

# ANT 312H5 F –ARCHAEOLOGICAL ANALYSIS

Fall 2011, Anthropology, UTM

**Prof. Heather M.-L. Miller**

Syllabus available at: <http://www.utm.utoronto.ca/~w3htmlmil/> and Blackboard

Lecture & Laboratory: Wednesdays 2:00-5:00 pm, Room 217 North Building

Open Lab Time: Wednesdays 5:00-6:00 pm

	Office	Phone	Email	Office Hours
Instructor: Prof. Heather Miller	246 HSC	905-828-3741	heather.miller@utoronto.ca	Wed 5-6 217 North, or by appointment
TAs: Peter Bikoulis Talena Stevenson	220 North	---	peter.bikoulis@utoronto.ca talena.stevenson@utoronto.ca	TBA

## **Course Description**

This course introduces the process of archaeological research, from project design through report write-up. Lectures topics include ethics in archaeology, research design, analyses of different artifact types, statistical and graphical representation and site interpretation. A series of written exercises and hands-on labs will be used to cover selected topics and artifact types. Students will undertake a term project based on data collected from a local cemetery. Lectures, exercises and readings will provide overlapping material.

## **ANT312 in the UTM Anthropology curriculum**

- UTM ANT312H expands on the introduction to archaeological methods presented in ANT200Y. If you have difficulty with parts of this course, it may help to review your ANT200 text or notes.
- ANT312 examines the entire process of archaeology and introduces students to the identification and analysis of different artifact classes; therefore, ANT312 is strongly recommended as a prerequisite for all of the fourth year archaeology classes.
- Prior experience with archaeological fieldwork will be an advantage for this course, but is not expected nor necessary; this course is intended to help prepare you for your first field experience.
- No previous knowledge of statistics is required, only basic mathematical skills (algebra).

## **Learning Outcomes**

- (1) By the end of this class, you will have an understanding of the archaeological process, including
  - How archaeological projects are planned and organized through a research design
  - Archaeological ethics, and their role in daily archaeological research decisions
  - Methods used to collect archaeological data (written & oral sources, survey, excavation, lab work)
  - Basic methods of identification and analysis of archaeological remains, and the interpretation of these data to generate knowledge of the human past
- (2) Through the laboratory component of the course, you will have an understanding of the most common artifacts types, and the basics of analytical methods, including
  - Use of basic laboratory equipment
  - Technologies and analyses of lithic, ceramic, glass, metal, and organic materials
  - Stratigraphic analysis and taphonomic processes in archaeology
  - Spatial analysis in archaeology
  - Classification and seriation methods
  - Use of oral and written sources in archaeology

## **Course Materials - Required**

\* *Texts are available at the UTM Bookstore:*

- (1) Sutton, Mark and Brooke Arkush. 2009. *Archaeological Laboratory Methods. An Introduction. 5<sup>th</sup> edition.* Kendall/Hunt Publishing Company. Dubuque, Iowa. **Listed as "S & A" in Class Schedule**
- (2) Barber, Russell J. 1994. *Doing Historical Archaeology. Exercises Using Documentary, Oral, and Material Evidence.* Prentice Hall. **Listed as "B" in Class Schedule**

\* *Selected readings and handouts are available as electronic resources through **Blackboard**:*

- (1) Harris, E., 1975. The Stratigraphic Sequence: A question of time. *World Archaeology* 7(1):109-121.
- (2) *Selected pages from the following, as noted on the class schedule:*
  - Dibble, H.L., S.P. McPherron, and B.J. Roth, 2003. *Virtual Dig. A Simulated Archaeological Excavation of a Middle Paleolithic Site in France. 2<sup>nd</sup> edition.* Boston: McGraw-Hill / Mayfield Publishing Co.
  - Price, D. and G. Gebauer, 1990. *Adventures in Fugawiland. Version 3.3.* Mountain View, CA: Mayfield.
  - Staeck, John P., 2002. *Back to the Earth. An Introduction to Archaeology.* Mountain View, CA: Mayfield
- (3) *Other resources specific to the cemetery project*

## **Evaluation**

The marked work for this course will consist of (1) materials associated with an independent cemetery project; (2) a series of written exercises and lab reports on a variety of archaeological data types; and (3) weekly short quizzes on the readings.

**SEE p. 3-4, REGULATIONS, for details on late work, make-ups, citations, and other information.**

### **(1) INDEPENDENT PROJECT (35%)**

Students will each do an independent project on two aspects of cemetery analysis: style of gravestones and ritual behaviours. The project report is the culmination of weeks of work on this project, and should include ideas from the assigned readings, lectures, written exercises, and discussions.

