

Geoarchaeology (ANTH 3010)

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Course Description:

This course is designed to give students a thorough introduction to geoarchaeology as a contextual framework for human paleoecology. Major topics include description and interpretation of sediments in which archaeological remains are found, consideration of the natural processes that create the archaeological record, and reconstruction of landscapes on which ancient people lived. You will learn about climate change, and the effects of these changes on the Earth; the various types of landforms on which archaeological sites are found; and how the processes of erosion, deposition, soil formation, and biological and human activity affect archaeological deposits in fluvial, eolian, lacustrine, and other depositional environments. Other topics include: methods of dating archaeological sites; and geological sourcing of artifactual materials.

Readings:

There is no required textbook for ANTH 3010, but I will post required weekly readings on D2L (myCourselink). You will need to read/study these materials in order to do well in the course.

Evaluation:

Midterm exam: **25%**
 Google Earth assignments (2): **10%**
 Cave report: **15%**
 Seminars (2): **5%** (your grade will be an average of the two seminars)
 Radiocarbon lab: **5%**
 Final exam: **40%**

Letter grades and their numerical equivalents:

A+	90-100%	B	70-79%	D	50-59%	F	0-39%
A	80-89%	C	60-69%	E	40-49%		

Students are responsible for ensuring that they are properly registered in this class.

See the LU Calendar for information on academic integrity, examinations, grade appeals, and other important regulations of which you should be aware.

*** Late assignments will be deducted 10% per day from the final grade for that assignment.

Seminar Grading (5% total)

Attendance: 2%

Minimal participation: +1%

Moderate participation: +2%

Exemplary participation: + 3%

Note that you will be graded on both the extent of your participation as well as the degree to which you demonstrate a comprehension of the assigned reading material (in other words: quality and quantity both matter!)

Other information

In this course, in the context of remote instruction and participation, video and audio recordings of class activities MAY be made to ensure students' and instructors' easy and comprehensive access to those activities. The recordings are confidential and are intended only for the use of the course students and instructors. They may otherwise not be used or disclosed. During recording, to protect others' privacy, each student should ensure that no one else is present in the location where they are being recorded without that non-student's consent. The recordings are made under the authority of sections 3 and 14 of *The Lakehead University Act, 1965*. Questions about the collection of the images and sounds in the recordings may be directed to Dr. Todd Randall, Dean of the Faculty of Science and Environmental Studies, Thunder Bay campus.

STUDENT ACCESSIBILITY SERVICES Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please visit <https://www.lakeheadu.ca/faculty-and-staff/departments/services/sas>.

Class Schedule:

Module	Topics	Readings	"Lab"/Seminar
1	Introduction; Sediment classification; Weathering;	Reitz & Shackley (2012), ch. 5	
2	Sediment transportation; Physical properties of sediments; Sedimentary structure; Chemical/ biochemical deposition;	Reitz & Shackley (2012), ch. 5 Boggs ch. 4 & 5	
3	Organic matter; Soils and buried soils; Slope deposits	Reitz & Shackley (2012), ch. 5	Soil/Sediment texture (practice)
4	Rivers and lakes	Goldberg & Macphail (2006), ch. 5	Google Earth assignment #1 (Due: TBA)
5	Eolian environments; Coastal settings	Goldberg & Macphail (2006), ch. 6 & 7	Google Earth assignment #2 (Due: TBA)
Oct. 12-16	Fall Study Break		
Oct 20 (lab period)	Midterm Exam (~1.5h)		
6	Caves and rockshelters; Postdepositional processes & the formation of the archaeological record;	Goldberg & Macphail (2006), ch. 8 Reitz & Shackley ch. 2	Cave Report (due: Nov. 3)
7	Mechanisms underlying climate change; Human responses; Sedimentary records of climate change;	Dincauze (2000)	'Little Ice Age' seminar (Tentative date: Nov. 10)
8	Plant microfossil analysis Other paleoenvironmental techniques	Dincauze (2000)	
9	Geological sourcing: select methods	TBD	Stonehenge sourcing seminar (Tentative date: Nov. 24)
10	Radiocarbon and other dating techniques	TBD	Radiocarbon lab (Due: Dec. 7)
	Final exam: TBA (scheduled by University)		