



ENVS*3180 Sedimentary Environments

Fall 2022

Section(s): 01

School of Environmental Sciences

Credit Weight: 0.50

Version 1.00 - September 06, 2022

1 Course Details

1.1 Calendar Description

This course examines the principles of sedimentology and stratigraphy as applied to various ancient and modern sedimentary systems. Students will learn to describe and interpret sedimentary deposits in terrestrial and marine systems as well as the larger forces that control the preservation and evolution of these sedimentary systems over geological time. The course includes several field trips.

Pre-Requisites: ENVS*1050 or ENVS*2240
Restrictions: ENVS*2400

1.2 Timetable

Lectures: MWF 1:30 to 2:20 MCKN 313

Lab: T 2:30-5:20 ALEX 024

1.3 Final Exam

Dec 16, 2022 At 8:30-10:30 AM

2 Instructional Support

2.1 Instructional Support Team

Instructor: Emmanuelle Arnaud
Email: earnaud@uoguelph.ca
Telephone: +1-519-824-4120 x58087
Office: ALEX (AXEL) 126
Office Hours: By appointment via email - please email me to set up a time.

We will meet either on Teams or in person, public health situation permitting. Let me know if you have a preference.

If you have a question about course issues or content, please use the discussion board on the course website-I will get notifications at the end of each day. To access this discussion forum, select **Discussions** from the **Tools** dropdown menu. If you have a conflict that prevents you from completing course requirements or have a question concerning a personal matter, please email me I will respond as soon as possible within a day or two of your email.

If you have not heard from me, I welcome a friendly email reminder ;). if you have a complex question that would benefit from a live chat, we can set up a one-on-one virtual meeting on Teams or an in person meeting, public health situation permitting. Please let me know your preference.

Assignments will be graded within two weeks of submission.

Lab Co-ordinator:	Alyson Brown
Email:	alysonb@uoguelph.ca
Telephone:	+1-519-824-4120 x53393
Office:	ALEX (AXEL) 221

2.2 Technical Support

Technical Support for courselink

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.

Email: courselink@uoguelph.ca

Tel: [519-824-4120](tel:519-824-4120) ext. 56939 Toll-Free (CAN/USA): [1-866-275-1478](tel:1-866-275-1478)

Support Hours (Eastern Time):

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

Office 365 Teams is a collaboration service that provides shared conversation spaces to help teams coordinate and communicate information. This course *may* use Teams in the event of lockdown. I also hope to livecast lectures in case you are not able to come to class. It is recommended that you use the desktop version of Teams. As a student you are responsible for learning how to use Teams and its features.

For Teams Support visit the CCS website for more information.

<https://www.uoguelph.ca/ccs/services/office365/teams>

3 Learning Resources

3.1 Required Resources

Sedimentology and Stratigraphy (Textbook)

Nichols, G. 2009. Sedimentology and Stratigraphy. 2nded. Oxford: Wiley Blakwell, 419 pp. Will be available on ARES reserve in the library.

Check the courselink course website for additional in-course resources and information including instructions for labs. Login with your email login and password at <http://courselink.uoguelph.ca/index.html>.

Software and systems requirement (Software)

<http://spaces.uoguelph.ca/ed/system-requirements/>
System and Software Requirements

This course will use a variety of technologies including;

- CourseLink (main classroom)
- Teams (via Office 365)

To help ensure you have the best learning experience possible, please review the list of system and software requirements. <https://opened.uoguelph.ca/student-resources/system-and-software-requirements>

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. Use the browser check tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window).

<http://spaces.uoguelph.ca/ed/system-requirements/>

<https://courselink.uoguelph.ca/d2l/systemCheck>

3.2 Additional Resources

Library resources (Other)

<https://www.lib.uoguelph.ca/>

As a student, you have access to the University of Guelph's library collection, including both physical and electronic materials. For information on checking out or couriating physical library items, accessing electronic journals and returning items to the library, visit the library's website.

If you are studying off campus and would like to access the library's electronic resources, use the Off Campus Login and login using your Single Sign On credentials or using your last name and library barcode.

<https://www.lib.uoguelph.ca/>

<https://www.lib.uoguelph.ca/campus-login>

Ares

For this course, you may want to access course reserve materials through the University of Guelph McLaughlin Library. Note that you will need your Central Login ID and password in order to access items on reserve.

For further instructions on accessing reserve resources, visit [How to Get Course Reserve Materials](#).

If at any point during the course you have difficulty accessing reserve materials, please contact the e-Learning Operations and Reserve Services staff at:

Tel: 519-824-4120 ext. 53621

Email: libres2@uoguelph.ca

<https://www.lib.uoguelph.ca/find/course-reserves-ares/how-get-course-reserve-material>

3.3 If we need to go to online learning, this is what it will look like...

The course website (on course link) will hold all course information, links to past lectures, assignments, your grades etc. You can get there by logging into course link (courselink.uoguelph.ca) using your central login ID and password.

