Course Syllabus: Tectonic Origins of North America
McCoy College of Science, Mathematics, and Engineering
GEOS 5413-101
Fall 2024

Contact Information
Instructor: Dr. Andrew Katumwehe
Office: Pierce 206
Lecture: MWF 04:00–4:50 am RM B117
Office hours: F: 1:00 – 4:00 pm and TR: 10–11:00 am and by appointment
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Course Description
This is a lecture-based overview of North America's geologic, physiographic/tectonic provinces followed by student-led investigations. Particular emphasis will be placed to the prehistory of the provinces from Precambrian through the present and the resulting distribution of structures, landforms, stratigraphy, energy and mineral resources, and geological hazards. This course will comprise overview lectures based on the tectonic history of specific areas. However, students will be assigned special readings on historical findings, current research, and presentation of topical research.

Objectives
At the end of this course, students should be able to recognize, describe, and analyze geologic/ geomorphic provinces of North America from the perspective of their plate tectonic evolution, geomorphic evolution, geologic resources, and geologic hazards. The question remains as to what these geological features tell us about the tectonic history of an area.

Required Textbook & Instructional Materials
No required textbook for this course. However, different research materials will be used in this class.

Student Handbook
Refer to: Student Handbook 2017-18

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 behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, helping another person cheat, unauthorized access to tests, 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. Violations may subject you to disciplinary action, including the following: receiving a failing grade (0%) on an assignment, examination, or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. Violations of academic integrity will be reported for administrative action, and the penalties for such infractions will be as listed in the MSU policy on Academic Integrity.

Artificial Intelligence (AI).

Chat GPT and University Policy: AI programs assist writers. AI programs do not replace human creativity, originality, and critical thinking. Writing is a craft you must develop over time to develop your writing voice. This course assumes that the students will write all work submitted by students. All coursework without proper citation or attribution is a form of academic dishonesty. AI writing detection complements Turnitin's similarity-checking workflow and is integrated with D2L. The detection component provides a percentage score for AI-written text.

Grading

Lecture Portion of course = 100% of final grade. Assignments=30% of final grade. Presentations =50%, and an individual research paper in line with your paper contributes 20% of the total grade. Lecture attendance and participation are mandatory, and your presentation will be graded based on a rubric. You have to submit your presentation for a final grade after presenting it. You will need to be able to provide assignments and research papers in a format compatible with D2L (e.g. .doc, .pdf, .jpeg, etc. Presentation is limited to 15 minutes and will be followed by 5-10 minutes for questions from peers. Presentations may be PowerPoint or poster-based or zoom depending on the prevailing circumstances. Presentations will be graded on the clarity of the presenter, knowledge of the topic (nor reading off the slide), and no clutter. Research papers must be between 2250 and 3250 words (about 4-6 pages of text based on 11-pt or 12-pt font; word count per MSWord's word count tool) and be no longer than ten pages, including illustrations and title page. Papers must contain an abstract of no more than 250 words (not included in word count) and highlights of the paper. At least 5 primary, peer-reviewed references, and be structured as follows: (1) Abstract and highlights; (2) Introduction (background and rationale for paper topic choice); (3) Methodology; (4) Discussion what would be your take-home message and want to share with your colleagues as a result of your research); (5) Conclusion (highlight

or restatement of most crucial learning's from your perspective and why you chose the particular topic); and (6) references (minimum of five primary references). Figures and tables (with captions and references) may be included within the text or at end of paper as appendices. Format – MS Word; paper copy and electronic copy to be submitted per the course schedule/syllabus. Research papers submitted more than two weeks late may be given a grade of zero. Papers must be submitted as electronic copies through a dropbox on D2L with the words "GEOS5413 Paper Fall 2024-your name". The research paper grade is determined based on format compliance (up to 60%) and logical reasoning (up to 40%).

Table 1: Points allocated to graded item or group of items discussed in the Grading Section above.

Graded Items	Contribution to Final Course Grade
Presentations	50%
Assignments, attendance, and participation	30%
Research papers	20%

Table 2: Final grade determination (grades are rounded up to the nearest integer before assigning the final course letter grade.

Grade	Points
A	90 and above
B	80-89
C	70-79
D	60-69
F	Less than 60

Homework
See the Grading Section for details – All Homework is to be submitted to my office in your regular lab section.

Exams
No exams in this course.

Research Paper
See the Grading Section for details about content and format. All Research Papers must be submitted in Microsoft Word or PDF format. A Dropbox will be created on D2L, but you will not be penalized if you send your research paper to andrew.katumwehe@d2lmail.msutexas.edu.

