

SEDIMENTATION

Instructor:

Dr. Jacalyn *Wittmer* Malinowski
Office Hours: Virtual (Zoom)
Email: malinowski@geneseo.edu

Lecture: Recordings Posted on Canvas

Laboratory Time and Room: 10:30pm-12:50pm, Tuesdays: Group A
10:30pm-12:50pm, Thursdays: Group B
ISC Rm 19; Key Code: 0179

Course Description: This is a lecture, field, and lab-intensive course that explores how sediments form, weather, erode, are transported, and are ultimately deposited in depositional environments. The course focuses heavily on sediment transport and processes and explores sediment process by observing real depositional systems, collecting samples and conducting data analysis. The goals of the course are to analyze sediments, sedimentary rocks, and sedimentary structures to determine processes and settings that led to their deposition, thereby shedding light on aspects of geologic history, paleoclimate, tectonic setting, and sea-level change. This course involves field and lab research, experiments, data synthesis and exploration. Prerequisites: GSCI 170 and GSCI 220.

Learning Outcomes:

After successful completion of the course, a student will be able to

- Understand the entire sedimentary process from the formation of sediments to their delivery in depositional systems.
- Understand the mechanisms of transport for clastic sedimentary systems and the mechanisms of precipitation for carbonate sedimentary systems.
- Competently collect field or lab data that is reliable and reproducible.
- Analyze independently collected data from the field/lab and make informative interpretations from their own data.
- Use and understand statistical methods from statistical programs that aid in the interpretation of sedimentary datasets.

Optional Text: Prothero and Schwab, 2013, Sedimentary Geology, W.H. Freeman, 3rd Edition, 593 p.

Highly Recommended Text:

Leeder, M., 1999, Sedimentology and Sedimentary Basins, Wiley-Blackwell, 592 p.

Boggs, S., 2006, Principles of Sedimentology and Stratigraphy, 4th edition, 662 p.

Tucker, M.E., 2001, Sedimentary Petrology, 3rd edition, 262 p.

Potter, P. and Pettijohn, F., 1977, Paleocurrents and Basin Analysis, Springer-Verlag, 2nd edition, 423 p.

*All texts are available on reserve at Milne Library

Course Structure

This is a **3-credit hour HYBRID** course. The course spans the entire semester (**15 weeks** long and consists of 15 content modules). You should dedicate approximately **12–16 hours** per week to working on the course itself, but actual time commitments will vary depending on your input, needs, and personal study habits. To be successful, you will need to log on to the course canvas site a minimum of **4 days per week** in addition to attending **weekly in-person lab meetings**.

- The course has a consistent and predictable structure, organized around the weekly modules, with a course canvas site that should be straightforward and easy to navigate. Instructions and due dates for activities and assignments are clearly

articulated so that you know what is expected of you and you can easily stay on track.

- Most assignments are due by 11:59 PM of their respective due dates as listed on the course calendar. At the end of each weekly content module, participants will have an opportunity to make sure that they have completed all the required activities and assignments before the new week's content is released.
- For most weeks of the course, the future week's materials will be available a few days ahead of schedule, likely on the Friday before that week officially begins. This is done for students who need to get ahead in the course due to some sort of major event planned.

- **Face-to-Face Information**

- I greatly value the learning opportunities we'll have in our in-person lab meetings and hope that you will actively participate in this important element of the learning process. The COVID-19 pandemic presents challenges to in-person learning, but by working together we can make this a safe experience.
- It is essential that all students in in-person classes follow some basic processes to help keep themselves, other students, and our faculty and staff safe. Although these processes may seem inconvenient, they reflect current public health guidance that helps minimize the spread of coronavirus. Please incorporate these essential health and safety measures into your normal routine, consider the ways that your actions may affect the health and wellbeing of those around you, and try to approach this semester with a spirit of empathy and compassion.
- In the context of the COVID-19 pandemic, it is vital that we all do what we can to protect the health and safety of each other. If you are feeling unwell on a day that lab meets in-person, do not attend. Remember that it is better to stay home if you are not feeling well than to attend class and risk spreading illness to others. Throughout the semester, please be proactive in communicating about absences and contact the Dean of Students if you expect to be out for an extended period of time. Rest assured that there will be no penalty for missing class and that I've designed our course so that there's a path for you to make up any learning that takes place in a lab meeting you miss.
- The college has developed an online COVID-19 screening report for students. Be sure to familiarize yourself with this process and complete the brief screening report before leaving for lab. If you are experiencing common symptoms of COVID-19, stay home and contact Health and Counseling Services as soon as possible. I strongly encourage you to set a daily reminder to fill out the screening report.
- Face masks are required in all instructional spaces (including classrooms, lecture halls, and laboratories) and all common areas including residence halls and academic buildings. If you forget your mask, please be sure to pick up a disposable one before entering the classroom. Masks must be worn for the duration of lab. If you do not have a mask or are unwilling to wear one, you will be asked to leave the classroom. I cannot safely hold lab if all students are not wearing face masks.
- If you would feel more comfortable or if my teaching could be more accessible if I wear a clear face mask, please let me know as soon as possible.
- Please familiarize yourself with any special seating arrangements in the classroom and be sure to practice 6-foot physical distancing at all times. This includes entering and exiting the classroom.

