

ARCHAEOLOGY 453 FUNDAMENTALS OF GEOARCHAEOLOGY

Fall 2013

Instructor: Andrea Freeman
Office: ES 842
Phone: 220-2792
Office Hours: W 11am - noon, or by appointment
Lectures: TR 2-3:15 pm, ES 859
Labs: TR 3:30-5:20pm, ES 859 (unless otherwise notified)

Teaching Assistant: Robert Patalano
Office: ES 740
Phone: 220-5226
Office Hours: TBD

COURSE DESCRIPTION

This course will cover analytical methods used in geoarchaeology. Case studies and experiential learning through field examples will be used when possible. Students are required to have a basic knowledge of archaeology, geology, and/or geography. The following topics are considered of primary importance:

Recording techniques & Interpretation of site and regional context	
Application of dating methods	Provenance
Application of chemical and isotopic methods	Paleoenvironment
Late Quaternary Stratigraphy	Sediments and Soils

LABS

Experiential laboratory learning will be held on Tuesdays and Thursdays from 3:30-5:20pm. The lab will rarely last more than one hour, but students may stay for help from 4:30-5:20 pm. Students are required to attend either the Tuesday or the Thursday laboratory session. The labs are held in ES 859, unless otherwise announced. Lab materials will be handed out during laboratory sessions. Some materials may be available on Blackboard in advance of the session.

EXAMINATIONS

Two midterm examinations and one final quiz will be given. These examinations will be closed-book and held during the lecture period. There will be no final examination for the course.

RESEARCH PAPER

All students are required to write a course paper of 8-12 pages. Directions for the course paper will be handed out separately. Students should consult with the professor regarding paper topic. An oral summary (10-15 minutes) of the research paper will be required of all students. Both the oral summary of the paper and discussion sessions will comprise the "participation" portion of the paper grade.

GRADING SCHEME

Exam 1	25%	A (A+ to A-)	90-100%
Exam 2	25%	B (B+ to B-)	80-89%
Final Quiz	10%	C (C+ to C-)	70-79%
Course Paper	10%	D (D+ and D)	60-69%
Labs	30%	F	<60%

(5% each for labs 3-7
+5% for lab participation)

COURSE TEXT

REQUIRED:

Rapp, George (Rip), Jr. and Christopher L. Hill (1998). *Geoarchaeology: The Earth-Science Approach to Archaeological Interpretation*. Yale University Press. (R&H)

Goldberg, Paul and R.I. Macphail (2006) . *Practical and Theoretical Geoarchaeology*. Blackwell Publishing. (G&M); Readings will be provided on RR if text not available.
Additional Readings will be available in the Archaeology Reading Room (RR).

RECOMMENDED: Stein, Julie and William R. Farrand (1992). *Sediments in Archaeological Context* or Waters, Michael R. (1992) *Principles of Geoarchaeology*.

LABORATORY MANUAL

REQUIRED: *Geoarchaeology: A Laboratory Manual*, by A. Freeman, pdf available on Blackboard.

TENTATIVE SCHEDULE

Week 1:

10 Sep Course Goals, Structure, and Schedule
Geoarchaeology in Historical Perspective
Assignment: R&H pp. Xi-24

12 Sep Sediments and Soils, part 1a
Assignment: R&H pp. 25-59, G&M ch 1 & ch 3

Week 2:

17 Sep Soils, part 1b
19 Sep Soils, part 1c

Week 3:

24 Sep Sediments and Soils, part 2
Assignment: RR:Mandel and Bettis (2001), ch. 7

26 Sep Stratigraphy
Assignment: G&M ch 2
Lab 1: Soils and Sediments

Week 4:

1 Oct Depositional Processes, alluvial
Assignment: R&H pp. 60-78, G&M ch 4 &5

3 Oct Depositional Processes, alluvial, part 2
Assignment: RR:Freeman (2000)
Lab 2: Mapping and Stratigraphy

Week 5:

8 Oct First Midterm Examination (25%)
Freeman at Laval, Patalano to invigilate exam

10 Oct Depositional Processes, lacustrine
Assignment: R&H pp. 78-81, G&M ch 5 & ch 7
NO lab this week

Week 6:

15 Oct Depositional Processes, eolian
Assignment: G&M ch 6

17 Oct Depositional Processes: caves, rockshelters, springs
Assignment: R&H pp. 81-98, G&M ch 8
Lab 3: History of a Landform

