

**Geography 3352A: Paleolimnology and Global Environmental Change
Fall 2021**

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.

Instructor/Teaching Assistant

Instructor: James Thayer, jthayer3@uwo.ca

Office Hours: Friday 9:30-10:30 in Biological & Geological Sciences 1025

TA: Kevin Ng, kng342@uwo.ca

Prerequisites

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](#).

Note: Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may 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.

Textbook

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

Lectures/Labs/Field Trips

Lectures: Tuesday 11:30 – 1:30 in Social Science Center 1302

Labs: Wednesday 2:30 – 4:30 in Social Science Center 1302

Field Trip: TBD

Evaluations

Midterm (October 26th) 35%

Final exam (scheduled by registrar) 35%

Labs (3 labs, 10% each) 30%

Note: Unless otherwise accommodated, a penalty of 5% per day (weekends included) for late labs will be applied, up to when the labs are handed back (~7 days). Late assignments won't be accepted once returned.

Learning Outcomes

By the end of the course, students will be able to

1. explain the importance of a long-term perspective in environmental research
2. understand basic limnological concepts

3. describe the most recent theories and methods 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

Course Outline

Week	Dates	Topic	Labs	Readings
1	Sep 14-15	Course Introduction	No lab	Chapter 2
2	Sep 21-22	Properties of Water & Lake Zones	No lab	Chapter 1
3	Sep 28-29	Lakes & Their Sediments	No lab	Chapter 3
4	Oct 5-6	Carbon & Oxygen Isotopes	Lab 1	Ch 5.7 & 14.4.2
5	Oct 12-13	Assigning Ages to Sediments	Lab 1 continued	Chapter 4
6	Oct 19-20	Catchment Erosion	Lab 2/ Lab 1 due	Chapter 12
7	Oct 26-27	Midterm	Lab 2 continued	
8	Nov 2-3	Reading Week		
9	Nov 9-10	Bioindicators & Reconstructions	Lab 3/ Lab 2 due	Chapters 5 & 6
10	Nov 16-17	Eutrophication	Lab 3 continued	Chapter 11
11	Nov 23-24	Acidification	Lab 3 due	Chapter 7
12	Nov 30-Dec 1	Climate Change	No lab	Chapter 14
13	Dec 7-8	Review	No lab	

Support and 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

Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the term, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,
- assessments worth more than 30% of the student's final grade,
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are not met, students will need to provide a Student Medical Certificate if the absence is medical, or provide appropriate documentation if there are compassionate

grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation. Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For Western University policy on Consideration for Student Absence, see:

[Policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs](#)

and for the Student Medical Certificate (SMC), see:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

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.

Mental Health and Support Services

Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Other relevant support services available to students are [Western's Support Services](#) and the [Student Development Centre](#).

Statement on Academic Offenses

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Statement on Use of Electronic Devices

Only calculators will be permitted during examinations.

COVID-19-SPECIFIC POLICIES

Masking Guidelines

Students will be expected to wear triple layer, non-medical, paper masks at all times in the classroom as per University policy and public health directives. Students who are unable to wear a mask must seek formal accommodation through Western Accessible Education, and present medical documentation.

Students are not permitted to eat or drink while in class to ensure masks stay in place. Students will be able to eat and drink outside of the classroom during scheduled breaks.

Students unwilling to wear a mask as stipulated by Western policy and public health directives will be referred to the Dean, and such actions will be considered a violation of the student Code of Conduct.

Course Absences due to Daily COVID Screening Questionnaire

Missed assessments (e.g., presentations, essays, quizzes, tests, midterms, etc.) require formal [academic considerations](#) (typically self-reported absences and/or academic counselling). Methods for dealing with missed work and course content are at the discretion of the instructor(s). Students should be aware that some learning outcomes cannot be easily made up and may need to be completed in a subsequent year. Your instructor will provide you with further information as to how this applies within this course.

Students who demonstrate a pattern of routinely missing coursework due to self-reported COVID symptoms, and therefore do not demonstrate mastery of the learning outcomes of the course, will not receive credit for the course.

Contingency plan for an in-person class pivoting to 100% online learning

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving 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. In the event that online learning is required, a stable internet connection with working microphone and webcam will be required. As has been the case in the past, the decision to pivot to online learning will be made by Western, and not individual instructors or departments (excepting temporary online instruction in the event of instructor illness).