



McMaster University, Department of Anthropology, ANTHROP 3FA3

## **FORENSIC ANTHROPOLOGY**

### **Spring 2022**

**Instructor:** Creighton Avery

**Lecture:** Monday & Wednesday, 6:30-9:30pm

**Lecture Space:** ABB 102

**Email:** [averylc@mcmaster.ca](mailto:averylc@mcmaster.ca)

**Office:** CNH 515

**Office Hours:** Monday 5:30-6:20

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## **Land Acknowledgement**

I acknowledge that McMaster University is located on the traditional territories of the Mississauga and Haudenosaunee nations, within the lands protected by the “Dish with One Spoon” Wampum agreement. In this agreement, the dish represents the land, and the spoon represents the people, who are to take only what they need, and protect the land for future generations. Additionally, I am currently residing in traditional territories of the Haudenosaunee, Anishnawbe, and Neutral Peoples, in the land known as the Haldimand Tract. This land was given in compensation to the Six Nations of the Grand River and Mississaugas of the Credit First Nation in 1784, but today only 5% of that land remains under their protection. I encourage you to learn more about the lands you inhabit. If you’re in Canada, you can start by visiting Native-Land (<https://native-land.ca/>) or Whose Land (<https://www.whose.land/en/>).

## **Course Description**

Forensic anthropology has been popularized by TV shows like CSI and Bones. This course, however, will focus on the practical skills and methods used by real-life forensic anthropologists to assist in investigating real-life cases. In this course, we will look at the different methods and approaches taken by forensic anthropologists to help investigate modern, suspicious, and violent deaths. This includes looking at the human skeleton, methods to identify a set of remains, and interpret time since death. You’ll take what you learn in this course and use it to solve two fictional case studies. Ultimately, this course will help you consider multiple lines of evidence and view a problem holistically. In doing so, it will also help develop your critical thinking skills, relevant in both academic and professional environments.

**Note:** As an essential piece of this course, there will be discussions of death, homicide and suicide, abuse and trauma. There will also be images, where appropriate, of human remains.

## **Intended Learning Outcomes**

By the end of the course students should be able to:

1. Discuss how forensic anthropologists contribute to legal investigations, mass disasters and human rights cases.
2. Explain the process of identifying, documenting, and recovering human remains at a crime scene.
3. Describe what happens to a body after death, and how time since death can be assessed.
4. Apply the methods and techniques used by forensic anthropologists to establish a biological profile.
5. Identify and interpret evidence for trauma in skeletal remains to assess events prior to, and after, death.

## **Your Instructor**

Hi! My name is Creighton (she/her), and I recently received my PhD in Biological Anthropology at McMaster University. In my research, I explore the social and biological experiences of adolescence in the Roman Empire. What I love most about my research, is that I get to use scientific methods to answer social questions about life in the past. I was also first introduced to biological anthropology through the TV show *Bones*, so it has a special place in my heart. Outside of academia, I love to quilt (which I learned how to do via YouTube) and go on canoe tripping adventures.

I'm looking forward to getting to know all of you, and please don't hesitate to reach out with any questions or concerns at any point this semester.



## **Required Materials and Texts**

There are no required texts or materials for this course. Rather, course readings can be accessed through McMaster Library system or Google scholar. Additional resources will be made available through class to facilitate your learning.

## **Class Format**

This course is divided into two keys sections. In the first half of this course, we'll look establishing forensic significance, taphonomy and excavation. In the latter half, we'll look at how we work to identify remains, and interpreting evidence that might help identify the mode, manner, and cause of death.

It is my hope to deliver a course that engages all learners, this includes designing assignments that can be completed in different formats and providing course content in different modalities. If there is any portion of the course that you feel you cannot engage in or complete to the best of your ability, please reach out to me via email to discuss how I can better support your learning.

This course is intended to be delivered and held in-person, with Avenue to Learn serving as the remote base for all relevant course content and assignment submissions. Understanding that people may get sick, all lectures will be recorded and posted on Avenue to Learn following the class. However, in-person attendance is highly encouraged to work with hands-on materials when appropriate.

## **Course Evaluation – Overview**

Assignments are designed to help keep you on track and apply what you've learned in class to two fictional forensic case studies, to see how course content comes together. If you have any concerns about the following assignments (content, format, timeline etc.), please reach out to me in advanced, to see what can be done to help you succeed in this course. Assessments are to be completed/submitted on Avenue to Learn. I employ a compassionate late policy, where late penalties are not deducted for two days after the due date. If I have not heard from you to discuss why your assignment is late, a late penalty of 5% per day, including weekend days, will be applied after that point.

