



**Course Syllabus: Invertebrate Paleobiology**  
**McCoy College of Science, Mathematics, and Engineering**  
Lecture - GEOS 3534 Section 201, 11A  
Spring 2025

Lectures: Monday, Wednesday, Friday 1:00-1:50 pm | Bolin 125  
Labs: Thursday 2:00-3:50 pm | Bolin 125

**\*NOTE: Due to construction delays and complications, we may need to move the location of class and lab meetings in the early weeks of the semester. Information about where we will meet will be updated in the news items on D2L.**

[Course D2L Site](#)

**Contact Information**

Instructor: Dr. Steven J. Rosscoe

Office: Pierce Hall, Room 204 (Bolin Hall 101A – Later in the Semester)

Office hours: MF 10-10:50 am & 12-12:50 pm, W 10-10:50 am | By Appointment | [Zoom Meeting Link](#)

Office phone: (940) 397-4448 (Note: E-mail is the preferred method of communication)

E-mail: [steven.rosscoe@msutexas.edu](mailto:steven.rosscoe@msutexas.edu)

**Course Description**

An introduction to quantitative, theoretical, and descriptive invertebrate paleobiology. Topics include speciation, extinction, paleoecology, biostratigraphy, and systematics. Laboratory emphasizes hands-on analysis of fossil specimens, applied biostratigraphy, and quantitative fossil datasets.

**Course Learning Objectives**

The successful completion of this course will be evaluated around the following course learning objectives. Each of these course learning objectives include aspects of both content knowledge and skills development. Students will:

1. Investigate the foundational concepts of paleontology (fossilization, evolution and speciation, growth of organisms, the principle of faunal succession, and the diversity of fossils through time).
2. Apply modern understandings of the relationships between organisms and their environments to interpret past depositional environments, energy of environment, and paleoclimate based on the fossil record.

3. Develop field and laboratory skills necessary for the proper collection and analysis of paleontological specimens.
4. Properly use anatomical terminology, observational skills, and methods of illustration to prepare professional descriptions of invertebrate fossils.
5. Develop groups skills, scientific literacy, and collaborative scientific writing skills, by completing a field-based group research project and paper.

## **Textbook & Instructional Materials**

### Textbooks:

- There is no required textbook for the course. PDFs will be provided for lectures and pre-lab readings, where important (see course schedule).
- Recommended Textbooks (These are not required, but these are the great texts of paleobiology and excellent references for those of you interested in pursuing paleobiology.)
  - Boardman, R. S., Cheetham, A. H., and Rowell, A. J. 1991. Fossil Invertebrates. Wiley. 728 p. ISBN: 978-0865423022. ([Amazon Link](#))
    - This is the gold standard textbook for in depth discussions of each major invertebrate fossil group.
    - A great lab resource.
  - Foote, M. and Miller, A. I. 2006. Principles of Paleontology. W. H. Freeman Publishers. 480 p. ISBN: 978-0716706137 ([Amazon Link](#))
    - This is the gold standard book for principles of paleontology that are universal, not just limited to invertebrate paleontology.
    - A great lecture resource.

### Required Computer Applications:

- Microsoft Office: Word, PowerPoint [Free Access to Microsoft Office 365](#)
  - Required for completion of group project and laboratory activities.
  - The department computer lab has moved to Dillard. If you would like access to the complete applications (the online versions that are free do not have the same functionality), you will need to ask Dr. Price to have your name added to the card access.
- PDF Reader
  - PDFs are used to provide some course materials; a browser PDF reader or Adobe Acrobat will be necessary to view them.

### Required Laboratory Materials:

The following materials will be required for successful laboratory work this semester in the Invertebrate Paleobiology lab.

- Sketchbook (100 sheets minimum) ([Amazon Recommendation](#)) or electronic equivalent
- Camera (cell phone camera is perfect)
- Pencils (mechanical, sketching pencils if you'd like)
- Colored Pencils (a simple basic color set is fine)

**Required Field Materials:**

- Field Notebook ([Amazon Recommendation](#)). This is a must have. You should have a Rite-In-The-Rain field notebook to take detailed field notes on our field trips.
  - If you are a geology major and have one already you may continue to use it for this course. There is no need to buy another.
  - If you are not a geology major you can use a composition notebook rather than purchase this more expensive field notebook for use in this class, though if it gets wet you could lose your notes.

