

CE5390/ CE 4375/ CE4376/ CE4377

Advanced GIS

Spring 2023

Professor Raed Aldouri

raeda@utep.edu

(915) 747-8019

Office Hours: Virtually via Blackboard Collaborate, zoom or by email, or stop by my office (CE A219)

Course Information:

COURSE DESCRIPTION

The purpose of this course is to introduce the theory and practice of Geographic Information Systems (GIS). Cartographic, database, technical, and scientific issues involved in creating a useful GIS project will be presented. Databases and their analysis is another emphasis in the course. The class will provide a substantial information for the leading GIS new software ArcGIS PRO.

Topics include:

- Principals of Geographic Information Systems
- The spatial data models both vector & raster
- Data analysis
- Computer cartography versus GIS data structures
- Import data collected by remote sensing and GPS and other sources
- Data analysis tools & procedures
- Web GIS, Field Data Collector, ArcGIS Server & ArcGIS Pro platforms & Web services

COURSE OBJECTIVES OR EXPECTED LEARNING OUTCOMES

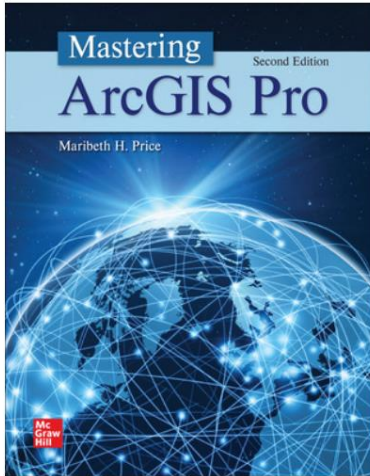
At the end of this course, students will be able to:

1. You will know the difference between Vector data and Raster data
2. You will know the different type of feature classes and formats
3. You will learn how to think spatially and solve problem
4. You will enhance your critical thinking
5. You will learn how to edit vector data
6. You will learn how to analyze data

LEARNING MODULES

This course is designed using a modular format—that is, each week is “packaged” as a single module so that all the materials, lecture notes, submission areas, discussion posts are in one area for a given week.

REQUIRED MATERIALS



Mastering ArcGIS Pro

2nd Edition

By Maribeth Price

ISBN10: 1264091206

ISBN13: 9781264091201

Copyright: 2023

Mastering ArcGIS Pro introduces the basic ideas behind GIS, teaching the concepts and skills needed to enter this rapidly evolving industry or use GIS in your current discipline. Based on the widely used ArcGIS software developed by Esri, Inc., this text integrates learning fundamental concepts with practicing software skills and is suitable for classroom use or for professionals studying independently.

[STUDENTS: PURCHASE OPTIONS](#)

[INSTRUCTORS: PRODUCT DETAILS](#)

COURSE ASSIGNMENTS AND GRADING

Assignments for this course are assessed according to their accuracy and completions of tasks.

Grade Distribution:

100- 90 = A	89-80 = B	79-70 = C	69-00 = D	59 and Below = F
○ Homework assignments			40%	
○ Midterm exam			30%	
○ Project			30%	

Students will also have a collection of assignments throughout the week that needs to be completed. These points cannot be made up, so students are expected to stay active in the course each week.

TECHNOLOGY REQUIREMENTS

Course content will be posted on Blackboard learning management system. Ensure your UTEP e-mail account is working and that you have access to the Web and a stable web browser. Google Chrome and Mozilla Firefox are the best browsers for Blackboard; other browsers may cause complications. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

You will need to have access to a computer/laptop, a webcam, and a microphone. You will need to download or update the following software: Microsoft Office, Adobe Acrobat Reader,

Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

If you do not have a word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP's Microsoft Office Portal. Click the following link for more information about [Microsoft Office 365](#) and follow the instructions.

IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP [Help Desk](#) as they are trained specifically in assisting with technological needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!

Course Communication: How we will stay in contact with each other

- **Office Hours:** We will be able to meet on campus, during office hours for your questions and comments about the course. Thursday will be dedicated to asking questions and help with ArcGIS Pro.
- **Email:** UTEP e-mail is the best way to contact me. I will make every attempt to respond to your e-mail within 24-48 hours of receipt. When e-mailing me, be sure to email from your UTEP student account. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name, and your university identification number.
- **Announcements:** Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

NETIQUETTE

As we know, sometimes communication online can be challenging. It's possible to miscommunicate what we mean or to misunderstand what our classmates mean given the lack of body language and immediate feedback. Therefore, please keep these netiquette (network etiquette) guidelines in mind. Failure to observe them may result in disciplinary action.