1. End of week 1 quiz (10%), due May 6 at 11:59pm
2. End of week 2 quiz (10%), due May 13 at 11:59pm
3. End of week 3 quiz (10%), due May 20 at 11:59pm
4. Midterm Case Study (20%), due May 25 at 11:59pm
5. End of week 5 quiz (10%), due June 3 at 11:59pm
6. End of week 6 quiz (10%), due June 10 at 11:59pm
7. Final case study (30%), due June 15 at 11:59pm

## **Course Evaluation – Details**

### **End of Week Quizzes (10% x 5 = 50%), due throughout the semester**

Each week, you'll complete a quiz on Avenue to Learn, testing you on the weekly readings and lectures. These non-cumulative quizzes will be available on Monday each week, and due on Fridays by 11:59pm. You'll have 30 minutes to complete the quiz each week, which will consist of 10-20 questions. You can only take each quiz once, and there is no moving backwards through the quiz. This will help you achieve ILO 1-5 throughout the semester.

### **Midterm Case Study (20%), due May 25**

You'll be presented with a fictional forensic case study with clues, pictures, and notes. It'll be up to you to determine if all aspects have forensic significance, if the recovery has been completed properly, and time since death. You'll then put together a final report covering your findings and expert interpretation. See assignment sheet for more details. This will help you achieve ILO 2 and 3.

### **Final Case Study (30%), due June 15**

Once again, you'll be presented with a fictional forensic case study with clues, pictures, and notes. You'll be asked to provide presumptive identification, and if anything can be used to establish a positive identification. You'll also analyze the remains to establish cause, manner, and mode of death, as well as an assessment of trauma. See assignment sheet for more details. This will help you achieve ILO 4 and 5.

## **Weekly Course Schedule and Required Readings**

Assigned readings and/or videos should be completed each week, to stay on top of the materials, facilitate your learning, and prepare you for assessments (especially weekly quizzes). Lectures will be delivered in class, with opportunities for students to ask questions and seek clarification. To further support your learning slides will also be available on Avenue to Learn.

### **Week 1. What is Forensic Anthropology? (May 2 & 4)**

For our first week, we'll take a tour of the course shell and go through some introductions as we get started in this course. We'll then define what forensic anthropology is, as the combination of forensic science and anthropology and how this discipline has developed. In our second lecture this week, we'll go through establishing forensic significance with three key questions.

Readings: Ubelaker, Douglas H. (2017). A history of forensic anthropology. *American Journal of Physical Anthropology* 165: 915-923. <https://doi.org/10.1002/ajpa.23306>.

Due: Week 1 Quiz

### **Week 2. Crime Scenes and the Human Skeleton (May 9 & 11)**

This Monday, we'll look at crime scenes including how individuals search, document, and recover pieces of evidence necessary for pursuing a criminal case. On Wednesday, we'll go through the basics of the human skeleton, necessary for future weeks in this class.

Readings: Evis, Laura Helen, Hanson, Ian, & Cheetham, Paul Nicholas. (2016). An experimental study of two grave excavation methods: Arbitrary level excavation and stratigraphic excavation. *STAR: Science & Technology of Archaeological Research* 2(2): 177-191. <https://doi.org/10.1080/20548923.2016.1229916>.

Fernández-Alvarez, Jose-Paulino, Rubio-Melendi, David, Martinez-Velasco, Antxoka, Pringle, Jamie K., Aguilera, Hector-David. (2016). Discovery of a mass grave from the Spanish Civil War using Ground Penetrating Radar and forensic archaeology. *Forensic Science International* 267: e10-e17. <https://doi.org/10.1016/j.forsciint.2016.05.040>.

Due: Week 2 Quiz

### **Week 3. Forensic Taphonomy and Time Since Death (May 16 & 18)**

We'll look at the process of decomposition, and how we can determine time since death using a variety of methods.

Readings: Ciaffi, Romina, Feola, Alessandro, Perfetti, Emilio, Manciocchi, Stefano, Potenza, Saverio, & Marella, Gian Luca. (2018). Overview on the estimation of

postmortem interval in forensic anthropology: review of the literature and practical experience. *Romanian Society of Legal Medicine* 26: 403-411. <https://doi.org/10.4323/rjlm.2018.403>.

Due: Week 3 Quiz

#### **Week 4. Movie: Following Antigone (May 23 & 25)**

Between a holiday Monday, and Creighton being away on Wednesday, there will be no classes this week. Rather, watch the video posted online and answer the discussion questions about them.

Readings: None

Due: Midterm Case Study

#### **Week 5. Identifying Remains (May 30 & June 1)**

This week, we'll look at a number of methods that can help us identify a set of remains, including how to estimate age and sex, ancestry and stature, as well as a positive identification.