**Suggested Field Materials (for Geology Majors)**

These materials are the standard field kit for most geologists (in addition to the field notebook). You are not required to have these for the course, but they would be helpful and you'll use them more and more as you go through your career. Some Amazon links are provided in D2L if you have the cash and the desire. *\*Again, you do not need these for the course at all!*

- Safety Colors – you need to be high visibility in the field especially on roadsides. A standard safety vest (yellow or orange), safety-colored t-shirts, even safety-colored hats exist. Note: For the Charlie XCX fans, your BRAT gear is appropriately safety-colored. (We have vests to borrow)
- Rock Hammer – The rock pick is the standard (a square end and a pointed end), a masonry hammer also works (a square end and a chisel tip end), and for those hard rocks (limestones, igneous rocks) just go for a mini-sledge.
- Hand Lens (aka Loop) – a small 10x or 15x magnifying lens for the field. 10x is standard, higher magnifications can be straining to your eyes.
- GPS – your phone GPS will do in a pinch, but there are way better ones out there.

**Grading**

The formal grade for this course is determined by your performance on lecture exams, a group project, laboratory activities, and paleontologist quizzes. You earn points throughout the semester for each assignment completed based on how well you complete the assignment. At the end of the semester the total number of points you have earned is divided by the total number of points available to determine your final grade. Any changes to the grading scheme caused by changes to the course schedule or timing changes will be posted officially in D2L.

**Table 1: Points allocated to each assignment type. For more details see assignment descriptions below.**

<b>Assignments (Quantity)</b>	<b>Points</b>
Lecture Examinations (2)	200
Group Project (1)	100
Lab Activities (13)	260
Paleontologist Quizzes (4)	040
Total Points	600

Table 2: Total points for final grade.

Grade	Points
A	540 and up
B	480 to 539
C	420 to 479
D	360 to 419
F	Less than 360

Lecture Examinations (Online)

There will be two examinations during the course that cover all aspects of the lecture and lab portions of the course. These examinations will be given online, in D2L. The examinations will consist of written response questions that will require complete and grammatically correct sentences. The examination will be released one week prior to the due date for the examination. The examination will be timed (2 hours) and you will only have one attempt to take it once you open the examination in D2L. I will provide a printed copy of the exam questions on the day the examination releases.

- Examinations are individual exercises.
- You may not take examinations with each other.
- You may not use internet resources while taking the examination.
- You may use your course materials, your lecture notes from class, and your labs.
- You are responsible for studying and learning the material before taking the examination.
  - You will not have enough time to look up every question if you do not study in advance for the examination. Study is key.
- Note: Written answers that are lifted from other materials or simply just repetition of bullet points from lecture slides will be given a grade of zero as that is plagiarism. Construct your own answers and write in your own voice.

Table 3: The table below shows due date for each exam.

Examination	Due Date	Time Due
Midterm Examination	Friday 03/07/2025	11:59 pm
Final Examination	Monday 05/12/2025	11:59 pm

Group Project (Outside of Class Time)

Employers in our industry are demanding a work force that can work collaboratively. In the field of geosciences specialization is very common, but much of the work that is being done requires experts from a variety of specializations. As such, geoscience is exceptionally collaborative. To help prepare you for this, you will be completing a group research project this semester to learn to work collaboratively, learn paleontology, and build your writing and editing skills. The following describes the major components of the project. More specific details for some of these components will be available on D2L.

