Course Syllabus
GEOS 5033: GIS for Geosciences
Kimbell School of Geoscience
McCoy College of Science, Mathematics, & Engineering
Spring 2026 Section 201 & 21A, F 9:00-12:50AM, Room BO-105

Instructor Contact Information
Instructor: Dr. Kashif Mahmud
Office: 101D Bolin Hall
Office hours: M 9:00-11:00AM, TuTh 12:00-1:30PM
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> This syllabus may change during the semester due to changes in course structure. Check D2L often for updates!

Teaching Instructor (TA)
Your TA is here to help you navigate this course as well. You should draw on them as resources throughout the semester. You should communicate with them regarding missed classes or assignments (while also copying me on the email). As they will be grading most assignments, grading inquiries should be directed to them as well.

Teaching Instructor: Rahul Kumar Ghose
Office hour: Fridays 1 – 2 PM, room BO-105
Email: rghose1107@my.msutexas.edu

Textbook & Instructional Materials (**Required**)
Discovering GIS and ArcGIS, Bradley A. Shellito, W.H. Freeman and Co. 3rd. Ed.

Office Hours:
I can meet with students 1-on-1 at my (and the student's) discretion. For 1-to-1 meetings, we can adhere to the original office hours given above or schedule a meeting time via email. If you do not wish to meet in person. You are welcome to call my office during my office hour times. We can also use Zoom to set up virtual meetings.

Communication:
Email – I will use your **D2L** email account to communicate with you. It is your responsibility to check your D2L email. When you email me you need to make sure that you are very clear in describing the question/issue. Always start by stating your name and what class you are in. Use formal language and give it a proofread. If I can't understand your writing, I can't respond in a meaningful way. Vague emails will not receive a response.

D2L – I recommend that you download the '**Brightspace Pulse**' app on your phones so that you can be alerted anytime I post anything on D2L. If you do not download this app, you can just log into D2L often to see any news updates and new material. I will alert you about new lecture material, assignments, and exams via D2L news items.

Course Objectives
To learn the principals of geospatial science and gain advanced understanding of ESRI ArcGIS Pro software. Students will be able to:
1. Develop spatial analysis skills using ArcGIS Pro software and online analysis tools
2. Learn to access and download data, integrate, analyze, and model data, create new data sets to solve practical science questions
3. Gain an advanced knowledge of ArcGIS Pro software
4. Solve and prevent technical issues with geospatial data processing in ArcGIS
5. Create refined map products to present spatial information

Course Format
Content for this class is not delivered in the traditional lecture/lab format. Lecture and Lab are integrated into the entire class time. You will use your textbook and lecture/lab guidance to complete all class activities. Weekly assignments will be completed and submitted the week after with Thursday deadline. These will come with separate guidance in D2L.

Course Assessment and Grading
- **Review Assignments:** You will have 6 review assignments to complete in first three weeks. Review Assignments will carry **18% of class grade.**
- **Class Products:** Each class from fourth week, you will follow along with the textbook to produce a final class product, 9 in total. This product serves as a participation grade for the course and must be submitted in the correct file format. Class products are due on **Mondays** (late submission will not be accepted) and will carry **9% of class grade**.
- **Lab Assignments:** From fourth week you will have weekly lab assignments to complete, 9 in total. Lab Assignments will carry **45% of class grade.**
- **Tutorial Assignments:** You will have 7 ESRI tutorial assignments to complete. Tutorial Assignments will carry **28% of class grade.**

  - *I will provide details in D2L for you to access all assignment instructions and data (if needed). You will have 1 week to complete weekly assignments and late assignments will have one mark deducted for each day. Check out D2L for assignment due date.*

  - *You will likely need to work outside of the scheduled class time to complete course activities and assignments. Bolin 105 will be open during the week.*

- ***Class grades will be published in D2L. You will be responsible for keeping track of your grades.***

Table 1. Overall percentage value for course assignments and tasks

Tasks/Assignments	Percent
Class Products	**9**X1=9
Review Assignments	**6**X3=18
Lab Assignments	**9**X5=45
ESRI Tutorials	**7**X4=28
Total	100

Grading Standards
This class uses the following numerical equivalents for grades:
A = 100-90% | B = 89-80% | C = 79-70% | D = 69-60% | F = 59-0%.

Extra Credit:
There will be no extra credit offered for this course. If you are struggling, try harder. If you are still struggling, come see me.

