

Department of Anthropology, University of Toronto Mississauga  
 ANTH337H5 Anthropology of Growth and Development  
 Fall 2024

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| Course Title                          | Anthropology of Growth and Development   |
| <b>Lecture times &amp; format</b>     | <b>Thursdays, 11:00 am – 1:00 pm</b><br>In-Person, MN 2190   |
| Course website                        | <a href="https://q.utoronto.ca/courses/364712">https://q.utoronto.ca/courses/364712</a>  |
| Instructor                            | Dr. Creighton Avery  |
| Email                                 | <a href="mailto:creighton.avery@utoronto.ca">creighton.avery@utoronto.ca</a>   |
| Office                                | HSC354   |
| <b>Office hour times &amp; format</b> | In person: Thursdays, 1:30-2:30pm<br>Virtual: By appointment   |
| Teaching Assistants                   | TBD  |
| Required reading/textbook             | Weekly assigned readings, available through the library system or provided via Quercus (see tentative list below).   |
| Course description                    | This course examines the fundamental biological principles of growth and how these are expressed. The course examines human growth and development throughout infancy, childhood, and adolescence and explores the influence of genetic, epigenetic, and endocrine processes on the plasticity of human growth that ultimately produces the variability observed in our species. The evolution of growth patterns among primates and hominins are also considered. The goal of this course is to provide students with a complex understanding of how environmental and social processes interact in the production of growth and health in human populations. |
| Learning outcomes (LO)                | By the end of the course students should be able to: <ol style="list-style-type: none"> <li>1. Explain major research questions and methodological approaches to the study of growth and development in bioarchaeology</li> <li>2. Discuss the current state of bioarchaeological research into growth and development</li> <li>3. Critically assess peer-reviewed journal articles</li> <li>4. Communicate bioarchaeological research to a broad audience</li> </ol>  |
| Course assessments                    | <b>Weekly Reading Responses (4% x 7 = 28%), due throughout the semester</b><br>Each week, two questions will be posed for you to answer based on the required readings. You'll select one to answer and submit through Quercus. In your answers, I will be looking for major points and themes, but will not focus on grammar and perfect sentence structure. This will help you   |

stay on top of your weekly readings and prepare you for in-class discussions. Your top seven out of a possible nine weeks will contribute to your final grade, but you're welcome to complete all nine. This will help you achieve LO 1, 2, 3, and 4, throughout the semester.

**Midterm Test (25%), completed in-class on October 24, 2024**

The written test will cover lecture content from Week 1 to Week 7 (September 5 to October 17, inclusive). The exam will include true/false, multiple choice, fill-in-the-blank, and short answer questions. This will help you achieve LO 1 and 2.

**Grant Application (47%), Multiple Dates**

Pretending you're about to undertake your own research project related to growth and development, prepare and present a grant application. This will help you achieve LO 1, 3, and 4. This assigned is broken into four parts:

1. **Grant Proposal** (6%, due October 17, 2024, 11:59pm). Submit a synopsis of your proposed research project, to help ensure you're on the right track and that it is relevant to the current course. You'll be asked to provide your research question, a rough idea of materials or methods, and two sources that will support your grant application.
2. **Grant Application** (25%, due November 14, 2024, 11:59pm). Using the template provided, write up a full grant application for your hypothetical research project. Include your research questions, background information, and indicate what materials and methods you will use, as well as the appropriate theoretical framework that will drive your research. As with any grant application, you'll also have to explain the significance of your research to an "educated but non-specialized" audience.
3. **Three Minute Pitch** (10%, due November 28, 2024, in class). With one static slide and no more than three minutes, briefly explain the project you want to undertake, including the objectives, aims, and importance. You will also have two minutes to answer any questions that arise from your classmate.