Readings: Bethard JD, DiGangi EA (2020) Letter to the editor: moving beyond a lost cause: forensic anthropology and ancestry estimates in the United States. *Journal of Forensic Sciences* 65(5): 1791-1792. <https://doi.org/10.1111/1556-4029.14513>.

Schall, Jenna L., Rogers, Tracy L., Deschamps-Brady, Jordan C. (2020). Breaking the binary: the identification of trans-women in forensic anthropology. *Forensic Science International* 309: 110220. <https://dx.doi.org/10.1016/j.forsciint.2020.110220>.

Due: Week 5 Quiz

#### **Week 6. Cause, manner, and mode of death (June 6 & 8)**

On Monday, we'll talk about anthropologists role in determining cause, manner and mode of death, and how we might be able to differentiate between homicides, suicides, and accidental deaths. We'll also cover types and timing of trauma that might be visible in the human remains.

Readings: Blau, Soren. 2017. How traumatic: A review of the role of the forensic anthropologist in the examination and interpretation of skeletal trauma. *Australian Journal of Forensic Sciences* 49(3): 261-280. <https://doi.org/10.1080/00450618.2016.1153715>.

Due: Week 6 Quiz



## **Week 7. Mass Disasters and Human Rights (June 13 & 15)**

On Monday, we'll talk about the role a forensic anthropologist can play when investigating mass disasters and human rights issues. On Wednesday, our last class, we'll have a panel event, where we talk to a number of specialists about their careers in forensic anthropology.

Readings: De Boer, HH, Blau S, Delabarde T, Hackman L. 2019. The role of forensic anthropology in disaster victim identification (DVI): recent developments and future prospects.

Due: Final Case Study

## **Course Policies**

### **Submission of Assignments**

All assignments will be submitted through Avenue to Learn, including written work (weekly responses, essays, etc.) and exams. Deadlines for each week are set for 11:59pm on Friday nights.

### **Grades**

Grades will be based on the McMaster University grading scale:

<b>MARK</b>	<b>GRADE</b>
90-100	A+
85-90	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
67-69	C+
63-66	C
60-62	C-
57-59	D+
53-56	D
50-52	D-
0-49	F

### **Late Assignments**

I employ a compassionate late policy, where late penalties are not deducted for two days after the due date. If I have not heard from you to discuss why your assignment is late, a late penalty of 5% per day, including weekend days, will be applied after that point.

### **Absences, Missed Work, Illness**

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar "[Requests for Relief for](#)

[Missed Academic Term Work](#)" (MSAF). If you have used your MSAF, and still need relief from academic work, please visit the Faculty of Social Sciences (or your home faculty) to discuss what alternatives might be possible.

### **Avenue to Learn**

In this course we will be using Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, usernames for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

### **Turnitin.com**

In this course we will be using a web-based service (Turnitin.com) to reveal plagiarism. By submitting to the Avenue to Learn submission folder, it will be scanned by Turnitin.com so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must inform the instructor at the beginning of the semester. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to [www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity).

## **University Policies**

### **Academic Integrity Statement**

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at [www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity).

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which credit has been obtained.



2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

### **Academic Accommodation of Students with Disabilities**

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail [sas@mcmaster.ca](mailto:sas@mcmaster.ca). For further information, consult McMaster University's Policy for [Academic Accommodation of Students with Disabilities](#).

### **Religious, Indigenous and Spiritual Observances (RISO)**

The University recognizes that, on occasion, the timing of a student's religious, Indigenous, or spiritual observances and that of their academic obligations may conflict. In such cases, the University will provide reasonable academic accommodation for students that is consistent with the Ontario Human Rights Code. Please review the [RISO information for students in the Faculty of Social Sciences](#) about how to request accommodation.

### **Faculty of Social Sciences E-mail Communication Policy**

Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student's own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student's responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

### **Privacy Protection**

In accordance with regulations set out by the Freedom of Information and Privacy Protection Act, the University will not allow return of graded materials by placing them in boxes in departmental offices or classrooms so that students may retrieve their papers themselves; tests and assignments must be returned directly to the student. Similarly, grades for assignments for courses may only be posted using the last 5 digits of the student number as the identifying data. The following possibilities exist for return of graded materials:

1. Direct return of materials to students in class;
2. Return of materials to students during office hours;
3. Students attach a stamped, self-addressed envelope with assignments for return by mail;
4. Submit/grade/return papers electronically.

Arrangements for the return of assignments from the options above will be finalized during the first class.

### **Course Modification**

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

### **Cover Image**

Excavations at Drawsko Mortuary Field School (2012). Photo by Creighton Avery.