ANTH 3010
Geoarchaeology

Dr. M. Boyd (office: BB-2001-F); ph: 343-8279; matthew.boyd@lakeheadu.ca).
Office hours: TBA

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 biota; 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.

Textbook:

Dincauze, D. 2000. Environmental Archaeology: Principles and Practice. 2nd edition. Cambridge University Press. 620 pp.

Evaluation:

Midterm exam: **20%**
Lab assignments (n = 7): **30%**
Final exam: **30%**
Term paper: **20%**

Research paper should be 10-15 pages in length (typed, double-spaced). The topic of your research paper may cover any aspect of Geoarchaeology, should be well-referenced, scholarly, and based entirely on peer-reviewed sources. Please follow a standard style guide for the social sciences when formatting your paper.

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.

******* There will be no “make-up” lab periods for individual students, unless absence from the normal lab period is documented by a note from a physician, therapist, or other healthcare professional.

*** Unless otherwise stated by your instructor, all lab assignments are due at the end of the scheduled lab period. Late assignments will be subject to a 10% grade deduction per day.

*** Late term papers will be deducted 10% per day from the final grade for that assignment. The first 10%, however, will be waived if you complete the course (instructor) evaluation.

Outdoor Labs

There are two outdoor "labs" in this course. These little excursions will take place on the LU campus. Please wear boots or old shoes with good ankle support; long pants (no shorts); rain gear (depending on weather). There is also a moderate amount of walking over uneven ground during these outdoor sessions. Please let me know if you are unable to participate in these activities for reasons of a disability and therefore require accommodations.

Lecture and Lab Schedule:

Module		Readings	Lab
1	Introduction; Sediment classification; Weathering;	Dincauze ch.11&12	No lab
2	Sediment transportation; Physical properties of sediments; Sedimentary structure; Chemical/ biochemical deposition;		Identifying sediment transport from particle shape **Lab #1**
3	Organic matter; Soils and buried soils; Slope deposits		Soils lab **Lab #2**
4	Rivers and lakes	Dincauze ch. 9	**Outdoor lab #3**
5	Eolian environments; Coastal settings	Dincauze ch. 9 & 10	**Outdoor lab #4**
Oct. 8 - 12	**Fall Study Break**		
Oct. 15	**Midterm Exam (2h)**		
6	Caves and rockshelters; Postdepositional processes & the formation of the archaeological record;		No lab
7	Mechanisms underlying climate change; Human responses; Sedimentary records of climate change;	Dincauze ch. 1-4, 7 & 8	No lab
8	Plant microfossil analysis Other paleoenvironmental techniques	Dincauze ch. 13-17	Phytolith & starch lab **Lab #5**
9	Geological sourcing: select methods		Mineralogy lab **Lab #6**
10	Radiocarbon and other dating techniques	Dincauze ch. 5 & 6	Radiocarbon lab **Lab #7 (take home)**
	Final exam: TBA (scheduled by University)		