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|  | 4. <b>Peer Evaluation</b> (6%, due November 28, 2024, 11:59pm). Using the provided rubric and asking appropriate questions, provide feedback for two other students (assigned randomly) and their Three Minute Pitch. |
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## COURSE OUTLINE

### Course Outline

This course will use a semi-flipped classroom design. Each lecture will be divided into two parts. Typically, Part 1 of the class (11am to 12pm) will be devoted to in-class discussions, exploring the topic introduced in the previous week as well as assigned readings on the topic. Part 2 (12 to 1 pm) will resemble a typical lecture, introducing you to new content related to growth and development. Part 3, readings, are to be completed after the lecture, and will build on material introduced in the second part, forming the basis of the discussion for the first part of the subsequent class.

Discussions and lectures will occur in class, with opportunities for students to ask questions and seek clarification. Assigned readings will be indicated on Quercus, to be accessed through the online or through the library. Slides will also be available on Quercus. To support your learning, a range of optional activities (readings, videos, webpages, etc.) will also be available on Quercus. It is my hope to deliver a course that engages all learners. 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 learn how I can better support your learning.

| <b>Week</b> | <b>Date</b>  | <b>Part 1:<br/>Discussion</b> | <b>Part 2:<br/>Lecture</b>                     | <b>Part 3:<br/>Readings</b> |
|-------------|--------------|-------------------------------|--|-----------------------------|
| <b>1</b>    | September 5  | Introduction                  | Growth and Development                         | A, B                        |
| <b>2</b>    | September 12 | Growth Disruptions            | Perinates and Birth                            | C, D                        |
| <b>3</b>    | September 19 | Perinates                     | Infants and Weaning                            | E, F                        |
| <b>4</b>    | September 26 | Infants                       | Children and Stunting                          | G, H                        |
| <b>5</b>    | October 3    | Children                      | Adolescents and Puberty                        | I, J                        |
| <b>6</b>    | October 10   | Adolescents                   | Old Age and Senescence                         | K, L                        |
| <b>7</b>    | October 17   | Old Age                       | Theory<br><b>Grant Proposal Due</b>            | M, N                        |
| <b>8</b>    | October 24   | <b>Midterm Test</b>           |  | None                        |
| -           | October 31   | Reading Week                  | No Class                                       | None                        |
| <b>9</b>    | November 7   | Preparing Your Pitch          | Primates                                       | O, P                        |
| <b>10</b>   | November 14  | Primates                      | Early Hominins<br><b>Grant Application Due</b> | Q, R                        |

|    |             |   |                    |      |
|----|-------------|---|--------------------|------|
| 11 | November 21 | Early Hominins  | Modern Populations | S    |
| 12 | November 28 | <b>Three Minute Pitch, in-class<br/>Peer Evaluation due</b> |                    | None |

For Fall 2024 “F” term courses: November 6, 2024 is the deadline to drop a F course from academic record and GPA.

## Readings

Readings are tentatively assigned, and may change based on the interest of the class, previous discussions, or newly published material. Please see Quercus for an updated list of required readings for each week.

- A. Lewis, Mary E. 2008. Children in Bioarchaeology: methods and interpretations. In M. Anne Katzenberg and Anne L. Grauer (Eds.) *Biological Anthropology of the Human Skeleton: Third Edition*. DOI: 10.1002/9781119151647.ch4.
- B. Mays, Simon. 2018. The study of growth in skeletal populations. In Sally Crawford, Dawn M. Hedley, and Gillian Shepherd (Eds.) *The Oxford Handbook of the Archaeology of Childhood*. Oxford: Oxford University Press, pp. 71-89.
- C. Solari, Ana, Anne Marie Pessis, Gabriela Martin, and Niède Guidon. 2020. Fetal bioarchaeology: A case-study of a premature birth from Burial 2 in Toca do Enoque (Middle Holocene, Northeastern Brazil). *Childhood in the Past* 13(1): 8-19. DOI: 10.1080/17585716.2020.1738629.
- D. Ellis, Meredith A. B. 2020. Still life: A bioarchaeological portrait of perinatal remains buried at the Spring Street Presbyterian Church. *Historic Archaeology* 54: 184-201. DOI: 10.1007/s41636-019-00216-5.
- E. Guterrez, Elea, Isabell Ribot, Jean-Fraoncois Helie. 2021. Weaning among Colonists from Montreal and environs: What can nitrogen isotope analysis on dentine tell us? *Bioarchaeology International* 5(3-4): DOI: 10.5744/bi.2020.0022.
- F. Pezo-Lanfranco, Luis, Aldemar Crispin, Marco Machacuay, Pedro Novoa, Ruth Shady. 2020. Isotopic evidence of weaning behaviors from farming communities of the Peruvian North-Central coast: insights into the demography of the transition from the Middle to the Late Formative Periods (500 – 400 BC). *Bioarchaeology International* 4(3-4): 191-216. DOI: 10.5744/bi.2020.3019.
- G. Dhavale, Neha, Sian E. Halcrow, Hallie R. Buckley, Nancy Tayles, Kate M. Domett, Andrew R. Gray. 2017. Linear and appositional growth in infants and children from the prehistoric settlement of Ban Non Wat, Northeast Thailand:

