



**Course Syllabus: Graduate Geoscience Seminar**  
**McCoy College of Science, Mathematics, & Engineering**  
**Spring 2023 GOES6001-201**

**Instructor Contact Information**

Instructor: Dr. Andrew Katumwehe  
Office: 307H Bolin Hall  
Lecture: M 3:00-3:50 PM RM 125  
Office hours: W: 1:00 – 4:00 PM, F 1-2 PM  
Office phone: (940) 397-4031  
E-mail: [andrew.katumwehe@msutexas.edu](mailto:andrew.katumwehe@msutexas.edu)

**Course Description**

With completion of your Master of Science degree, you are likely to be engaged in pursuits where you may be the sole authoritative voice of scientific evaluation; you will be the wizard in a room of managers, moneymen and marketers. And you will also be the rare vessel of knowledge and understanding about earth materials and processes to a greater community largely ignorant of such things. In some cases, you will be the defender of your insights to a body of experts. Very few of us are predisposed to serve these roles; this seminar course will engender the skills necessary and typical for those who hold an M.S. in Geoscience.

Additionally, when you complete your Master of Science degree, you will most likely seek employment or further educational opportunities. You will compete with graduates from a number of other excellent programs in earth science. It is my sincere hope that you are not merely competitive, but clearly the superior candidate in these evaluative processes. This seminar is a preparation towards that goal. We meet for an hour each week, but I expect you to devote significant time to course preparation for this one hour of credit. You will go through the introduction to research experience, the dos, the don'ts, data policies, responsible conduct of research (RCR) and sharing.

**Course Objectives**

- To refine student's understanding of concepts, principles, and theory in scientific investigations
- To develop the student's ability to identify key concepts relevant to their own undergraduate work
- To develop the student's theoretical understanding of the subject matter on which their thesis work is focused
- Strengthen and sharpen critical thinking skills
- Increase proficiency at reading peer-reviewed technical articles

- Enhance verbal and written communication skills
- Become efficient evaluators of scientific research
- Grow as scientists

### **Course Format**

- Students will participate in class discussion to improve their understanding of theory, concepts, principles, and models in relation to their thesis
- Students will produce a brief 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
- We will look at different papers and projects
- Do a literature review (identify the problem, the link between different research approaches, and the missing link) and how to organize your writing.

### **Course Assessment and Grading**

Each of you will be assigned presentation dates. You will read different technical papers, and then share the paper's contents and your critical analysis as a 15-minute Power point presentation. During this course we will look at a research proposal project and give a thorough analysis based on motivation, hypothesis, objectives, methodologies and your synthesis.

- Allow 11 minutes for your talk and 3 minutes for questions.

The presentation should be professional and follow the evaluation criteria (rubric) outlined on D2L. These include:

- Suitable topic
- Simple backgrounds and text
- correct formatting
- Appropriate information
- Proper organization
- Professional form
- An independent and original assessment

Note: You may not submit a presentation or paper for a grade in this class that already has been (or will be) submitted for a grade in another course.

### **Academic Misconduct Policy & Procedures**

**Academic Dishonesty:** MSU is committed to maintaining the highest standards of integrity and ethical conduct. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and altering academic records) will result in an official academic sanction. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University.

You have the right to appeal the charge. Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.  
<https://msutexas.edu/student-life/assets/files/handbook.pdf>.

### Evaluation

I will be evaluating your performance on the basis of quality presentation, participation (**avoid being on a phone in class**) and engagement in the seminar. Expect evaluation methods including (but not limited to) quizzes, worksheets, exercises, individual and group projects, extensive face-to-face questioning over topics of your choosing. In all cases, I will be looking for your genuine growth in terms of research.

**Table 1. Points allocated to each assignment**

Components	%age
Responsible conduct of research	20
Individual Presentations	15
Written assignments	15
Resume/c.v	10
Engagement/participation	10
Proposal drafts/Abstracts	15
Research fest/3min Thesis	15
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%.

### Colloquium Participation & Writing Assignments

To grow as a student and as a professional, you should attend presentations by other knowledgeable authorities as they arise. Kimbell School of Geosciences department offers [colloquium series](#) with typically three speakers per semester. You need to definitely attend two of these and three other acceptable presentations (Jan26, Feb 06). Acceptable presentations include:

- Other sessions of our Colloquium
- NTGS or other geo-society luncheons
- Conference presentations (GSA, AAPG)
- Short courses

Every presentation attended, a written summary of the presentation, the speaker's name and affiliation, a short synopsis of the presentation, a few sentences on how the presentation is related to your prior understanding of the topic, and a few sentences on your personal impressions of the presentation (style, execution, etc...). Each submission should be exceptionally coherent, and free of spelling and grammatical errors.

## **Participation**

Seminar classes rely on interaction and discussion. You need to be actively involved in each session to receive a full credit for participation (any semblance of phone engagement will attract a reduced grade).

