


GEOG 3352/9216B – Paleolimnology and Global Change Course Outline: Section 001 Winter 2021



Although this academic year might be different, Western University is committed to a **thriving campus**. We encourage you to check out the [Digital Student Experience](#) website to manage your academics and well-being. Additionally, the following link provides available resources to support students on and off campus: <https://www.uwo.ca/health/>.

1. Technical Requirements



Stable internet connection



Laptop or computer



Working microphone



Working webcam



Zoom application installed

Recommended technical specifications:
<https://registrar.uwo.ca/academics/timetables.html>

Western Zoom webpage, including privacy
information: <https://wts.uwo.ca/zoom/index.html>.

2. Course Information



Delivery Mode	Dates	Time
In-person, on-line (Synchronous, online)	Wed.	10:30-12:30
	Thurs.	12:30-2:30

*Details about design and delivery of the course are listed below in Section 5

Classes Start	Reading Week	Classes End	Study day(s)	Exam Period
January 11	February 13-21	April 12	April 13	April 14-30

* January 19 2021: Last day to add a second-term half course

March 15 2021: Last day to drop a second-term half course without academic penalty



Course Instructor	Contact Information	Office Hours
Dr. Katrina Moser	kmoser@uwo.ca	By Appointment

Teaching Assistant(s)	Contact Information	Office Hours
Kevin Ng	kng342@uwo.ca	Thursdays 2:30-3:30



- Office hours will be held remotely using Zoom
- Students will be able to sign up for an appointment with Dr. Moser by email
- Students will be able to drop in during Kevin's office hours Thursdays 2:30-3:30.
- Mandatory synchronous sessions will be held on Wed. 10:30-12:30 and Thursdays 12:30-2:30

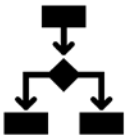
3. Calendar Description

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 lab hours

Prerequisite(s): One of Geog. 2310A/B, Geography 2320A/B, or at least a 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."

4. Textbook

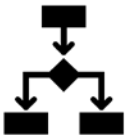


- Required textbook Smol, J.P. 2008. Pollution of Rivers and Lakes: A Paleoenvironmental Perspective, Second Edition. Blackwell Publishing, Oxford. ISBN: 9781405159135 1405159138
- Lab Kit – to be picked up at UWO

5. Course Objectives and Format

This course provides students with a “hands-on” learning experience in an area of environmental science, Paleolimnology. Students will practise formulating research questions and develop and test hypotheses. Individual field outings provide students with the opportunity to design a small research project to address a research question. 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.



Mode	Dates	Time	Frequency
Virtual synchronous Lecture	Wednesdays	10:30-12:30	weekly
Virtual synchronous Lab	Thursdays	12:30-2:30	weekly

Attendance at synchronous sessions 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](#).

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.

6. 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. make field observations and measurements and assess the accuracy and precision of the measurements;
8. apply paleolimnological techniques to address environmental issues
9. communicate scientific findings



7. Course Content and Schedule

Week	Dates	Topic	Readings and Labs
1	Jan 11 – 17	Course introduction: What is Paleolimnology	Smol, Chapters 2 and 3 Field Safety and Note Taking
2	Jan 18 – 24	The properties of water and lake zones	Smol, Chapter 1 Field Project Planning
3	Jan 25 – 31	Lakes and their sediments	Smol, Chapter 3 Lab 1: Lake Properties
4	Feb 1 – 7	Assigning Ages to Sediments	Smol, Chapter 4 Lab 1 Due Feb. 4
5	Feb 8 – 14	Paleoindicators/Diatoms	Smol, Chapter 5 and 6 Paleoindicator VT
6	Feb 15 – 21	Reading Week	
7	Feb 22 – 28	Quiz 1 Due Feb. 28 Paleoindicator VT Prep	
8	Mar 1 – 7	Landscape Change and Erosion Paleoindicator VT Show	Smol, Chapter 12 Paleoindicator VT Due March 4 Lab 2: Tracking Change
9	Mar 8 – 14	Eutrophication Lab 2 Work Time	Smol, Chapter 11
10	Mar 15 – 21	Acidification Quiz 2 Due March 21	Smol, Chapter 7 and 8 Lab 2 Due March 18
11	Mar 22 – 28	Climate Change	Smol, Chapter 14 Lab 3: Pollen and Climate Change
12	Mar 29 – Apr 4	Quiz 3 Due April 4	Lab 3 Due April 1
13	Apr 5 – 11	Class Wrap Up Final Report Tutorial	
14	Apr 12	No Class	



8. Online Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Students can also participate by interacting in the forums with their peers and instructors.