This will only be relevant if public health tells us to stay home.... The Teams platform (accessible through Office 365) will be used for us to connect during lecture and lab hours and for one-on-one meetings as necessary. I can also meet one-on-one using other platforms (google hangouts, zoom, Skype, webex) -just let me know your preference when you email me for a meeting. if you have never used Teams before, please go here for some great introductory resources: <https://www.uoguelph.ca/ccs/services/office365/teams>

3.3 Mental health and wellness

The pandemic has made the past several years challenging for many. If at any point you are experiencing difficulty, please reach out for help. I'm here to facilitate your learning and your success this semester and can help to connect you with the right supports.

For more Info: go to www.wellness.uoguelph.ca. or call Good2Talk at 1-866-925-5454

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Demonstrate the ability to characterize sedimentary deposits by constructing a stratigraphic log and describing sedimentary deposits using standard terminology
2. Differentiate environments based on typical facies associations and use this information to interpret the origin of sedimentary deposits using a facies approach
3. Demonstrate understanding of stratigraphic relationships by using these to deduce basin/site history
4. Demonstrate the value of detailed observation and the use of different scales in analysis of sedimentary data
5. Create a depositional model or conceptual framework for a site and use it as a predictive tool

5 Teaching and Learning Activities

We will be meeting in class during the scheduled lecture and lab times. In the event that we have to pivot to remote learning, you can join the virtual lecture class or lab via TEAMS. Please check out the announcement on the course link website.

5.1 Lecture

Fri, Sep 9

Topics: Introductions, overview,

References: Chapter 1, 2

Mon, Sep 12 - Fri, Sep 16

Topics: Processes and Products

References: Chapter 4

Mon, Sep 19 - Fri, Sep 23

Topics: Process and Products/Facies Analysis and Facies Models

References: Chapter 5

Mon, Sep 26 - Fri, Sep 30

Topics: Facies Analysis and Facies Models

References: Chapter 5

Mon, Oct 3 - Fri, Oct 7

Topics: Terrestrial environments

References: Chap 9.1-9.4, 10 (skip 10.3 and 10.4)

Mon, Oct 10 - Fri, Oct 14

Topics: marginal marine environments (No class Monday)

References: Chapter 12.1-12.3; 13.1-13.5,

Mon, Oct 17 - Fri, Oct 21

Topics: Marine Environments

References: Chapters, 14, 16 (skip 16.2.2, 16.3, 16.4)

Mon, Oct 24 - Fri, Oct 28

Topics: Marine Environments cont'

References: Chapters, 12.1-12.3; 13.1-13.5, 14, 16 (skip 16.2.2, 16.3, 16.4)

Mon, Oct 31 - Fri, Nov 4

Topics: Stratigraphic concepts

References: Chapter 19

Mon, Nov 7 - Fri, Nov 11

Topics: Biostratigraphy/dating techniques

References: Chapter 20, 21

Mon, Nov 14 - Fri, Nov 18

Topics: Subsurface Sedimentary Environments

References: Chapter 22

Mon, Nov 21 - Fri, Nov 25

Topics: Sea level change and sequence stratigraphy

References: Chapter 23

Mon, Nov 28 - Fri, Dec 2

Topics: Site conceptual model, and final exam review. Note Thanksgiving make up class (Dec 2)

5.2 Lab

Tue, Sep 13

Topics: Lab 1 Description and identification of sediments and sedimentary rocks

Tue, Sep 20

Topics: Lab 1 Description and identification of sediments and sedimentary rocks (Alex 024)

Tue, Sep 27

Topics: Lab 2 field trip; Lab 1 due

Tue, Oct 4

Topics: Lab 2 field trip

Tue, Oct 11

Topics: no lab this week because of Thanksgiving

Tue, Oct 18

Topics: Lab 3 Field trip to Hamilton Beach; Lab 2 due

Tue, Oct 25

Topics: Lab 3 Field trip to Hamilton Beach.

Tue, Nov 1

Topics: Lab 3 due, NO LAB this week

Tue, Nov 8

Topics: Lab 4 Lake Erie sedimentary bedrock cores (Alex 024)

Sat, Nov 12

Topics: Field Trip Day to Hamilton (9-3pm)

Tue, Nov 15

Topics: Lab 4 Lake Erie sedimentary bedrock cores (Alex 024)

Tue, Nov 22

Topics: Lab 4 due. No lab this week

Tue, Nov 29 - Thu, Dec 1

Topics: Site Conceptual Model exercise Nov 29 and Dec 1 (make up for thanksgiving break)

6 Assessments

Assessment for this course will focus on four labs (50%), an online research assignment (10%), a midterm (15%) and a final exam (25%). Details about each assignment will be posted on the course website. In Class Exercises (lake sediments, Hydrite stratigraphy, sequence stratigraphy) will not be graded but are important to help you understand concepts we are covering. Note that this assessment structure may need to change if labs or field trips have to be cancelled due to changing public health directives. All such changes will be communicated as soon as possible via course link. Don't hesitate to email me if you want to discuss this further.