The final report on your independent project will be marked on the quality and quantity of data collection and submission as well as the overall final report. More information will be provided in a separate handout.

Part 1: First Draft of Research Design	-----	2%	Due Sept. 21
Part 2: Research Design & Data Set Collected to date	-----	8%	Due Oct 26
Part 3: Final project report	-----	25%	Due Nov. 23

### **(2) WRITTEN EXERCISES and LAB ASSIGNMENTS (55%)**

The 6 written exercises are worth variable amounts, depending on their difficulty, for a total of 55% of the final mark. These must be submitted in the standard formats provided by the instructor, and must be written independently by each student.

Information from assigned readings, lectures, and labs will be needed to complete and properly record all of these labs, so be sure to **do the reading BEFORE class**. Use the instruction handouts for lab reports in general and for the particular labs to create a properly formatted submission.

Exercise 1: Measurement and Data Communication	10%	Due Sept 28
Exercise 2: Time (2 parts): A. Stratigraphy & B. Similiary Seriation	11%	Due Oct 5
Exercise 3: Spatial Analysis (3 parts): A. Regional Settlement; B. Community Pattern, & C. Rome Reborn	12%	Due Oct 19
Exercise 4: Lithics	5%	Due Nov. 2
Exercise 5: Pottery	5%	Due Nov. 9
Exercise 6: Functional/Social Analysis: Inferring Alcohol Usage from Glass Bottles	12%	Due Nov. 16

**(3) QUIZZES (10%):** Weekly quizzes on readings (10 at 1% each)

The weekly quizzes will be composed of 4 or 5 true/false or multiple choice questions designed to reward those who do the readings assigned for each class period. They will test major points covered in the assigned reading (such as the topics referenced in the introductions, headings and conclusion), not minor details or formulas. Eleven quizzes will be given, and the lowest score for each student will be dropped.

## **Regulations for ANT312 Marked Work**

**1. You may work with other students in preparing for assignments, but what you submit must be your own work.** You are encouraged to discuss questions together, or share source materials, or recommend readings and web sites. However, I will expect everyone in the class to have a different lab write-up; be especially careful to work ALONE on your final project write-up.

**2. Please be especially careful to avoid plagiarism,** which is a serious academic offence. Assignments in which plagiarism is detected will be severely penalized. For more details, see Section 7.1 “Academic Honesty” and Section 11.2, the Code of Behaviour on Academic Matters in the current UTM Calendar. It is your responsibility to be familiar with this code, and adhere to it. Be sure to read the link to the information on plagiarism on the web site, <http://www.utoronto.ca/writing/plagsep.html>.

**3. No make-up quizzes will be given, under ANY circumstances.** If you are late to class, you may not take the quiz, which will be given at the beginning of each class. The lowest mark on the quizzes will be dropped for every student, so missing a class due to illness, etc., will not affect your overall quiz mark.

**4. Students must attend all classes and labs.** It may be impossible to completely make up any missed classes, as group activities cannot be replicated, but marked work can be made up in case of illness or emergency. **\*\*Appropriate medical or similar documentation for any absences will be required before a make-up exercise or lab will be created.\*\***

**5. Submission of Materials.** Assignment submissions may ONLY be through Turnitin.com AND/OR by paper copy to the instructor in person. The TA and Anthropology office staff may not accept assignments. We will be using Turnitin.com, primarily to make on-time submission easier.

**The Turnitin class ID number is: 4274137**

**The class password is: laboratory**

You must submit an electronic copy of your assignments at Turnitin.com by the start of class (2 pm) on the dates specified. **In addition,** your assignments must also be submitted as a paper copy at the start of class on the date indicated. In case of discrepancies, the Turnitin.com version of the assignment will be used for marking. Late copies must be submitted through Turnitin.com for a date stamp, to limit the late penalties incurred (see (5) below).

*“Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University’s use of the Turnitin.com service are described on the Turnitin.com web site.”*

If you are uncomfortable submitting your essay through Turnitin.com, you may arrange in the first two weeks of class to simply supply a paper copy to the instructor by the required date and time. In that case, you will have to bring any late assignments to the instructor, at the instructor’s convenience, possibly to St. George campus. Emailed assignments will not be accepted.

