Course Syllabus

GEOS 6001: Graduate Seminar in Geosciences
Kimbell School of Geoscience
McCoy College of Science, Mathematics, & Engineering
Fall 2024 Section 101, F 9:00-9:50AM, Room BO-105

This syllabus may change during the semester due to changes in course structure. Check D2L often for updates!

Instructor Contact Information
Instructor: Dr. Kashif Mahmud
Office: 205 Pierce Hall
Office hours: MW 9:00-10:30AM, TuTh 12:30-1:30PM
Office phone: (940) 397-4475
E-mail: Kashif.mahmud@msutexas.edu

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 concepts, principles, and theory in scientific investigations and explore diverse geologic topics. Students will be able to:
1. Gain some basic skills applicable to geosciences and environmental sciences
2. Develop the ability to identify key concepts relevant to their own research work
3. Interact and exchange information amongst academically active grad cohort
4. Disseminate general and scientific information

5. Strengthen and sharpen critical thinking skills
6. Increase proficiency at reading peer-reviewed technical articles
7. Become efficient evaluators of scientific research
8. Grow as scientists

Course Format
Students will participate in class activities and discussions to improve their understanding of theory, concepts, principles, and acquiring skills applicable to geosciences and environmental sciences. Students will produce a scientific presentation that identifies the key concept(s) involved in their research, the principles that support the concept(s), and the larger theory that is supported by the concept. Students will look at different papers and theses and perform a review (identify the problem, the link between different research approaches, and the missing link) and how to organize their writing. 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

- **Assignments:** You will have 4 assignments to complete in first seven weeks.

- **Paper review presentation:** You will give a short presentation (5 mins) on a paper of your choice, a peer-reviewed journal article possibly in your area of thesis research. You have to summarize the paper with its method and results. However, you will also criticize the research work by pointing out the drawbacks.

- **Writing assignment:** Your task is to review one example of a master's level research project. You are free to identify a thesis that interests you. Suggestions for possible examples are provided below, but you are by no means limited to these: https://digitalcommons.usf.edu/gly_etd/ or https://scholarworks.umt.edu/etd-geosciences/. To start off your review, please include:
  1. Title
  2. Author, affiliation
  3. Source (e.g. URL)

  In your review, you need to address the following elements:
  1) What is the problem statement (if any)?
  2) What is (are) the research question(s) or project goals? How clearly are these articulated? Is it clear from the outset what the general nature of the project is going to be?
  3) What is the general approach? Is there a strong justification for this approach?
  4) What are the specific methods employed? Is there enough detail so that the study is defensible and replicable?

5) How are the results and conclusions presented? Did these address the original research question(s) or project goals? Is the significance of the results clearly explained?

Please limit how much text you copy from the published reports - perhaps a bit of text for #1 and #2, but not for the rest. Try to be concise and limit yourself to **1000 words** for this writing assignment.

- **MSU Fall 2024 Celebration of Scholarship:** Towards the end of the semester, you will present a Scientific Talk (2nd year students) or Three Minute Thesis (1st year students) of your ongoing thesis research at the MSU Fall 2024 Celebration of Scholarship. The topic: your thesis or some facet of interest (potential thesis). As you are all at different stages, 2nd year students will present your own research in a 15-minute scientific talk, while 1st year students will need to rely on increasing degrees of background material towards an evolving idea in Three Minute Thesis Competition.

- **Participation:** Seminar classes rely on interaction and discussion. You need to be actively involved in each session to receive a full credit for participation, such as asking questions to your peer after their presentation, engage in group assignment, any semblance of phone engagement will attract a reduced grade.

  - ***I will provide details in D2L for you to access all assignment instructions. Late assignments will have one mark deducted for each day. Check out D2L for assignment due date.***

  - ***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**
Assignments	4X7.5=30
Paper review Presentation	15
Writing assignment	20
Celebration of Scholarship scientific presentation	25
Engagement/participation	10
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:
Late submissions will have one mark deducted for each day. ***Special note** – 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: 8/26
Deadline to file for graduation: 9/23
Last day to drop with a grade of "W:" 10/9
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 6001 Course Schedule

Week	Dates	Lecture / Assignment / Presentation
1	**8/30**	Course Intro
2	**9/6**	How to acquire and process data using LiDAR
3	**9/13**	LiDAR practical exercise (Group work) **Assignment 1 assigned**
4	**9/20**	Programming using R **Assignment 1 due**
5	**9/27**	Programming using R **Assignment 2 assigned**
6	**10/4**	Intro to Python programming **Assignment 2 due**
7	**10/11**	How to use Python editor IDLE **Assignment 3 assigned**
8	**10/18**	Python with ArcGIS **Assignment 3 due** **Assignment 4 assigned**
9	**10/25**	Tasks / submissions / presentations – Expectations and gradings **Assignment 4 due**
10	**11/1**	Paper review presentation – Day 1
11	**11/8**	Paper review presentation – Day 2
12	**11/15**	Celebration of Scholarship scientific presentation preparation
13	**11/22**	Celebration of Scholarship scientific presentation (**11/20)**
14	**11/29**	**No Class – Thanksgiving Holiday**
15	**12/6**	Writing assignment submission
16	**Finals Week**	**NO CLASS (Travelling for AGU conference)**

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.