- **Online Instruction**

- All course materials are available on Canvas and I've made every attempt to ensure that they are accessible to everyone. If you have difficulties accessing any materials (including needs for alternative formats), please let me know as soon as possible and I will rectify the situation.
- Accessing course materials online may be challenging - we've all experienced things like unforeseen emergencies and internet disruptions. Although this course may include some "live" or synchronous course activities, we can all be understanding about the challenges posed by the COVID-19 pandemic and the limits of technology. If you miss a synchronous session, please let me know as soon as possible so that we can discuss ways to keep you on track. If you are experiencing longer-term disruptions, please be proactive in communicating with me and contact the Dean of Students if you expect to be out for an extended period of time.
- CIT has developed a number of **resources that can help you formulate good strategies for success in online courses**. These include general strategies for keeping on track with your courses as well as more specific resources about learning experiences that you may encounter in an online course. The Office of the Dean for Academic Planning and Advising has also introduced the new **KOALA (Knights' Online Academic Learning Assistance)** course support resource. Throughout the semester, if you need help with online learning strategies, you can contact the KOALA support desk, which will assist you with identifying resources and strategies for success.
- **CIT also provides a range of technology support resources**. When you are in Canvas, the Help menu on the left side of the screen will also direct you to a number of CIT supports, including self-help resources and options to request technology assistance.

Health and Wellbeing

The changes brought on by COVID-19 have impacted us all in a number of ways, and will continue to do so at various times and to varying degrees during the upcoming semester. Your health and wellbeing are foundational to your ability to learn, and if you find that you are feeling unwell (physically or mentally) and it is impacting your ability to complete your coursework, please reach out. Because the learning environment will be different than it has been in the past, the indicators that usually let you know something is wrong may not be as clear to you or those around you as they would be during a typical semester. Additionally, the ways in which you normally engage in self-care may have been disrupted. Please remember that it's never too late to ask for help. The **Dean of Students (585-245-5706)** can assist and provide direction to appropriate campus resources. The college also has collected resources in a **Coping with COVID webpage**.

Class policies and expectations

- **Posting material on Canvas**

- Every week, there will be a new Weekly Module posted with three main sections: Overview, Lectures and Assignments. The Overview section will go over weekly expectations, due dates and discuss major class changes.
- Lectures will be posted as videos with additional lecture notes and linked sites for each Weekly Module.
- Assignments such as labs, discussions or quizzes will be posted for each Weekly Module under Assignments.

- **Required Student Work**

- Weekly readings from textbooks or websites
- Viewing and Note-taking from recorded lectures

- In-person Lab exercises and Lab Reports
- Bi-weekly Discussions
- Bi-weekly Quizzes
- **Late Assignments**
 - For all assignments (lab reports, discussions, etc.) I will allow submission up to **three days after the assignment deadline**. Each day late, I will deduct 10% off the final grade for the assignment. I will only accept assignments after the three-day grace period if students are unwell, quarantined or encounter extenuating circumstances.
- **Quizzes**
 - Exams will not be part of this course; this course will not have a final exam. The course will have bi-weekly quizzes that will cover material delivered in lectures, readings, discussions, and labs as chunked assessments. The quiz questions will be a mixture of short answer, fill in the blank, and diagram questions. Quiz dates are provided in the course schedule and will be available in weekly overview and communications. Quizzes are non-cumulative and will be delivered at the beginning of in-person lab meetings.
- **Laboratory Exercises**
 - Laboratory exercises are set up as staggered exercises where you will develop skills such as data collection, lab analysis, data analysis, and **multi-page laboratory write-ups (LAB REPORTS)**. Lab Reports will be the only collected and graded component of the labs, these will be submitted electronically in Canvas as word documents or pdfs. In their write-ups, students are expected to succinctly convey the laboratory exercise's context, purpose, hypotheses, procedure, data analysis in the form of results, and—perhaps most importantly—interpretation. Further guidance, e.g. rubrics, will be provided throughout the semester. These labs are for you to learn necessary and employable skills, you will be conducting your own analyses, graphs and tables, and interpret your own results. Due dates for the reports are posted in the course schedule and will be available in weekly overview and communications.
 - *If a student is not satisfied with the grade received for a written assignment, they have one opportunity to re-write the report, replacing the unsatisfactory grade with that of the re-write.*
- **Field Labs**
 - The class may be able to have at least two field excursions during lab times. These field labs are instrumental to your overall grade and your experience in the course. These locations are planned to be nearby and would only involve your combined lecture and lab time for collection. Multiple labs are based on collected data from the field, if we are able – you will collect samples in modern depositional environments. However, if we are unable to go in the field as a class, I will collect the samples needed for the labs. Details regarding localities and necessary equipment will be delivered in Canvas announcements and weekly overviews.
- **Discussions**
 - Part of the hybrid course concept, this course will have bi-weekly discussions that will be based on assigned discussion topics on Canvas. These **Discussion boards** will be available under Assignments in the Weekly Modules or will be available under Discussions in the Canvas toolbar. Discussions will involve an initial post by individual students on one selected topic proposed on the discussion assignment. These initial discussion posts will be due on Fridays at 11:59pm. Following the initial post, you will have to do two responses to your peer's initial posts by Sundays at 11:59pm.
- **Grading Scale**
 - Your course grade will be calculated as follows:
 - Lab Reports 40%
 - Quizzes 30%
 - Lab Exercise Partic. 15%
 - Discussions 15%
 - Grading Scale