## **Individual Presentation**

You will be asked to give a short presentation towards the end of the semester. These may be either on your thesis research or a topic of interest.

## **Research Fest.**

Another important individual assignment will require you to produce an annotated bibliography on a randomly assigned topic. You will be asked to acquire a small number of key references and summarize the useful attributes of each.

## **Reflections on Ethics.**

Your professor would like to believe that ethical behavior is second nature to everyone. Although it is likely true for the members of this course, experience suggests that exposure to ethical guidelines is useful. Another important individual assignment will ask you to evaluate ethical behavior in the science and profession of geology.

## **3Min Thesis**

The Three Minute Thesis (3MT®) competition is open to all currently enrolled graduate students interested in presenting their thesis, dissertation, or graduate-level research in a concise manner to a non-specialist audience. Research presented must have been conducted at MSU Texas. The 3MT® competition celebrates graduate student research and challenges students to present their work in a compelling and creative manner. Students are limited to a three-minute time frame and a single, static PowerPoint slide. During this class each student will practice to give a 3 Min Thesis presentation and is graded.

## **Responsible Conduct of research (RCR).**

MSU places special importance on a faculty member's commitment to quality teaching, scholarship, and service to the university, the community, and the profession. Research enhances teaching and learning, and for developing and promoting MSU. All personnel engaged in any study are accountable for any actions or inactions that might contribute to injury of any persons placed at risk. As federally mandated and required by the MSU Institutional review Board (IRB), all researchers and individuals involved in project activity must complete a self-study course under Collaborative Institutional Training Initiative (CITI Program). The certificate is good for three years. Certificates must be current throughout the duration of the research conducted under IRB oversight at MSU.

## **Resume/C.V.**

Early in the semester, I will have you construct or modify your resume. You will be asked to honor a list of guidelines. This will be a graded assignment.

**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:**

This class has zero room in its schedule for late of anything. You will need to complete all assignments on time. Your time of presentation is not interchangeable.

**Attendance**

Attendance will count towards your participation grade except for university excused absences. Absenteeism will be addressed on an individual basis, and the professor reserves the right to drop or fail students with poor attendance. However, any excuse (for absence or otherwise) is best when delivered ahead of the absence. Successful completion is a pathway to an estimable career path that generally weeds out those without commitment and courtesy. It is discourteous to not alert your professor to a delay or absence to any scheduled assembly. Certainly, oversleeping is not an excusable absence.

**Desire-to-Learn (D2L)**

Extensive use of the MSU D2L program is part of this course. Each student is expected to be familiar with this program as it provides the 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. Zoom presentations might be done online so be familiar with zoom and D2L.

**Covid-19 Pandemic**

The SARS-Cov2 virus is a threat to the execution of this class. We will replicate conditions that have been useful to healthcare workers.

Rules:

- Stay home if you or anyone in your immediate dwelling is ill.
- You must pass a daily self-assessment whenever you engage in non-remote work – reporting the absence of fever or other symptoms.
- Wash hands for 20 seconds whenever possible. Use hand sanitizer at least once per hour.
- Maintain 6 feet distance when possible.
- Masks are to be worn whenever in close proximity or in closed spaces.
- Wipe equipment with disinfecting cleanser before exchanging users.
- Maintain a same sitting in the lecture hall

Information on the face covers can be found on: <https://msutexas.edu/return-to-campus/assets/files/msu-texas-facial-covering-requirement.pdf>

## **COVID-19 Accommodations**

Students may apply through; <https://msutexas.edu/student-life/disability/covid/student-concerns.php>

## **Student Handbook**

There is no reference book for this course, Refer to: [Student Handbook 2017-18](#)

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.

## **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 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

## **Important Dates:**

Last Day to drop this course with a grade of "W" is 4pm, March 27, 2023 Drops after this date will receive grades of "F." Refer to academic calendar: [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.

## **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:**

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and 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.

Grade Appeal Process:

Students who wish to appeal a grade should consult the Midwestern State University [Undergraduate Catalog](#)

**GEOS 6001-201 Course Schedule**

We meet each Monday at 3:00 PM, except during gazetted University holidays. Important due dates and other requirements will be imparted as the semester progresses. Changes in the course syllabus, format, assignments, and schedule may be made at the discretion of the instructor.

Tentative schedule

Introduction to Research (Weeks 1 and 2)

Managing Your Research (Week 3)

Finding Scientific Information Relevant to Research (Week 4)

Proposal Writing (Weeks 5, 6 and 7)

Managing Your Experiment (Week 8)

Managing Your Data (Week 9)

Dissemination of Results I: Manuscripts and Theses (Weeks 10 and 11)

Dissemination of Results II: Oral Presentations

Dissemination of Results III: Poster Presentations