- Field Trips [20 points total] – You must attend the two field trips for the course. Following each field trip, you will submit a copy of your field notes to the instructor for evaluation. You may use a scanner to scan your field notes and submit them in D2L as a PDF or you may take a clear photo of the pages from your field notes, place them in a MS Word document (one photo of a page per page in the document) and submit that as a MS Word document or PDF. Each field trip is worth 10 points. You receive 5 points for attending and participating in all aspects of the field trip and 5 for the quality of your field notes.
  - Field Trip 1 – Stratigraphy of the Mineral Wells Fossil Park (February 8<sup>th</sup>, 2025)  
This field trip will focus on the geology of the Mineral Wells Fossil Park near Mineral Wells, Texas. You will collect rock data (lithology and geophysical data) so that you can generate a high-quality measured section of the strata at the MWFP. There will also be fossil collecting time.
  - Field Trip 2 – Paleontology of the Mineral Wells Fossil Park (February 22<sup>nd</sup>, 2025)  
This field trip will focus on the fossil specimens from the MWFP. You will work as a group to carefully collect a large and diverse collection of specimens from the park. These specimens will be evaluated and identified as a part of the group project paper that will be written during the rest of the semester. You will be working on the identification and description of these fossils for the rest of the semester. A good collection is the key to a good grade!
- Introduction Draft [10 points total] – The introduction of a paleontology paper generally consists of a literature review, geologic setting, locality description, and methodology. Your introduction sections will not include a deep literature review (as little has been written about the MWFP). Your introduction will consist of an introductory paragraph, a section on the Pennsylvanian Geology of Mineral Wells, a section describing the locality and its specific geology. We'll forego the methodology section until the final draft of the paper at the end of the semester. Your group will submit one MS word document by the deadline for the instructor to read, edit, and return to you. Detailed requirements can be found in D2L.
- Systematic Paleontology Draft [10 points total] – The systematic paleontology section of a paleontology paper is the detailed description and discussion of the various fossil species found in a study. You will identify your specimens to the genus-level. This section includes figures (called plates) and an organized and structured description. You will complete a draft of the systematic paleontology section for all specimens in your collection in a MS Word Document for all fossils from the protists, the porifera, the cnidaria, the brachiopoda, and the bryozoa for the draft. All other fossils will need to be completed for the final draft of the paper at the end of the semester. This will be read, edited, and returned to you. Detailed requirements can be found in D2L.
- Results, Discussion, and Conclusion Draft [10 points total] – The results section of a paleontology paper describes the data collected in the study. This is where the fossils present, their abundance, and their characteristics are discussed (how you tell one genus from another). In addition, you discuss any trends that you observe (up section or at different localities). There is no interpretation at all in the results section. Interpretation is found in the discussion section of a paleontology paper. This is the section where you will interpret the depositional environment based on the geology and paleontology of the MWFP. Lastly, is the conclusion. The conclusion is a short summary

of the important points from the paper. You will submit a draft of these sections in a MS Word document for editing and review. Detailed requirements can be found in D2L.

- Final Draft of Full Paper [50 points total] – On the last day of the semester, the final draft of your group paper is due. You will want to make changes and edits to previously submitted drafts and you will need to add content, including an abstract, methods, and acknowledgements section. You will also need to complete the systematic paleontology for all genera present, not just the genera in the draft. You will also need a formal references section for all of the resources you used in writing the paper. The final draft will be a MS Word document, one submitted per group. Detailed instructions can be found in D2L. The sections of the paper, in order, are:
  - Abstract
  - Introduction
    - Pennsylvanian Geology of Mineral Wells
    - Geology of the Mineral Wells Fossil Park
    - Methods
  - Results
  - Discussion
  - Conclusion
  - Acknowledgements
  - References
  - Systematic Paleontology

Table 4: The table shows checkpoints and deadlines for the group project for the semester.

<b>Checkpoint/Deadline</b>	<b>Date (Date Due)</b>	<b>Product</b>
Field Trip 1: Stratigraphy of the Mineral Wells Fossil Park	02/08 (02/10)	Copy of Notes
Field Trip 2: Paleontology of the Mineral Wells Fossil Park	02/22 (02/24)	Copy of Notes
Introduction Draft	02/28 (02/28)	Word Document
Systematic Paleontology Draft	03/28 (03/28)	Word Document
Results, Discussion, and Conclusion Draft	04/25 (04/25)	Word Document
Final Draft of Full Paper	05/09 (05/09)	Word Document

### Lab Activities (In Lab)

There are thirteen lab activities throughout the semester. Labs 1 to 11 are labs specific to distinctive groups of fossils. Labs 12 and 13 deal with applications of paleontological data. Our labs meet on Thursdays. Each lab will be due by the start of the following lab period (2:00 pm). For labs 1 to 11, you must submit a MS Word document or PDF of your sketch book pages for the specimens in the week's lab in D2L. We'll briefly go over select specimens from the previous week's lab at the start of the lab period. The last two labs (12 & 13) will be more self-contained activities where the whole lab will be submitted. Lab thirteen will be due on the day of the class final exam block. See the course schedule at the end of the syllabus to find the due dates.