9. Communication



- Students should check the OWL site every 24 – 48 hours
- Students should email their instructor(s) and teaching assistant(s) using OWL “messages”
- 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 48 hours
- This course will use Microsoft Teams for discussions [If you want to use Teams, there are
- This course will use the OWL forum for discussions
- Students should post all course-related content on the discussion forum so that everyone can access answers to questions
- The discussion forums will be monitored daily by instructors or teaching assistants

10. Evaluation

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

Assessment	Format	Weighting	Due Date
Labs	Written Reports	30%	As indicated on schedule
Quizzes*	Written	30%	As indicated on schedule
Paleoindicator VT	Oral Presentation	10%	As indicated on schedule
Final Report	Oral Presentation and Field Journal	25%	TBD – Exam Period
Participation	Class Attendance	5%	Attendance*

*Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the text.

**To receive 5/5 on attendance students must attend 80% of the classes.

Evaluation for those registered in Geography 9216B will be the same as above, but graduate students will be held to a higher standard.

- All assignments are due at 5:00 pm EST unless otherwise specified
- Written assignments will be submitted to Turnitin (statement in policies below)
- Rubrics will be used to evaluate assessments and will be posted with the instructions
- 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:

- 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
- There will be no make up quizzes. The weight of a missed quiz will be transferred to the other quizzes. In the event that you miss all three quizzes, you will be required to write a quiz covering all course material.

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.*

11. 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](#).

12. Make-up Examinations

There are no make up quizzes, and there is no final exam.

13. Use of Electronic Devices

No electronic devices will be allowed during tests and examinations.

14. How to Be Successful in this Class:

Students enrolled in this class should understand the level of autonomy and self-discipline required to be successful.

1. Invest in a planner or application to keep track of your courses. Populate all your deadlines at the start of the term and schedule time at the start of each week to get organized and manage your time.
2. Plan ahead, especially for the final report.
3. Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed in this class.
4. Follow weekly checklists created on OWL or create your own to help you stay on track.
5. Attend classes and labs. Take notes during lectures. Read the textbook to supplement your notes. Keeping handwritten notes or even notes on a regular Word document will help you learn more effectively.
6. Connect with others. Try forming an online study group and try meeting on a weekly basis for study and peer support.
7. Do not be afraid to ask questions. If you are struggling with a topic, check the online discussion boards or contact your instructor(s) and or teaching assistant(s).
8. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.



15. Use of Recordings

All of the remote learning sessions for this course will be recorded. The data captured during these recordings may include your image, voice recordings, chat logs and personal identifiers (name displayed on the screen). The recordings will be used for educational purposes related to this course, including evaluations. The recordings may be disclosed to other individuals under special circumstances. Please contact the instructor if you have any concerns related to session recordings.

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation, or the participant has the prior written permission of the instructor.

16. 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.

17. Statements concerning Online Etiquette

Some components of this course will involve online interactions. To ensure the best experience for both you and your classmates, please honour the following rules of etiquette:

- Please “arrive” to class on time
- Please use your computer and/or laptop if possible (as opposed to a cell phone or tablet)
- Ensure that you are in a private location to protect the confidentiality of discussions in the event that a class discussion deals with sensitive or personal material
- To minimize background noise, kindly mute your microphone for the entire class until you are invited to speak, unless directed otherwise
- Please be prepared to turn your video camera off at the instructor’s request if the internet connection becomes unstable
- Unless invited by your instructor, do not share your screen in the meeting

The course instructor will act as moderator for the class and will deal with any questions from participants. To participate please consider the following:

- If you wish to speak, use the “raise hand” function and wait for the instructor to acknowledge you before beginning your comment or question
- Remember to unmute your microphone and turn on your video camera before speaking
- Self-identify when speaking
- Remember to mute your mic and turn off your video camera after speaking (unless directed otherwise)

General considerations of “netiquette”:

- Keep in mind the different cultural and linguistic backgrounds of the students in the course.
- Be courteous toward the instructor, your colleagues, and authors whose work you are discussing.
- Be respectful of the diversity of viewpoints that you will encounter in the class and in your readings. The exchange of diverse ideas and opinions is part of the scholarly environment. “Flaming” is never appropriate. Do NOT take photos or videos of the class on Zoom; this is an invasion of privacy and disrespectful.
- Be professional and scholarly in all online postings. Cite the ideas of others appropriately.

Note that disruptive behaviour of any type during online classes, including inappropriate use of the chat function, is unacceptable. Students found guilty of Zoom-bombing a class, taking photos or videos while on Zoom or other serious online offenses may be subject to disciplinary measures under the Code of Student Conduct.

18. 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.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

19. Western's Commitment to Accessibility

The Department of Geography 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.

20. 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.

21. Support Services

Western's Support Services
Student Development Centre

22. Important Dates

January 11: Classes resume

January 19: Last day to add a second term half course

February 15: Family Day – Department Office Closed

February 13 to February 21: Spring Reading Week (No classes; Department Office open)

March 15: Last day to drop a first term half course without penalty

April 2: Good Friday

April 12: Classes end

April 13: Study day

April 14 to April 30: Examination Period