Lecture (Attendance) Extra Credit
Limited extra credit opportunities will be available on an irregular and random basis during the lecture portion of the course. Generally, these opportunities will involve a short written response to a question or problem posed during the lecture or, more often than not, simply your signature on the attendance sheet.
Students who leave lectures early may be marked absent.

Late Work
Late work will be accepted. However, the following penalties will apply in all cases of late submittals: 10% for one day past due; 20% for two days past due; 30% for one weeks past due; after one week, a grade of zero may be recorded. No course assignments will be accepted after 12/04/2024.

Important Dates
The last day to drop this course with a grade of "W" is 4 pm, November 25, 2024. Drops after this date will receive grades of "F." Refer to academic calendar**:** Drops, Withdrawals & Void. More information can be found here.

Desire-to-Learn (D2L)
The MSU D2L program is a part of this course. Lectures, review materials, assignments, dropbox and course information are available through D2L. 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.

Online computer requirements
Though there are no online exams, uploading class projects, assignments, and projects requires access to a computer with reasonable Internet access to complete and upload your assignments. You are responsible for having (or having access to) a working computer in this class. Assignments and presentations are due by the due date, and personal computer technical difficulties may not be a reason for the instructor to allow students extra time to submit assignments. Computers are available on campus in various areas of the buildings and the Academic Success Center. There are many places to access your class! Contact your instructor immediately upon having personal computer trouble. College technicians can only work on things other than student computers due to liability and resource limitations; however, they can help you connect to our online services. For help, log into D2L

Refund and Repayment Policy
A student who withdraws or is administratively withdrawn from MSU may be eligible to receive a refund for all or a portion of the tuition, fees, and room/board charges paid to MSU for the semester. However, the refund may be returned to the financial aid programs if the student received financial aid (federal/state/institutional grants, loans, and/or scholarships).

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 apply for such assistance through Disability Support Services 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 or https://msutexas.edu/student-life/disability/.

Carry and Active Shooter
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.

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, Midwestern State students and employees are informed that strictly enforced policies prohibit 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 during university-sponsored activities.

Grade Appeal Process
Students wishing to appeal a grade should consult the Midwestern State University MSU policy on the Academic Integrity and grade appeal checklist.

Notice
Any course syllabus, procedure, assignments, and schedule changes may be made at the instructor's discretion. However, these changes will be communicated to all students through D2L and your school email. Please be on the lookout for course news and schedule updates regularly.

Course schedule details are given on the following five pages. The first Table lists lecture topics, textbook readings, and the three lecture exams. The second Table lists the dates for the lab topics, three lab quizzes, homework assignment due dates, and self-assessment assignments.

GEOS5413 Fall 2024		**Lecture Schedule**
Week	**Dates**	**Topics Covered (general)**
1	**08/26, 28, 30**	Introduction;
	09/02	**Labor Day No Classes**
2	09/04; 09/4; 6	Rock/Sediment Type; Structural Form
3	09/9; 11; 13	Mechanisms that impart change; Forcing Variable: Tectonic Change
4	09/16; 18; 20	Forcing Variable: Climate; Forcing Variable; Sea Level and Isostasy;
5	09/23; 25; 27	Interaction of Tectonics, Climate, and Time; Nearly Flat-Lying Sedimentary Layers; Annotated Presentations/Discussion #1
6	09/30; 10/02; 04	Nearly Flat-Lying Sedimentary Layers; Annotated Presentations/Discussion #2
7	10**/7; 9**; 11	***Project Work;*** Annotated Presentations/Discussion #3 ***PW***; ***PW;*** P/D
8	**10/14**; 16; 18	Crystalline-cored Mid-Continent Anticlines And Domes; Annotated Bibliography Presentations/Discussion #4
9	10/21; 23; 25	Crystalline-cored Mid-Continent Anticlines And Domes; Foreland Fold and Thrust Belts;
10	**10/28; 30; 11/01**	**Crystalline Deformation Belts**
12	11/4; 06; 08	Normal Fault-Dominated Landscapes; Cascadia Volcanic Arc System
13	11/11; 13; 15	Cascadia Volcanic Arc System;

		California Transpressional System
14	11/18; 20; 22	Cascadia Volcanic Arc System; California Transpressional System
	11/28- 12/01	**Thanksgiving Break**
15	12/04, 06	***Project Work;*** Tectonic Style, Rock Successions and Tectonic Provinces
16	12/7, 9,	Tectonic Style, Rock Successions, and Tectonic Provinces; **CLASS PRESENTATIONS**