### Paleontologist Quizzes (Online)

Paleontologists need to write and speak with a uniform vocabulary. Throughout the semester you will need to take four online quizzes (multiple-choice). These quizzes are taken after you have self-studied the provided materials and are prepared to take them. The topics covered have been selected to cover the terminology that any paleontologist would be expected to know in everyday conversation with their peers. Many of these terms are equally important to geologists who are not paleontologists! All four of the quizzes (each covering a different set of terms within a theme) are due by the last day of the semester (May 09, 2025) at 11:59 pm. You may take them whenever you want throughout the semester. The topics are found below, the terms you will need to study can be found in the Paleontologist Quizzes module in D2L.

- Paleontologist Quiz 1: Lithological Terminology
- Paleontologist Quiz 2: Time Terminology
- Paleontologist Quiz 3: General Anatomical Terminology
- Paleontologist Quiz 4: Environmental Terminology

Each quiz consists of twenty multiple choice questions pertaining to the terminology provided in the study guide. Quizzes are timed, with each quiz lasting 15 minutes. You have a maximum of two attempts to earn a high grade on the quiz. While I cannot prevent you from using external materials to find answers, it is highly recommended that you put in the effort to actually learn the terms so you use them correctly in this course, in other courses, and in your careers.

### Extra Credit

There is no extra credit in this course. Bonus points may be offered for attendance to department and college events throughout the semester at the instructor's discretion.

### Late Work

This is a course where each assignment has substantial lead time before its due date. **\*No late work will be accepted.** Missed labs and examinations may be made up with a legal, paper-documented, excuse.

### Make-Up Work/Tests

For legal, paper-documented excuses make-ups for labs and examinations can be completed. Make-up work should be arranged for in advance wherever possible. The instructor will give you a new deadline that is reasonable for the course timeline. **\*No make-up work (lecture or lab) will be allowed beyond 10 days past the original deadline.**

The group project cannot be made-up as it requires active participation in the group throughout the semester. While your group should work with your schedule to include you and reschedule meetings due to illness, if you do not participate at all you will not be able to make-up the assignment.

Note: You must complete the assignments, laboratories, and examinations presented in this syllabus. No substitute assignments will be allowed to compensate for poor performance or missed deadlines.

## Instructor Class Policies

The following policies are the policies that are integral for our successful completion of the course and should be read thoroughly. If you have any questions, please see the instructor.

### Academic Honesty

Academic dishonesty is considered cheating, collusion, and plagiarism. Any unauthorized assistance during the completion of assignments, using on aids beyond those authorized for an assignment, or the use of other people or services to complete assignments is considered cheating. Working with others in a way that is not authorized by the instructor to complete assignments is considered to be collusion. Plagiarism is the use of another person's materials (by paraphrase or direct quotation) without giving them full and clear acknowledgement. The use of material prepared by another person or agency selling term papers and academic materials is also considered plagiarism.

The use of any artificial intelligence (AI) in completing course assignments is NOT allowed. AI in this sense is any technology that summarizes, writes, or answers questions on its own. Recent court rulings have allowed lawsuits to go forward against Chat GPT and other AI operators because it directly plagiarizes the use of others. College is about you learning to write, you developing your voice, and you learning how to process, summarize, and properly cite information. Any use of AI is considered a violation of this academic honesty policy.

If a student is caught cheating, colluding, or plagiarizing on any assignment the assignment grade will automatically be a zero. Two or more violations will result in failure of the course.

### Classroom Civility (IMPORTANT)

Learning, especially in science, can be a very challenging process. Learning often requires putting yourself out there and being vulnerable. Science also happens to be at the forefront of information which may conflict with personal beliefs. Your beliefs are yours and nothing will change that, though those beliefs may not get you credit on the exam. We are focused on science and what understandings have been developed in the field. Additionally, no scientist thinks the same way as every other scientist. To develop the best understandings of our universe, we must seek input from all people in the field.

In my classroom, we strive to create an environment where everyone is respected and valued for who they are. We are all here together, learning together, and working toward the same goal. This is not a place for hate of any kind. The use of derogatory language, hate speech, or violence is absolutely unacceptable in this classroom and in any setting related to the course. Learn to work with and value all people. Be civil and treat each other with respect. Do your best to listen to each other, in any conversation. Use of derogatory language, hate speech, or violence will result in removal to the classroom or the course.

