

GEOG 3352A – Paleolimnology and Global Environmental Change

Course Outline: Section 001 Fall 2023

This course is taught in-person

1. Course Information

*Details about design and delivery of the course are listed below in Section 6



Classes Start	Fall Reading Week	Classes End	Study day(s)	Exam Period
September 7	October 30-November 5	December 8	December 9	December 10-22

September 15, 2023: Last day to add a second-term half course

October 9, 2023: Thanksgiving Holiday

November 13, 2023: Last day to drop a first term half course without penalty



Course Instructor	Contact Information	Office Hours
Kevin Ng	kng342@uwo.ca	By Appointment

Teaching Assistant(s)	Contact Information	Office Hours
Ethan Cade	ecade@uwo.ca	Lab Sessions/By Appointment



Office hours will be held by requesting an appointment by email.

Students will be able to utilize lab hours on Wednesdays.

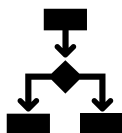
Mandatory synchronous sessions will be held during lecture on Tuesdays from 10:30am-12:30pm and during specific lab dates indicated on the course calendar on Wednesdays from 2:30pm-4:30pm.

2. Calendar Description

This course provides students with an introduction to paleolimnology, which uses the physical, chemical and biological characteristics of lake sediments to determine past environments.

2 lecture hours, 2 laboratory hours, 0.5 course

Prerequisite(s): One of Geography 2310A/B, Geography 2320A/B or Geography 2330A/B, or at least 3rd year standing in an Environmental Science or Earth Sciences program, or Biology 2483A/B, Biology 2485A/B.



Prerequisite checking is the student's responsibility

Senate Regulations state, "unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites."

3. Textbook



Recommended textbook

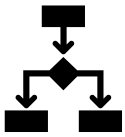
Smol, J.P. 2008. *Pollution of Rivers and Lakes: A Paleoenvironmental Perspective*, 2nd Edition. Blackwell Publishing, Oxford

Other resources will be posted in OWL

4. Course Objectives and Format

This course provides students with a “hands-on” learning experience in an area of environmental science, paleolimnology. The field outing provides students with the opportunity to observe and participate in learning field skills within the field of paleolimnology. Students will learn to make and record limnologic observations and measurements. Lectures provide the background materials necessary for understanding and interpreting data collected by students.

Active participation from students, both for assessment, and to enhance the learning experience of the entire class is required. Active learning supports higher-level learning and improves retention of material (Prince, 2004). Lectures will include brainstorming, activities, work periods and discussion. Please come to class prepared to be involved and to be respectful to your classmates and the instructor team. Derogatory or offensive remarks and responses are not acceptable, nor are they effective forms of academic debate. Participation will be graded, and there are formal and informal expectations of involvement.



Attendance is required

All course material will be posted to OWL: <http://owl.uwo.ca>. Any changes will be indicated on the OWL site and discussed with the class.

Google Chrome or Mozilla Firefox are the preferred browsers to optimally use OWL; update your browsers frequently. Students interested in evaluating their internet speed, please click [here](#). [Using the right browser is important, especially when using different features integrated with OWL]

If students need assistance, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

5. Learning Outcomes

Upon successful completion of this course, students will be able to:

1. explain the importance of a long-term perspective in environmental research.
2. know basic limnological principals.
3. describe the most recent theories and methodologies in paleolimnology.
4. relate the contributions of paleolimnology to our understanding of global environmental change.
5. appreciate Canada’s water resources and our responsibility to protect those resources.
6. apply paleolimnological techniques to address environmental issues.
7. communicate scientific findings.



6. Course Content and Schedule

Week	Dates	Topic	Labs	Readings
1	Sept 11-15	Course Introduction: What is paleolimnology?	No lab	Chapter 2 & 3
2	Sept 18-22	Properties of water and lake zones + Field Safety	Field Notes and River Walk	Chapter 1
3	Sept 25-29	Lakes and their sediments	River Walk Field Notes/Reflection Due	Chapter 3
4	Oct 2-6	Assigning ages to Sediments	Lab 1 Introduction	Chapter 4
5	Oct 9-13	Paleoindicators/Diatoms	Lab 1 Work Session	Chapter 5 & 6
	Oct 15	Tumbleson Pond Field Trip		
6	Oct 16-20	Catchment and landscape change	Lab 1 Due Lab 2 Introduction	Chapter 12
7	Oct 23-27	In-Class Midterm (October 24)	Lab 2 Work Session	N/A
	Oct 30-Nov 3	Fall Study Break		
8	Nov 6-10	Environmental reconstructions	Lab 2 Due, Lab 3 Introduction	Chapter 5 & 6
9	Nov 13-17	Eutrophication	Lab 3 Work Session	Chapter 11
10	Nov 20-24	Acidification	Lab 3 Due	Chapter 7
11	Nov 27- Dec 1	Climate change		Chapter 14
12	Dec 4-8	Review		N/A