Evaluating biological responses to agricultural intensification in Southeast Asia. *Journal of Archaeological Science: Reports* 11: 435-446. DOI: 10.1016/j.jasrep.2016.12.019.

- H. Schug, Gwen Robbins and Haviva Goldman. 2014. Birth is but our death begun: A bioarchaeological assessment of skeletal emaciation in immature human skeletons in the context of environmental, social, and subsistence transition. *American Journal of Physical Anthropology* DOI: 10.1002/ajpa.22536.
- I. Blom, Alette Anne, Rachel Schats, Menno L. P. Hoogland, Andrea Waters-Rist. 2020. Coming of age in the Netherlands: An osteological assessment of puberty in a rural Dutch post-medieval community. *American Journal of Physical Anthropology*. DOI: 10.1002/ajpa.24161.
- J. Avery, L Creighton, Tracy L Prowse, Sheri Findlay, Cecile Chapelain de Sereville-Niel, Megan B Brickley. 2023. Pubertal timing as an indicator of early life stress in Roman Italy and Roman Gaul. *American Journal of Physical Anthropology* 180(3): 548-560. DOI: 10.1002/ajpa.24680.
- K. Eng, Jacqueline T. 2015. A bioarchaeological study of osteoarthritis among populations of northern China and Mongolia during the Bronze Age to Iron Age transition to nomadic pastoralism. *Quaternary International*. DOI: 10.1016/k.quaint.2015.07.072.
- L. Newman, Sophie L., Katie Keefe, Anwen C. Caffell, Rebecca L. Gowland, Jelena Bekvalac, Malin Holst, Isabelle Heyerdahl-King. 2023. Growing old in the Industrial age: Aging, health, and social identity in elderly women (eighteenth-nineteenth centuries AD). *Bioarchaeology International* 7(3). DOI: 10.5744/bi.2023.0003.
- M. Garland, Carey J. 2020. Implications of accumulative stress burdens during critical periods of early postnatal life for mortality risk among Guale interred in a colonial era cemetery in Spanish Florida (ca. AD 1605-1680). *American Journal of Physical Anthropology* 172(4): 621-637. DOI: 10.1002/ajpa.24020.
- N. Hodson, Claire M., and Rebecca L. Gowland. 2020. Life mother, like child: Investigating perinatal and maternal health stress in Post-Medieval London. In Rebecca Gowland and Sian Halcrow (Eds.) *The Mother-Infant Nexus in Anthropology: Small beginnings, significant outcomes*. Springer, pp. 39-64.
- O. Berghaenel, Andreas, Jeron M. G. Stevens, Gottfried Hohmann, Tobias Deschner, Verena Behringer. 2023. Evidence for adolescent length growth spurts in bonobos and other primates highlights the importance of scaling laws. *eLife* 12: RP86635. DOI: 10.7554/eLife.86635.