Dr. Rosscoe (me) is always available to help if you have any concerns or questions about building a positive classroom environment. The campus also has numerous resources related to a safe and welcoming experience at MSU. Also, don't forget the MSU Safety App.

- [Title IX Misconduct](#): Dating violence, sexual assault, sexual harassment, stalking, and other forms of sexual misconduct.



- [Bias Incident Reporting](#): Bias and hate incidents related to race, gender, or sexual identity.
- [Disability Grievance Procedures](#): Discrimination on the basis of disability.

### COVID-19 and Illnesses

Since COVID-19, classroom health has been a necessary and probably long overdue focus. While there are no longer COVID-19 policies in place by the university the following procedures are scientific best practices. These same principles can be applied to any viral infection (flu, cold, etc.).

- If you become ill and have symptoms, get tested.
- If you are positive for COVID-19, stay home. It's good for your recovery and good for protecting your peers.
- Illness happens and if you absolutely must be in public, wear a mask. Even a cloth mask reduces the chance you will spread the illness to others.
- If you stay home or miss assignments, be sure to get a Doctor's note and excuse. It lets me help you make things up.

In the case of long-term illnesses or medical situations that will prevent you from attending classes regularly, contact the professor (me) as soon as possible. We will work together to make sure that you can succeed, just make sure it's Doctor-documented. I can't do much to help, if I don't know until the day before the semester ends.

### Electronic Devices

Use of electronic devices for taking notes is allowed in my classroom. Recording (audio or video) is not allowed unless approved by the instructor for educational purposes. The use of social media or streaming anything is not an appropriate use of technology during class. If your use of technology is non-educational or is being disruptive to your peers, you will be asked to leave.

### Course Grade and Grade Bumps

In my courses, a grade is earned by accumulating points throughout the semester. The grade you earn in the course is determined by the number of points you earn through the timely completion of assignments. As such, at the end of the semester, there are no grade bumps given out. Do not ask how or if you can be bumped up to the next letter grade, if you haven't earned the points, you will not be able to get that grade.

If you believe there to be an error in the calculation of your grade, whether it is on a specific assignment or the whole course feel free to ask me to re-evaluate and double check. I will do so happily. For specific assignments, be prepared to give me specific reasons you feel the grade is wrong (which wrong answer do you think was right, etc.).

### Desire-to-Learn (D2L)

Extensive use of the MSU D2L learning management system is required in 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.

### Computer Requirements

Taking this course involves the completion of all lecture exams, reading quizzes, and discussions in the course learning management system (D2L). This class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class. **\*Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered a reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.** Computers are available on campus in various areas of the buildings as well as the Academic Success Center. **\*Your computer being down is not an excuse for missing a deadline!!** There are many places to access your class! Our online classes can be accessed from any computer in the world which is connected to the internet. Contact your instructor immediately upon having computer trouble. If you have technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations however they are able to help you get connected to our online services. For help, log into D2L.

### Inclement Weather Policy

In cases of extreme weather events that delay or close campus and where those delays or closures impact the course:

- If the closure or delay includes lecture meeting time, the lecture will not meet and the lecture schedule for the semester will be modified.
- If the closure or delay includes a laboratory meeting time, the laboratory will not meet and all remaining laboratory meetings for the week will be cancelled to keep the lab sections on the same schedule. Lab due dates and lab quiz dates will be adjusted.
- If due dates are impacted by the delay or closure, they will be rescheduled.
- All changes to the course schedule will be posted, in writing, in D2L.
- NOTE: Because all students do not have equal or reliable access to technology and internet, especially in times of inclement weather, we WILL NOT shift to online in cases of inclement weather.

## University Policies and Information

The following information and policies apply to this course. Please read each of these policies and ask your instructor if you have any questions.