Week 7:
22 Oct Geochronology, part 1
Assignment: R&H pp. 132-164

24 Oct Geochronology, part 2
Assignment: see above
Lab 4: Examining Radiocarbon Dates

Week 8:
29 Oct GSA , Site detection and stratigraphy
Assignment: R&H pp. 103-131

31 Oct Disturbance Processes
Assignment: R&H pp. 99-102, 244-272, G&M ch 13
TH only: Lab 5: Interpreting Radiocarbon Dates

Week 9:
5 Nov Overview of Quaternary environments
Assignment: R&H pp. 165-194, RR:Bradley, pp. 1-46

7 Nov Chacmool Conference, No lecture or lab
TU only: Lab 5: Interpreting Radiocarbon Dates

Week 10:
12 Nov *Reading Day, University Holiday*
HOLIDAY
NO lab this week

14 Nov **Second Midterm Examination (25%)**
TH only: Lab 6: Time and Accumulation Rates

Week 11:
19 Nov Pollen and macrofossils
Assignment: RR:Bradley, pp. 357-373
Stable Isotopes
Assignment: RR:Nordt (2001), ch. 15

21 Nov Phytoliths, other silicate fossils, insects
Assignment: RR:Bradley, pp. 337-354
Assignment: RR:Leach (1992)
TU: Lab 6: Time and Accumulation Rates
TH: Lab 7: Proxy Data Lab

Week 12:
26 Nov Soils and environmental interpretation
Assignment: Holliday (2004), ch. 8; R&H pp. 198-222

28 Nov Cultural Stratigraphy, Theory in Geoarchaeology
Assignment: RR:Stein (2001), ch. 1, G&M ch 10 & ch 11
TU only: Lab 7: Proxy Data Lab

Week 13:
3 Dec 10% Quiz in first 30 minutes
Student Presentations

5 Dec Student Presentations
Assignment: **Course Papers (10%) Due 5 December 2013**

Laboratory Schedule

	Tuesday	Thursday
Week 3 S 24, 26	Lab 1: Soils and Sediments Assignment: G&M chapter 16	Lab 1: Soils and Sediments Assignment: G&M chapter 16
Week 4 O 1, 3	Lab 2: Stratigraphy and Mapping	Lab 2: Stratigraphy and Mapping
Week 5 O 8, 10	No lab	No lab
Week 6 O 15, 17	Lab 3: History of a Landform	Lab 3: History of a Landform
Week 7 O 22, 24	Lab 4: Examining Radiocarbon Dates	Lab 4: Examining Radiocarbon Dates
Week 8 O 29, 31	No lab, instructor out of town	Lab 5: Interpreting Radiocarbon Dates
Week 9 N 5, 7	Lab 5: Interpreting Radiocarbon Dates	No lab, Archaeology Department Chacmool Conference
Week 10 N 12, 14	No lab, University holiday	Lab 6: Time and Decay Rates
Week 11 N 19, 21	Lab 6: Time and Decay Rates	Lab 7: Proxy data lab
Week 12 N 26, 28	Lab 7: Proxy data lab	No lab
Week 13 D 3, 5	No Lab	No lab

RULES OF CONDUCT FOR THIS COURSE

Examinations, Quizzes, and Final Project:

Cheating and plagiarism are not tolerated in this course. If you have any questions about what constitutes academic misconduct, you should consult the professor of the course or refer to the University of Calgary Calendar. During examinations and quizzes, electronic devices and papers related to the course must be securely stowed away in a backpack or purse and not visible to yourself or any other student.

Electronic Devices:

Portable computers are allowed during lecture and lab for taking notes. Course webpages and related links may be referred to during these periods. Ringers for PDAs and cellular telephones must be off and these devices stowed away in a pocket, purse, or backpack.

Illness or Missed Work:

Make-up midterm examinations will be held **only** for those who miss a midterm due to illness, death in the family, religious conviction, or other *extremely* debilitating circumstances. Those who provide proof of their incapacitation may make up the examination at a date to be scheduled within one week following the original midterm date. It is the responsibility of the student to inform the professor *as soon as possible* of his or her need to make-up a midterm examination.

The Professor is not responsible for missed lecture or lab materials. Students are advised to find a partner in the class who may be able to share notes. Students missing more than one week of course materials are advised to seriously consider taking a medical, bereavement or other leave of absence from the University.