**6. Late assignments will have 20% of the total possible marks deducted per calendar day late. 10% will be deducted for assignments turned in after the first hour of class on the date due, even if the assignment is turned in on the due date. No late assignments will be accepted after 3 days (that is, Friday is the last day a late assignment will be accepted).** It is your responsibility to turn in late assignments to the instructor, at her convenience. You may NOT submit assignments by email. Only the usual documented excuses (doctor's note, etc.) will be accepted to avoid late penalties.

\*\*\*Course work is cumulative, so assignments must be completed on time.

## Course Schedule

DATE (Wed)	TOPIC for CLASS	READING to be COMPLETED for CLASS (Please read in order given!)	ASSIGNMENT DUE
Sept. 7	Introduction Archaeological Work—Overview Introduction to Cemetery Project Ethics in Archaeology <u>Group Exercises:</u> Gravestone Styles Cemetery Rituals	<u>S &amp; A:</u> Ch. 1-Introduction, 1-15 -- <i>terminology</i> <u>B:</u> Introduction, 1-7 <i>Note Barber also has a Glossary of terms for Cemetery description</i> <u>Blackboard:</u> handout on style (Staeck 70-71)	---
Sept. 14	Research Design Background Material Archaeological Survey Archaeological Excavation <u>Group Exercises:</u> Research Design Human Subjects Review	<u>Syllabus &amp; Project handouts</u> <u>S &amp; A:</u> Ch. 2-The Archaeological Project, 17-25 <u>Blackboard:</u> Staeck 2002: 50-52,56; Price & Gebauer 1990: 6-13; Dibble 2003: 23-26; <u>B:</u> Planning Research, 227-229; Cemetery Studies 191-198; Grave Offerings 215-216, 220-221; Grave Marker Ideology 223-225; Oral History 27-32	Bring list of possible project cemeteries; must <b>finish readings before class</b> to do exercises
Sept. 21	Archaeological Object Analysis: --Recording Data --Reports and Illustrations (Figures, Tables, Graphs, Maps) <u>Lab:</u> Measurement & Data Communication	<u>Blackboard:</u> Lab handout <u>B:</u> Sampling, Stats, Reports, 230-238 <b>(Read these before you write Exercise 1)</b> <u>S &amp; A:</u> Ch. 3 and Ch. 14 - Recording, Measurement, Illustration: 27-43, 327-335	<u>Project:</u> First draft of your research design
Sept. 28	Time and Archaeology: --Stratigraphy & Dating; Taphonomy --Typology & Seriation <u>Group Lab:</u> Typology & Seriation	<u>S &amp; A:</u> Dating 309-315, review 13-15 <u>B:</u> Stratigraphy 81-89 <u>Blackboard:</u> Price & Gebauer 14-26; Harris article (stratigraphy); Staeck p. 25-30 (typology)+ review style ho <u>B:</u> Typology 127-129, 133-140; Seriation 174-177, 199-205	Exercise 1: Measurement & Data Communication (handout)
Oct. 5	Written and Oral Sources (including cemetery markers!) <u>Group Lab:</u> Cemetery data, interpretations <b>(must bring your data to class)</b>	<u>B:</u> Written & Oral Sources, 5-7, 8-10, 17-21, 33-41, 42-43; Cemetery markers: 206-209 & other parts of this section of Barber <u>S &amp; A:</u> 226-227 <u>Blackboard:</u> references for Cemetery Project	Exercise 2: Time A. Stratigraphy (ho); B. Similiary Seriation (B 174-180)