### Important Dates

- First Day of Classes: January 22<sup>nd</sup>, 2025
- Last Day to Change Schedule and Late Registration: January 24<sup>th</sup>, 2025
- Deadline to File for December Graduation: February 17<sup>th</sup>, 2025
- Spring Break Holiday: March 10<sup>th</sup>-14<sup>th</sup>, 2025
- Holiday Break: April 18<sup>th</sup>, 2025
- Last Day for a Grade of W: April 30<sup>th</sup>, 2025 (Drops after this date get a grade of F)
- Final Exams Begin: May 12<sup>th</sup>, 2025

### Attendance

Students are expected to attend all meetings of the classes in which they are enrolled. Although in general students are graded on intellectual effort and performance rather than attendance, absences may lower the student's grade where class attendance and class participation are deemed essential by the faculty member. In those classes where attendance is considered as part of the grade, the instructor should so inform students of the specifics in writing at the beginning of the semester in a syllabus or separate attendance policy statement. An instructor who has an attendance policy must keep records on a daily basis. The instructor must give the student a verbal or written warning prior to being dropped from the class. Instructor's records will stand as evidence of absences. A student with excessive absences may be dropped from a course by the instructor. Any individual faculty member or college has the authority to establish an attendance policy, providing the policy is in accordance with the General University Policies.

### 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.

### 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) exist 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](#).

#### Campus Carry Rules/Policies

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 Rules and Policies](#)

#### 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 MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [Safety / Emergency Procedures](#).

#### Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by MSU. 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

Following the appropriate procedure for grade appeals requires you to speak to your instructor first, so talk to your instructor. Students who wish to appeal a grade should consult the Midwestern State University [Undergraduate Catalog](#).

### Lecture Topic Schedule for Spring 2025

The following is the schedule for the lecture topics we will study during the semester. This schedule will vary over the semester as some topics may move quicker or slower than expected. Note: Changes in the course syllabus, procedures, assignments, and schedule may be made at the discretion of the instructor. Readings for lecture topics, when required, will be posted in D2L as PDFs.

Week	Dates	Monday Topic	Wednesday Topic	Friday Topic
<b>1</b>	Jan 20 to Jan 24	<b>No Class</b> <i>Martin Luther King Jr. Day</i>	Course Introduction	Paleontology
<b>2</b>	Jan 27 to Jan 31	Taphonomy	Modes of Preservation	The Fossil Record
<b>3</b>	Feb 03 to Feb 07	The Protists	The Protists	The Basal Metazoans
<b>4</b>	Feb 10 to Feb 14	The Porifera	The Porifera	The Cnidaria
<b>5</b>	Feb 17 to Feb 21	The Cnidaria	The Cnidaria	The Lophophorates
<b>6</b>	Feb 24 to Feb 28	The Bryozoans	The Bryozoans	The Brachiopods
<b>7</b>	Mar 03 to Mar 07	The Brachiopods	The Brachiopods	The Mollusks
<b>SB</b>	Mar 10 to Mar 14	<b>No Class</b> <i>Spring Break Holiday</i>	<b>No Class</b> <i>Spring Break Holiday</i>	<b>No Class</b> <i>Spring Break Holiday</i>
<b>8</b>	Mar 17 to Mar 21	The Gastropods	The Gastropods	The Cephalopods
<b>9</b>	Mar 24 to Mar 28	The Cephalopods	The Cephalopods	The Bivalves
<b>10</b>	Mar 31 to Apr 04	The Bivalves	The Bivalves	The Arthropods
<b>11</b>	Apr 07 to Apr 11	The Arthropods	The Trilobites	The Echinoderms
<b>12</b>	Apr 14 to Apr 18	The Echinoderms	The Echinoderms	<b>No Class</b> <i>Holiday Break</i>
<b>13</b>	Apr 21 to Apr 25	The Graptolites	The Conodonts	Biostratigraphy
<b>14</b>	Apr 28 to May 02	Biostratigraphy <i>Online – Dr. R. Out of Town</i>	Biostratigraphy <i>Online – Dr. R. Out of Town</i>	Paleo Statistics
<b>15</b>	May 05 to May 09	Paleo Statistics	Paleo Statistics	Wrap-Up

#### Additional Lecture (in Lab Period) and Field Trip Times:

- Thursday, January 23<sup>rd</sup>, 2025 – Discussion of Field Techniques in Geology/Paleontology (2–4 pm)
- Thursday, January 30<sup>th</sup>, 2025 – Discussion of Laboratory Techniques in Geology/Paleontology (2–4 pm)
- Saturday, February 8<sup>th</sup>, 2025 – Field Trip 1: Mineral Wells Fossil Park (8 am to 6 pm)
- Saturday, February 22<sup>nd</sup>, 2025 – Field Trip 2: Mineral Wells Fossil Park (8 am to 6 pm)

### Laboratory Activity Schedule for Fall 2024

The following is a table of all laboratory activities required for the successful completion of this course. Pre-laboratory readings will be provided in D2L, if required. All laboratory activities are due by 2:00 pm at the start of the next lab meeting. The exception to this is the final lab which will be due on the date of the final exam block. NOTICE: Changes in the course syllabus, procedures, assignments, and schedule may be made at the discretion of the instructor.