- Always consider audience. This is a college-level course; therefore, all communication should reflect polite consideration of other's ideas.
- Respect and courtesy must be provided to classmates and to the instructor at all times. No harassment or inappropriate postings will be tolerated.
- When reacting to someone else's message, address the ideas, not the person. Post only what anyone would comfortably state in a face-to-face situation.
- Blackboard is not a public internet venue; all postings to it should be considered private and confidential. Whatever is posted on in these online spaces is intended for classmates and professor only. Please do not copy documents and paste them to a publicly accessible website, blog, or other space.

Course Policies: What do you need to do to be successful in the course

ATTENDANCE AND PARTICIPATION

Attendance in the course is determined by participation in the learning activities of the course. Your participation in the course is important not only for your learning and success but also to create a community of learners. Participation is determined by completion of the following activities:

- Reading/Viewing all course materials to ensure understanding of assignment requirements
- Participating in scheduled Blackboard Collaborate or zoom sessions as announced.
- Other activities as indicated in the weekly modules

Because these activities are designed to contribute to your learning each week, they cannot be made up after their due date has passed.

EXCUSED ABSENCES AND/OR COURSE DROP POLICY

According to UTEP Curriculum and Classroom Policies, "When, in the judgment of the instructor, a student has been absent to such a degree as to impair his or her status relative to credit for the course, the instructor may drop the student from the class with a grade of "W" before the course drop deadline and with a grade of "F" after the course drop deadline." See academic regulations in the UTEP Undergraduate Catalog for a list of excuse absences. Therefore, if I find that, due to non-performance in the course, you are at risk of failing, I will drop you from the course. I will provide 24 hours advance notice via email.

However, if you feel that you are unable to complete the course successfully, please let me know and then contact the [Registrar's Office](#) to initiate the drop process. If you do not, you are at risk of receiving an "F" for the course.

BLACKBOARD ZOOM SESSIONS

This class might have a Blackboard Zoom sessions. The purpose of these sessions are for you to view live demonstrations of the course material and/or to participate in small discussion groups with your classmates.

Students are expected to participate in these sessions with a webcam and microphone. The sessions will be recorded and provided so that they can be reviewed by classmates at a later time. Students should not record the sessions and post them to any sites outside of Blackboard.

DEADLINES, LATE WORK, AND ABSENCE POLICY

All Assignments:

- Assignments will be due on week at midnight (11:59 PM) from the date assigned. Late work will be penalized by 10% deduction for each day late if the reason is not considered excusable.

ALTERNATIVE MEANS OF SUBMITTING WORK IN CASE OF TECHNICAL ISSUES

I strongly suggest that you submit your work with plenty of time to spare in the event that you have a technical issue with the course website, network, and/or your computer. I also suggest you save all your work (answers to discussion points, quizzes, exams) in a separate Word

document as a back-up. This way, you will have evidence that you completed the work and will not lose credit. If you are experiencing difficulties submitting your work through the course website, please contact the UTEP Help Desk. You can email me your back-up document as a last resort.

INCOMPLETE GRADE POLICY

Incomplete grades may be requested only in exceptional circumstances after you have completed at least half of the course requirements. Talk to me immediately if you believe an incomplete is warranted. If granted, we will establish a contract of work to be completed with deadlines.

ACCOMMODATIONS POLICY

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the [UTEP Center for Accommodations and Support Services](#) (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at cass@utep.edu, or apply for accommodations online via the [CASS portal](#).

COVID-19 Accommodations

Students are not permitted on campus when they have a positive COVID-19 test, exposure or symptoms.

SCHOLASTIC INTEGRITY

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as one's own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more, please visit [HOOP: Student Conduct and Discipline](#).

CLASS RECORDINGS

The use of recordings will enable you to have access to class lectures, group discussions, and so on in the event you miss a synchronous or in-person class meeting due to illness or other extenuating circumstance. Our use of such technology is governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP's acceptable-use policy. A recording of class sessions will be kept and stored by UTEP, in accordance with FERPA and UTEP policies. Your

instructor will not share the recordings of your class activities outside of course participants, which include your fellow students, teaching assistants, or graduate assistants, and any guest faculty or community-based learning partners with whom we may engage during a class session. **You may not share recordings outside of this course.** Doing so may result in disciplinary action.

PLAGIARISM DETECTING SOFTWARE

Some of your course work and assessments may be submitted to SafeAssign, a plagiarism detecting software. SafeAssign is used to review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

COPYRIGHT STATEMENT FOR COURSE MATERIALS

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. They may not be further disseminated.

Course Resources: Where you can go for assistance.

UTEP provides a variety of student services and support:

Technology Resources

- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- [Math Tutoring Center \(MaRCS\)](#): Ask a tutor for help and explore other available math resources.
- [History Tutoring Center \(HTC\)](#): Receive assistance with writing history papers, get help from a tutor and explore other history resources.
- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.

Individual Resources

- [Military Student Success Center](#): Assists personnel in any branch of service to reach their educational goals.
- [Center for Accommodations and Support Services](#): Assists students with ADA-related accommodations for coursework, housing, and internships.
- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.