93.30 – 100 % = A	86.60 – 89.99 % = B+	76.60 – 79.99 % = C+	60.00 – 69.99 % = D
			≤ 59.99 % = E
90.00 – 93.29 % = A-	83.30 – 86.59 % = B	73.30 – 76.59 % = C	
	80.00 – 83.29 % = B-	70.00 – 73.29 % = C-	
- **Assignments and Point Distributions**

You can access your scores by clicking the **Grades** link from the left column of the course canvas page. All assignments have due dates, please see the course schedule to determine deadlines.

Assignments	Lab Exercises	Lab Reports	Quizzes	Discussions	Total points for the week
Week 1	30				30
Week 2	30			30	60
Week 3	30	50	40		120
Week 4	30			30	60
Week 5	30	50	40		120
Week 6	30			30	60
Week 7	30		40		70
Week 8	30	50			80
Week 9			40	30	70
Week 10	30				30
Week 11	30	50	40		120
Week 12	30			30	60
Week 13					-
Week 14	30	50	40		120
Week 15					-
Total points per assignment	360	250	240	150	1000
Relative Weight	15%	40%	30%	15%	100%

Accommodations: SUNY Geneseo makes reasonable accommodations for persons with documented physical, emotional or learning disabilities. Students should consult with the Director of the Office of Disability Services (Tabitha Buggie-Hunt, 22 Erwin, tbuggieh@geneseo.edu). During the first week of the semester, students should alert the professor regarding any needed accommodations by the beginning of the second week of the semester.

Academic Dishonesty Policy: Academic dishonesty includes cheating, knowingly providing false information, plagiarizing, and any other form of academic misrepresentation. If an incident of academic dishonesty occurs, I will enforce the policies of the university, meaning that I document the incident with the Office of the Dean and the student(s) receive a failing grade of 'E' for that assignment and potentially

for the course. Consult the following link for details: (<http://www.geneseo.edu/handbook/academic-dishonesty-policy>)

Statement of Commitment to Inclusion and Diversity: It is my intention to have a course that is accessible and inclusive to students from all backgrounds and perspectives and addresses students' learning needs both in and out of class. The diversity of perspective and experience that students bring into our classroom is a resource, strength and benefit and we seek to cultivate a learning community that is inclusive to all identities (including race, gender, class, sexuality, religion, ability, etc.)

To help accomplish this:

- If you have a name and/or set of pronouns that differ from those that appear in your official Geneseo records, please let your instructor know.
- If you feel like your performance in the class is being impacted by your experiences outside of class, please come and talk with me, Dr. Wittmer. I care and can help you find support resources on campus. If you prefer to speak with someone outside of the course, robbie routenberg (routenberg@geneseo.edu), is the Chief Diversity Officer for the College and they and their office can provide help and support.
- If something was said in class (by anyone) that made you feel uncomfortable, please communicate this to your instructor, Dr. Wittmer. (Note: Anonymous feedback is always an option). Reporting divisive comments or behavior is an essential step in continuing the education of people who are still in the process of learning about diverse perspectives and identities.
- Know that your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.
- If any of our class meetings conflict with your religious events, please let Dr. Wittmer know so that she can make arrangements for you.

For more details on SUNY Geneseo's community commitment to diversity, equity, and inclusion, please see the content at found at the following location: <https://www.geneseo.edu/diversity/commitment>