Late Work:
Make-up exams will only be given where notice of a university-excused absence is presented ***before or within one class period of the scheduled exam.** Late Class Products will not be accepted. Late assignments will have one mark deducted for each day. ***Special note** – Class Products and assignments submitted on time, but in the wrong file format, will be considered late if a corrected re-submission is not made before the due date.

Attendance – Attendance is **necessary**. In-person attendance for students in this class is **mandatory** except for university-excused students. Students with 3 or more unexcused absences may be dropped from the course. All students should refer to the MSU Student Handbook for university policies related to student responsibilities, rights, and activities.

Desire-to-Learn (D2L)
Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into D2L through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Moffett Library
Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers

media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

Student Handbook
Refer to: [Student Handbook](#)

Academic Misconduct Policy & Procedures:
Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct. Cheating, collusion, and plagiarism on course assignments will result, at a minimum, in a grade of '0' for that assignment. Depending on the magnitude of the offense, a course grade of 'F' or withdrawal from the course may be imposed.

Change of Schedule:
A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Important Dates:
Last day for term schedule changes: 1/23
Deadline to file for graduation: 2/16
Last day to drop with a grade of "W:" 4/29
Refer to: [Drops, Withdrawals & Void](#)

Refund and Repayment Policy:
A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Services for Students With Disabilities:
In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring

accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to Disability Support Services.

College Policies:
Smoking/Tobacco Policy:
College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy:
To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Campus Carry
Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License-to-carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit Campus Carry.

Active Shooter
The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by the MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit MSUReady – Active Shooter. Students are encouraged to watch the video entitled "*Run. Hide. Fight.*" which may be electronically accessed via the University police department's webpage: *"Run. Hide. Fight."*

Grade Appeal Process:
Update as needed. Students who wish to appeal a grade should consult the Midwestern State University Undergraduate Catalog

GEOS 5033 Course & Lab Schedule

Week	Dates	Lecture / Assignment / Tutorial	Text Chapter(s)
1	1/23	Course Intro; Intro to ArcGIS Pro; Map projection **Review Assignments 1 & 2 assigned**	N/A
2	1/30	Join in ArcGIS; Maps; Cartography **Review Assignments 1 & 2 due** **Review Assignments 3 & 4 assigned**	N/A
3	2/6	Select by Attribute & Location; Data Conversion **Review Assignments 3 & 4 due** **Review Assignments 5 & 6 assigned**	N/A
4	2/13	Geocoding **Review Assignments 5 & 6 due** **Lab Assignment 1 & ESRI Tutorial 1 assigned**	10
5	2/20	Network Analysis **Lab Assignment 1 & ESRI Tutorial 1 due** **Lab Assignment 2 & ESRI Tutorial 2 assigned**	11
6	2/27	Lidar Data **Lab Assignment 2 & ESRI Tutorial 2 due** **Lab Assignment 3 & ESRI Tutorial 3 assigned**	17
7	3/6	Geospatial Data in 3D **Lab Assignment 3 & ESRI Tutorial 3 due** **Lab Assignment 4 assigned**	18
8	<u>3/13</u>	**No Class – Spring Break**	N/A
9	3/20	Distance Calculations and Cost Distance **Lab Assignment 4 due** **Lab Assignment 5 & ESRI Tutorial 4 assigned**	19
10	3/27	Map Algebra **Lab Assignment 5 & ESRI Tutorial 4 due** **Lab Assignment 6 & ESRI Tutorial 5 assigned**	20
11	<u>4/3</u>	**No Class – Easter Holiday**	N/A
12	4/10	Build a Model **Lab Assignment 6 & ESRI Tutorial 5 due** **Lab Assignment 7 & ESRI Tutorial 6 assigned**	21
13	4/17	Hydrologic modeling tools **Lab Assignment 7 & ESRI Tutorial 6 due** **Lab Assignment 8 & ESRI Tutorial 7 assigned**	22
14	4/24	Story Maps **Lab Assignment 8 & ESRI Tutorial 7 due** **Lab Assignment 9 assigned**	N/A
15	5/1	Practice an ESRI tutorial of your own interest / research area https://learn.arcgis.com/en/gallery/#?p=arcgispro and submit the project package **Lab Assignment 9 and ESRI Bonus Tutorial due**	N/A
16	5/8	**No CLASS**	N/A
17	**Final Week**	**No CLASS**	N/A

Underlined dates are classes missed due to the Holidays and Conference travel

Notice: Changes in the course syllabus, format, assignments, and schedule may be made at the discretion of the instructor.