6.1 Marking Schemes & Distributions

Name	Scheme A (%)
WorldSed Assignment	10
Lab 1	12.5
Lab 2	12.5
Lab 3	12.5
Lab 4	12.5
Midterm	15
Final Exam	25
Total	100

6.2 Assessment Details

WorldSed Assignment (10%)

Date: individual deadlines throughout term, Dropbox

Learning Outcome: 2

Lab 1 (12.5%)

Due: Tue, Sep 27, 5:00 PM, in dropbox

Learning Outcome: 1, 4

Lab 2 (12.5%)

Date: Tue, Oct 18, 5:00 PM, in dropbox

Learning Outcome: 1, 2, 4

Lab 3 (12.5%)

Date: Tue, Nov 1, 5:00 PM, in dropbox

Learning Outcome: 1, 2, 3, 4

Lab 4 (12.5%)

Date: Tue, Nov 22, 5:00 PM, in dropbox

Learning Outcome: 1, 2, 3, 4

Midterm (15%)

Date: Fri, Oct 28, 5:00 PM, in class

Learning Outcome: 2, 3, 4

Final Exam (25%)

Due: Fri, Dec 16, 8:30 AM

Learning Outcome: 2, 3, 4, 5

6.3 Dropbox Submission

Assignments should be submitted electronically via the online **Dropbox** tool in **courselink**, **following the file naming convention (LastName_assignmentname.doc or PDF)**. When submitting your assignments using the **Dropbox** tool, do not leave the page until your assignment has successfully uploaded. To verify that your submission was complete, you can view the submission history immediately after the upload to see which files uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, I strongly recommend you save your assignments to a cloud-based file storage (e.g., OneDrive), or send to your email account, so that should something happen to your computer, the assignment could still be submitted on time or re-submitted.

7 Course Statements

7.1 Course Expectations

Unless otherwise instructed by the university and public health, all students are expected to attend lectures/labs and read the assigned chapters before class. **Please let me know ASAP if you are going to be unable to join us in person for the lectures or the lab so we can discuss a way forward.** I plan to livestream the lectures in case anyone is unable to attend in-class. Video recordings of the lectures will be available within a day or two of the lecture (this will depend on the captioning/transcript creation process) so that you can watch these later if you missed one or want to review the concepts covered. It is the responsibility of the student to obtain class notes if they miss a lecture. All students should check the course website regularly for additional course materials and notices regarding assignments and course information. Students will be able to access their marks on the courselink course website.

7.2 Other Resources

Check the **course D2L website** for additional in-course resources and information. Login with your email login and password at <http://courselink.uoguelph.ca/index.html>

7.3 Grading Policies

All assignments are to be submitted through Dropbox on the course website by the due date (please check the schedule posted on the course website). If you cannot meet a course requirement, let me know by email as soon as possible and preferably before the due date. Late assignment will be penalized 10% per day and will no longer be accepted a week after the due date.

*Please note that these policies are binding unless academic consideration is given to an individual student.

I will attempt to have grades posted online within 2 weeks of the submission deadline, if the assignment was submitted on time. Once your assignments are marked you can view your grades on the course website by selecting **Grades** from the **Tools** dropdown menu on the navbar. Your course will remain open to you for seven days following the last day of the final exam period.

University of Guelph students can access their final grade by logging into WebAdvisor (using your U of G central ID).

<https://webadvisor.uoguelph.ca>

7.4 Group Work

Group work is encouraged when completing in class exercises and assignments though students have to write their own individual reports

7.5 Course Evaluations

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their

teaching effectiveness and course delivery. I use these comments every year to improve the course so feel free to provide constructive feedback based on your experience this year. You will be sent instructions to submit feedback online through the course and instructor evaluation website.

7.6 Recording of lab and lecture materials

In order to be ready to accommodate a shift to online learning by some or all of us depending on how COVID goes this fall, some learning activities (e.g., lectures) may be recorded by me and posted to CourseLink for dissemination; students may be recorded during these sessions. By enrolling in a course, unless explicitly stated and brought forward to me, it is assumed that students agree to the possibility of being recorded during lecture, seminar or other "live" course activities, whether delivery is in-class or online/remote.

If a student prefers not to be distinguishable during a recording, they may:

1. turn off their camera
2. mute their microphone
3. edit their name (e.g., initials only) upon entry to each session
4. use the chat function to pose questions.

Students who express to me that they, or a reference to their name or person, do not wish to be recorded will discuss possible alternatives or accommodations me as soon as possible.

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website

<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website

<https://www.ridgetownc.com/services/accessibilityservices.cfm>

8.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website

(<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g.. final exam or major assignment).

8.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.