Oct. 12	Archaeological Spatial Analysis: --Settlement Pattern Analysis --Settlement Growth Analysis --Distributional Analyses <u>Spatial Analysis Labs (in library)</u>	<u>B</u> : Spatial Analysis: Regional Settlement Patterning & Community Patterning, 53-74 <u>Blackboard</u> : 2 Handouts – GIS Exercise & Google Earth: Rome Reborn Exercise	<b>MEET IN LIBRARY CLASSROOM</b>
Oct. 19	Artifact Analysis: Shell, Bone, & other Organic materials (Basketry, Textiles, Wood, Hide, etc) <u>Lab</u> : Organic materials and associated artifacts	<u>S &amp; A</u> : Ch 7 & 8, Shell, Bone, Perishables, 141-164 <u>B</u> : Analysis of Artifacts, 125-126	Exercise 3: Spatial Analysis (3 parts): A. Regional Settlement (B 55-63); B. Community Pattern (ho); C. Rome Reborn (ho)
Oct. 26	Artifact Analysis: Flaked Stone & Ground Stone <u>Lab</u> : Flaked & Ground Stone	<u>S &amp; A</u> : Ch. 4 & 5: Flaked Stone and Ground Stone Analysis, 45-109	<u>Project</u> : Research Design; data set to date
Nov. 2	Artifact Analysis: Pottery Analysis <u>Lab</u> : Pottery Analysis	<u>S &amp; A</u> : Ch 6: "Aboriginal Ceramic Analysis", 111-139; "Historic Ceramics", 205-221	Exercise 4: Lithics (handout)
Nov. 9	Artifact Analysis: Glass Functional Analysis, Food Social Aspects of Consumption <u>Lab</u> : Glass containers	<u>Blackboard</u> : Staeck, 234-239, 242-248 <u>S &amp; A</u> : Glass Artifacts, 184-205 <u>B</u> : Function, 181-183; Artifacts/Foodways (Bottles) – inferring alcohol usage, 107-126;	Exercise 5: Pottery (handout)
Nov. 16	Artifact Analysis: Metal <u>Lab</u> : Metal artifact identification	<u>Blackboard</u> : Staeck 219-221, 225, 228-232 <u>B</u> : Artifact Identification (Nails), 127-132 <u>S &amp; A</u> : Metal Artifacts, 166-184	Exercise 6: Functional & Social Analysis: Inferring Alcohol Usage from Glass Bottles (B 107-124 & handout)
Nov. 23	Overview: Floral, Faunal, Human Remains; Archaeometry <u>Cemetery Analysis</u> – Group Reports	<u>Blackboard</u> : check for any last project information  [ <u>S &amp; A</u> : Ch 10, 11, 12 – for future reference]	<u>Project</u> : Final report due

## Format for Formal Lab Reports

**1. General Appearance:** Lab reports should be typed unless otherwise indicated on the individual lab instructions. Those labs or sections of labs that are handwritten must be neatly PRINTED in dark pencil or ink, carefully drawn, and on paper with smooth edges. (In other words, they should look as good as a typewritten lab, not as if you wrote it on the bus on an old piece of paper from the bottom of your bag.)

**2. Heading:** Put the lab number and name at the top of the page, with your name under it, and the date the lab is due in the third line. **Do NOT use a separate cover sheet.** For example:

*Lab 10: Analysis of Refractory Materials*

*Heather M.-L. Miller*

*Dec. 25, 2010*

**3. Organization of Contents:** Each lab report should begin with a statement of the objective, and end with a conclusion. Both should be short – a few sentences at most. The body of the lab will differ for each lab, and will be specified for each under the heading “Outline”. All labs will have illustrations of some sort.

Here is an example of an Objective and a Conclusion:

### Objective

*The purpose of Lab 10 is to test whether the addition of chopped straw to a clay body makes it more heat resistant.*

### Conclusion

*My own experimental results were that the addition of a small amount of chopped straw (10% by volume) did make the test clay more heat resistant, but the addition of more straw (20% and 30%) did not increase heat resistance. However, the overall class results showed that the addition of more straw increased heat resistance, in a linear fashion. My own results were thrown out due to experimenter error in the firing process procedure.*

**\*\*Your ability to discern the main objective(s) of a lab is a central part of your lab grade – so don't ask your instructors or classmates to tell you what the objective was for each lab. This is often the difference between an A and a B lab. However, if you are still having trouble with this after the first few labs, please come see the instructor or TA during her/his office hours.**

## **4. Drawings & Flow Chart / Tables**

Use these to clarify and illustrate the text; most will be done by hand, not on the computer. Drawings will be necessary for some labs, and a flow chart or table of steps showing the overall lab process is helpful for most labs. Either integrate any drawings or tables into the text, or put them at the end of the lab. Be sure to put a referent (e.g., “Figure 1” or “Table 1”) into your text, so the reader looks for the illustrations. See how your text does this for more help.

**5. Style:** Lab reports should be concise and to the point – delete all unnecessary sentences, such as “Since earliest times, humans have used stone tools.” Cut to the essence: “This lab will examine whether it is possible to determine the function of a stone tool from the use wear on it.” However, do be sure to cite references as appropriate. **\*\*Clear, concise communication is a major goal of this class,** so write appropriately – longer is certainly not always better.

**6. Citations & Bibliographies:** Use the style employed by your Barber textbook for all citations & bibliographies turned in for this class. Ask the instructor or TA if you have any problems.