7. Communication



- Students should check the OWL site every 24 – 48 hours
- Announcements will be posted on the OWL site as needed. Students are responsible for checking the OWL site and syllabus for all pertinent information prior to contacting the instructor or teaching assistant.
- For any other communication, the centrally administered **e-mail account** provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner. You can read about the privacy and security of the UWO email accounts [here](#).
- Emails will be monitored daily; students will receive a response in 24 – 48 hours

8. Evaluation

Below is the evaluation breakdown for the course. Any deviations will be communicated.

Assessment	Format	Weighting	Due Date
River Walk Field Notes + Reflection Assignment	Written	5%	Indicated on Course Schedule
Lab 1	Written/Questions	10%	
Tumbleson Pond Field Trip Assignment	Written	10%	
Lake of the Day	Oral	5%	
Midterm Exam	Written	20%	
Lab 2	Written/Questions	10%	
Lab 3	Written/Questions	10%	
Final Exam	Written	30%	Scheduled by registrar

The evaluation methods described in the course outline are essential requirements for the course. Students are responsible for material covered in the lectures as well as the material covered in labs and field experiences.

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- All assignments are due at 11:55 pm EST unless otherwise specified
- After an assessment is returned, students should wait 24 hours to digest feedback before contacting their evaluator; to ensure a timely response, reach out within 7 days

Click [here](#) for a detailed and comprehensive set of policies and regulations concerning examinations and grading. The table below outlines the University-wide grade descriptors.

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work which is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

Information about late or missed evaluations:

Academic consideration requests for missed work worth 10% or more of the course grade due to medical or non-medical grounds must be submitted through your home Faculty or Affiliate Academic Counselling/Advising Office. For work worth less than 10%, the same process applies and accommodations should be sought and submitted through your home Faculty or Affiliate Academic Counselling/Advising Office.

- Late assessments without illness self-reports will be subject to a late penalty 10 %/day

- Late assessments with illness self-reports should be submitted within 24 hours of submission of the last illness self-report.
- An assessment cannot be submitted after it has been returned to the class; the weight will be transferred to the final grade.
- The weight of a missed test will be transferred to the final grade.

Grades will not be adjusted on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.

9. Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: [Academic Accommodation for Students with Disabilities](#).

Academic Consideration for Student Absence

The University recognizes that a student's ability to meet their academic responsibilities may, on occasion, be impaired by medical illness. Illness may be acute (short term), or it may be chronic (long term), or chronic with acute episodes. The University further recognizes that medical situations are deeply personal and respects the need for privacy and confidentiality in these matters. However, in order to ensure fairness and consistency for all students, academic accommodation for work representing 10% or more of the student's overall grade in the course shall be granted only in those cases where there is documentation indicating that the student was seriously affected by illness and could not reasonably be expected to meet their academic responsibilities.

[Policy on Academic Consideration for Medical Illness - Undergraduate Students](#)

[Student Medical Certificate \(SMC\)](#)

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

10. Make-up Examinations

Makeups will be granted with approved documentation only. All documentation for missed exams must be provided to the Academic Counselling Office within 48 hours of the scheduled exam, otherwise the instructor will assign a grade of zero.

The format and content of make-ups may differ substantially from the scheduled test or examination.

11. Use of Electronic Devices

No electronic devices or other aids will be allowed during tests and examinations unless stated otherwise by the instructor.

12. Continuity of Education Plan (in-person class pivoting to online learning)

In the event of a COVID-19 resurgence during the course that necessitates the university to direct courses move away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

13. Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence.

14. Western's Commitment to Accessibility

The Department of Geography and Environment strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. Information regarding accommodation of exams is available on the Registrar's website.

More information about "Accessibility at Western" is available.

15. Mental Health

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit Western's Health and Wellness website for more information on mental health resources.

16. Support Services

Western's Support Services
Student Development Centre

17. Important Dates

September 7: Classes resume

September 15: Last day to add a first term half course

October 9: Thanksgiving Holiday – Department Office Closed

October 30-November 5: Fall Reading Week (No classes; Department Office open)

November 13: Last day to drop a first term half course without penalty

November 30: Last day to drop a full course without penalty

December 8: Classes end

December 9: Study day
December 10-22: Examination Period