Geographic Concepts and Data Models	Chapter 1: 1.3, 1.4, Chapter 4: 4.1, 4.2, 4.3
	W	8/31	Lab 1 Due at midnight on Canvas Start Lab 2 (Due 9/7) Census date is Friday Sept. 2	Lab 2 Instructions on Canvas
3	M	9/5	No Class Labor Day!	
	W	9/7	Finish Lab's 1 and 2 Lab 2 Due at midnight on Canvas	
4	M	9/12	Lecture: Map Projections	Chapter 2: 2.2
	W	9/14	Start Lab 3 (Due 9/21)	Lab 3 Instructions on Canvas
5	M	9/19	Lecture: Map Design	Chapter 2: 2.1, Chapter 9: 9.1, 9.2, and 9.3
	W	9/21	Lab 3 Due at midnight on Canvas Start Lab 4 (Due 9/28)	Lab 4 Instructions on Canvas
6	M	9/26	Lecture: Data Types	Chapter 5: 5.1, 5.3, 5.4
	W	9/28	Lab 4 Due at midnight on Canvas Start Lab 5 (Due 10/12)	Lab 5 Instructions on Canvas
7	M	10/3	Review for Midterm Exam	No Assigned Reading
	W	10/5	Midterm Exam	
8	M	10/10	Lecture: Finding Data	Chapter 3: 3.1, 3.2, 3.3

	W	10/12	Lab 5 Due at midnight on Canvas Start Lab 6 (Due 10/19) No class. Work on labs instead	Lab 6 Instructions on Canvas
9	M	10/17	Lecture: Tables and Queries	Chapter 5: 5.2, Chapter 6: 6.2
	W	10/19	Due Lab 6 at midnight on Canvas Start Lab 7 (Due 10/26)	Lab 7 Instructions on Canvas
10	M	10/24	Lecture: Classifying Data	Chapter 6: 6.3
	W	10/26	Due Lab 7 at midnight on Canvas Start Lab 8 (Due 11/2)	Lab 8 Instructions on Canvas
11	M	10/31	Lecture: Spatial Analysis	Chapter 7
	W	11/2	Due Lab 8 at midnight on Canvas Start Lab 9 (Due 11/9) Last Day to Withdraw is November 4	Lab 9 Instructions on Canvas
12	M	11/7	Lecture: Raster Analysis	Chapter 8
	W	11/9	Due Lab 9 at midnight on Canvas Start Lab 10 (Due 11/16) Lab Day: No Physical Class	Lab 10 Instructions on Canvas
13	M	11/14	Lecture: Project Management	Chapter 10
	W	11/16	Due Lab 10 at midnight on Canvas	
	M	11/21	Thanksgiving No Class	
	W	11/23	Thanksgiving No Class	
14	M	11/28	Additional Types of Analysis	
	W	11/30	Review for Final Exam All late labs due	
15	M	12/5	Study Day! No Class	
	W	12/7	Final Exam TBA	