<b>Week</b>	<b>Date</b>	<b>Thursday Lab (2:00 – 3:50 pm)</b>	<b>Due Date / Time</b>
1	Jan 23	<i>Lecture: Field Techniques in Geology/Paleontology</i>	<i>Nothing Due</i>
2	Jan 30	<i>Lecture: Laboratory Techniques in Geology/Paleontology</i>	<i>Nothing Due</i>
3	Feb 06	Lab 01: The Protista	Feb 13 / 2:00 pm
4	Feb 13	Lab 02: The Porifera	Feb 20 / 2:00 pm
5	Feb 20	Lab 03: The Cnidaria	Feb 27 / 2:00 pm
6	Feb 27	Lab 04: The Bryozoa	Mar 06 / 2:00 pm
7	Mar 06	Lab 05: The Brachiopoda	Mar 20 / 2:00 pm
SB	Mar 13	No Lab Meetings – Spring Break	<i>Nothing Due</i>
8	Mar 20	Lab 06: The Gastropoda	Mar 27 / 2:00 pm
9	Mar 27	Lab 07: The Cephalopoda	Apr 03 / 2:00 pm
10	Apr 03	Lab 08: The Bivalvia	Apr 10 / 2:00 pm
11	Apr 10	Lab 09: The Arthropoda	Apr 17 / 2:00 pm
12	Apr 17	Lab 10: The Echinodermata	Apr 24 / 2:00 pm
13	Apr 24	Lab 11: The Hemichordata and Chordata	May 01 / 2:00 pm
14	May 01	Lab 12: Biostratigraphy	May 08 / 2:00 pm
15	May 08	Lab 13: Paleostatistics	May 12 / 11:59 pm

### All Course Due Dates and Events in Chronological Order

The following table lists the due dates and times of each assignment in the course and special events for the course. NOTICE: Changes in the course syllabus, procedures, assignments, and schedule may be made at the discretion of the instructor.

<b>Due Date - Time</b>	<b>Assignment</b>
Sa 02/08 – 8 am – 6 pm	Field Trip 1: Stratigraphy of the Mineral Wells Fossil Park
M 02/10 – 11:59 pm	Field Notes for Field Trip 1
Th 02/13 – 2:00 pm	Lab 01 – The Protista
Th 02/20 – 2:00 pm	Lab 02 – The Porifera
Sa 02/22 – 8 am – 6 pm	Field Trip 2: Paleontology of the Mineral Wells Fossil Park
M 02/24 – 11:59 pm	Field Notes for Field Trip 2
Th 02/27 – 2:00 pm	Lab 03 – The Cnidaria
F 02/28 – 11:59 pm	Introduction Draft
Th 03/06 – 2:00 pm	Lab 04 – The Bryozoa
F 03/07 – 11:59 pm	Midterm Examination
Th 03/20 – 2:00 pm	Lab 05 – The Brachiopoda
Th 03/27 – 2:00 pm	Lab 06 – The Gastropoda
F 03/28 – 11:59 pm	Systematic Paleontology Draft
Th 04/03 – 2:00 pm	Lab 07 – The Cephalopoda
Th 04/10 – 2:00 pm	Lab 08 – The Bivalvia
Th 04/17 – 2:00 pm	Lab 09 – The Arthropoda
Th 04/24 – 2:00 pm	Lab 10 – The Echinodermata
F 04/25 – 11:59 pm	Results, Discussion, and Conclusion Draft
Th 05/01 – 2:00 pm	Lab 11 – The Hemichordata and Chordata
Th 05/08 – 2:00 pm	Lab 12 – Biostratigraphy
Th 05/09 – 11:59 pm	Final Draft of Full Paper Paleontologist Quiz 1 Paleontologist Quiz 2 Paleontologist Quiz 3 Paleontologist Quiz 4
M 05/12 – 11:59 pm	Lab 13 – Paleostatistics Final Examination