Special Needs:

Students with special needs must inform the professor and teaching assistant during the first week of classes. Special needs must be accompanied by appropriate documentation.

Contacting Your Instructor:

The Professor will not respond to emails that do not identify the student as a participant in this course. The best way to ensure this is to provide your name and the course name or number in your email. The Professor prefers to be contacted via email using the Blackboard email function. Please be advised that the University of Calgary email system will often reject emails from external sources such as gmail, yahoo, hotmail, etc. Students at the University are advised to go to IT for a UofC email address.

Use of Blackboard:

The Professor will post lecture notes to Blackboard after they are presented in class and before the midterm examination for that material. Blackboard will also be used for some course readings. Blackboard may be used to contact the professor and other members of the course. Please note that any interim grade calculated by Blackboard may not be indicative of your performance in the course. Students should consult the weightings and grading scale in the course outline to determine what grade they are achieving. Any questions on this matter should be directed toward the professor.

ADDITIONAL CONTENT OF THE COURSE OUTLINE

Writing Across the Curriculum

Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their University careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their University courses and, where appropriate, instructors can and may use writing and the grading thereof as a factor in the evaluation of student work. The services provided by the Writing Centre in the Effective Writing Office can be utilized by all undergraduate and graduate students who feel they require further assistance.

Academic Accommodation Policy

The purpose of academic accommodation is to provide students with documented disabilities equal opportunity to master the essentials of a post-secondary education. Students with disabilities at the University of Calgary have met all admission requirements but may have done so with the use of accommodations. Similarly, they are expected to meet all academic and non-academic requirements. Adaptive technology and other academic accommodations do not relieve students of their responsibility to develop the essential skills and abilities expected of all students.

Please refer to the following web link for detailed information: <http://www.ucalgary.ca/drc/node/71>

Disability Resource Centre Accommodations

It is the responsibility of the student to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at (403)220-8237.

Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. Students are also required to discuss their needs with the instructor no later than fourteen (14) days after the start of the course.

Freedom of Information and Protection of Privacy Act

The University of Calgary is committed to protecting the privacy of individuals who work and study at the University or who otherwise interact with the University in accordance with the standards set out in the Freedom of Information and Protection of Privacy Act.

Please refer to the following link for detailed information:

<http://www.ucalgary.ca/secretariat/system/files/foip%20overview.pdf>

Academic Misconduct

Academic dishonesty is an unacceptable activity at the University of Calgary and students are **strongly advised** to read the Student Misconduct section of the University Calendar. Quite often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are:

- 1) Presenting another student's work as your own
- 2) Presenting an author's work or ideas as you own without proper referencing
- 3) Using work completed for another course

This activity will not be tolerated and students conducting themselves in this manner will be dealt with according to the procedures outlined in the University Calendar.

For detailed information on what constitutes academic misconduct, please refer to the following link:

<http://www.ucalgary.ca/pubs/calendar/current/k-2-1.html>

Emergency Evacuation Assembly Points

In the event of an emergency that requires evacuation, please refer to the following link to become familiar with the assembly points for the class:

<http://www.ucalgary.ca/emergencyplan/assemblypoints>

Safewalk Information

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day to any location on Campus including the LRT, parking lots, bus zones and University residences. Contact Campus Security at (403) 220-5333 or use a help phone, and Safewalkers or a Campus Security Officer will accompany you to your campus destination.

Faculty of Arts Program Advising and Student Information Resources

- Have a question, but not sure where to start? The new Faculty of Arts Program Information Centre (PIC) is your information resource for everything in Arts! Drop in at SS110, call us at 403-220-3580 or email us at artsads@ucalgary.ca. You can also visit the Faculty of Arts website at <http://arts.ucalgary.ca/undergraduate> which has detailed information on common academic concerns.
- For program planning and advice, contact the Student Success Centre (formerly the Undergraduate programs Office) at (403) 220-5881 or visit them in their new space on the 3rd Floor of the Taylor Family Digital Library.

- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at (403) 210-ROCK [7625] or visit them at the MacKimmie Library Block.

Contact for Students Union Representatives for the Faculty of Arts:

arts1@su.ucalgary.ca

arts2@su.ucalgary.ca

arts3@su.ucalgary.ca

arts4@su.ucalgary.ca