

Course Syllabus

ERTH 2203: Sediments & Sedimentary Rocks

Dept. of Earth & Environmental Sciences

Fall 2026



Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the Constitution Act, 1982, recognizes and affirms Aboriginal and Treaty rights in Canada.

We recognize that African Nova Scotians are a distinct people whose histories, legacies, and contributions have enriched the part of Mi'kma'ki known as Nova Scotia for over 400 years.

Course Instructors

Instructor: Dr. Owen Sherwood: owen.sherwood@dal.ca; LSC Oceanography wing room 3613/3614. I will reply to emails during regular business hours (8am-5pm). I will also be available for in person meetings by appointment.

TA: TBA

Course Format

Lectures: In person, Tuesdays and Thursdays 10:05 - 11:25, room LSC B2055. Lectures will not be recorded.

Laboratories: In person, Thursdays 14:35 – 17:25, room LSC B2030

Course Description

The course deals with physical, chemical and biological processes that generate modern sediments, and their conversion to sedimentary rocks through time. Labs provide a practical introduction to sediment analysis and to a range of sedimentary structures and rock types. Fieldwork may include description of beaches and bedrock in Nova Scotia.

Course Prerequisites

ERTH 1080 and ERTH 1090 / DISP. This is a required course for ERTH Majors and a prerequisite for ERTH 3303 – Stratigraphy.

Learning Objectives

- Identify and explain the nature of sediments and a variety of sedimentary rocks.
- Clearly establish the link between understanding modern sediments and their depositional environments and the interpretation of sedimentary rocks and their environments as recorded in the rock record.
- Identify the mineralogy of sedimentary rocks and know the most common components of a given sedimentary rock.
- Identify possible sedimentary environments of deposition given a particular sediment, sedimentary rock, or sequence of sedimentary rocks.
- Identify and interpret sedimentary structures in relation to possible formation and as clues to environments of deposition.
- Interpret geologic maps with sedimentary sequences.
- Reason and critically think like a sedimentologist.
- Develop professional skills and attributes associated with sedimentology-in-practice.

Required Course Materials

Textbook:

- Nichols, G. (2023) [Sedimentology and Stratigraphy, 3rd Edition](#). Wiley, paperback. 4051-3592-4. Available from Dal Bookstore or other online booksellers.

Lab Equipment:

- Handlens: [\\$62.92 at Dal Bookstore](#). Cheaper ones are acceptable, too.
- Grain size card: [\\$3.05 at Dal Bookstore](#)
- Regular Stationary (pens, pencils, eraser, ruler, etc...)
- Laptop computer (needed for viewing videos and for data analysis in some labs)

Additional Equipment for Field Trips:

- Field Notebook: [\\$6.50 at Dal Bookstore](#)

Course Software

- The ERTH2203 **Brightspace** site will be the primary source for course announcements, quizzes, handouts/readings, and lab assignments. Please check the site regularly and inform the instructor of access or technology issues.
- **Microsoft Excel** will be required for some lab assignments. The software is available for free here: <https://software.library.dal.ca/index.php>

Optional Course Materials

Other useful texts:

- Walker, R.G. & James, N.P (1992) *Facies Models: Response to Sea Level Change*. [QE 651 F25 1992](#).
- Boggs, S. (2012) *Principles of Sedimentology and Stratigraphy*. [QE 571 B66 2012](#).
- Prothero, D. & Schwab, F.L. (2013) *Sedimentary Geology: An Introduction to Sedimentary Rocks and Stratigraphy*. [QE 571 P77 2013](#).

Relevant peer-reviewed journals:

- Sedimentology; Sedimentary Geology; Journal of Sedimentary Research

Notes on the learning experience

Lectures will cover fundamental concepts in sedimentology and will include in-class exercises and assignments designed to solidify the lecture material. **Attendance is mandatory**, as we will cover material that may not be found in the textbook, and because **part of the grading is based on in-class quizzes and exercises**.

- Lecture slides will be posted online and will generally be posted before the scheduled lecture time.
- Labs will provide hands on experience with observing, describing, and interpreting sediments and sedimentary rocks.

Field Trips

There will be **THREE** field trips to locations in Nova Scotia, to be posted on the course timetable. Trips will take place during the Tuesday lab time slot from 2:35 pm and will run into the evening. Details on how to prepare and what to expect for each trip will be provided at least one week before each trip. Safety equipment will be provided.

Course Assessment

Component (number)	Weight (% of final grade)	Date*	Course Policy Note
In-class quizzes and exercises (10)	10%	Weekly	1
Lab/field assignments (10)	40%	Weekly	2,3,4,5,6,7
Midterm exam (1)	20%	TBA (1.5 hours)	8,9
Final exam (1)	30%	TBA (3 hours)	10,11

* A detailed class schedule will be posted on Brightspace

Course Policies

1. **Quizzes and exercises** will be held and will be due in class, unless otherwise noted.
2. **Lab assignments** will be due one week from the date of the lab session (i.e., the following Tuesday, by 2:35pm); late assignments will be **penalized 10% per day** and **will not be accepted if more than 5 days late**.
3. **Assignments resubmitted** after the deadline because "I submitted the wrong file" will be penalized as late. Please ensure that the assignment you submit is the one you intend to submit.
4. **Missed lab assignments:** The lowest of the 10 lab assignment marks will be dropped, so you can miss one assignment without penalty. Additional missed assignments will be graded as zero *unless accompanied by a Student Declaration of Absence for each of the missed assignment(s)*, in which case the lab components of the final course grade will be reweighted. Note that you are still responsible for learning the material, as it will be tested on the midterm and final exams.

5. **Collaboration with other students** on lab assignments is accepted and encouraged; however, students must submit *their own* assignments. Assignments with highly similar structure and answers may be submitted to the faculty academic integrity officer for review.
6. Submitting someone else's writing or work as your own or without proper attribution is **plagiarism**. Suspected cases of plagiarism will be referred to the Academic Integrity Office. **Do NOT plagiarize.**
7. **Use of generative AI and large language models** (e.g., ChatGPT) is acceptable for augmenting your learning. However, **handing in AI-generated text as your own writing will be considered as plagiarism and may be referred to the Academic Integrity Office.**
8. **Midterm exam:** dates will be posted with the class schedule during the first week of class.
9. **Missed midterm** exam due to exceptional circumstances: final exam will count for 50% of final grade. *Notification must be given to instructor prior to start of exam.*
10. **Final Exam:** the exam is cumulative and incorporates lecture and lab material. The exam date is set by the Registrar and will occur during in December.
11. **Missed final exam** due to exceptional circumstances: reasonable accommodation (makeup exam or grade reweighting) will be granted. *Notification must be given to instructor prior to start of exam.*

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

A+ (90-100)	B+ (77-79)	C+ (65-69)	D	(50-54)
A (85-89)	B (73-76)	C (60-64)	F	(<50)
A- (80-84)	B- (70-72)	C- (55-59)		

Syllabus Appendix

Please see the following link for updated information on University Resources and Policies.

[Syllabus Appendix: Student Supports & University Statements, Policies, and Guidelines](#)