- P. Jarrett, Jonathan D., Tyler Bonnell, Matthew J. Jorgensen, Christopher A. Schmitt, Christopher Young, Marcus Dostie, Louise Barrett, and Stephanus Peter Henzi. 2020. Modeling variation in the growth of wild and captive juvenile vervet monkeys in relation to diet and resource availability. *American Journal of Physical Anthropology* 171(1): 89-99. DOI: 10.1002/ajpa.23960.
- Q. Garvia-Martinez Daniel, Markus Bastir, Asier Gomez-Olivencia, Bruno Maureille, Liubov Golovanova, Vladimir Doronichv, Takeru Akazawa, Osamu Kondo, Hajime Ishida, Dominic Gascho, Christoph P. E. Zollikofer, Marcia Ponce de Leon, and Yann Heuze. 2020. Early development of the Neanderthal ribcage reveals a different body shape at birth compared to modern humans. *Science Advances* 6: eabb4377.
- R. Bolter, Debra R, Noel Cameron. 2020. Utilizing auxology to understand ontogeny of extinct hominins: A case study on *Homo naledi*. *American Journal of Physical Anthropology* 173(2): 368-380. DOI: 10.1002/ajpa.24088.
- S. Monteith, Hiliary, Mary Mamakeesick, Joan Rae, Tracey Galloway, Stewart B. Harris, Catherine Birken, Jill Hamilton, Jonathon L. Maguire, Patricia Parking, Bernard Zinman, Anthony J. G. Hanley. 2023. Determinants of Anishinabeck infant and early childhood growth trajectories in Northwestern Ontario, Canada: a cohort study. *BMC Pediatrics* 23:641.

## IMPORTANT COURSE INFORMATION

### USE OF GENERATIVE ARTIFICIAL INTELLIGENCE

Generative Artificial Intelligence (AI), and specifically foundational models that can create writing, computer code, and/or images using minimal human prompting, are proliferating and becoming ubiquitous.

In this course, students can use Generative AI in certain instances or specific ways. See below for some examples. If you are unclear if you may use AI in a particular way in this course, please reach out to the instructor to discuss options.

- Students may use artificial intelligence tools for creating an outline for an assignment, but the final submitted assignment must be original work produced by the student alone
- Students may use artificial intelligence tools for critiquing and editing as assignment for purposes of revision, but the first draft must be original work produced by the student alone
- Students may use artificial intelligence for gathering information across sources and assimilating it for understanding, but the assignment must be the original work produced by the student

## **ASSIGNMENT SUBMISSION POLICY**

Select assignments in this course will be submitted electronically through Quercus, including Weekly Reading Responses, Grant Proposal, Grant Application, and Peer Evaluations.

Normally, students will be required to submit their course essays to the University's plagiarism detection tool 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 tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).

If students choose to opt-out of submitting their essays to the University's plagiarism detection tool, they must notify the instructor. Students who choose to opt-out of using the plagiarism detection tool must do so in writing by email to the course instructor before **September 12, 2024**. Assignments without plagiarism detection submission must be accompanied by an outline, first draft and an annotated bibliography to demonstrate the paper's originality.

## **POLICY FOR MISSED AND LATE ACADEMIC TERM WORK**

### **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.

### **MISSED TESTS**

Students who miss a term test will be assigned a zero, unless discussions with the instructor to determine alternative arrangements for a make-up test. Grades will not be re-allocated should a make-up test not be possible.

## **SPECIAL CONSIDERATION FOR MISSED AND LATE ACADEMIC TERM WORK**

Students who miss term work (tests, assignments, labs) because of a temporary absence for a legitimate reason will receive reasonable academic consideration, such as the opportunity to write a make-up or to have the work graded without a late penalty being applied, without the need to provide supporting documentation.

Legitimate reasons for absence include:

- Illness or injury
- Personal or family emergencies
- Bereavement
- University sponsored events

The following are not considered legitimate reasons for absence:

- Personal social obligations
- Travel unrelated to the student's academic program
- Technological issues
- Avoidance of assessment or deadlines

To receive academic consideration for legitimate reasons, **within 72 hours of the missed deadline or test** students must use the [UTM Anthropology departmental process for special consideration](#).

Students with departmental approval for special consideration will be given an extended deadline with no late penalty or the opportunity to write a make-up.

## **ACADEMIC INTEGRITY**

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The [University of Toronto's Code of Behaviour on Academic Matters](#) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

It is your responsibility to understand the [Code of Student Conduct](#) and the [Code of Behaviour on Academic Matters](#)

Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

- Using or possessing unauthorized aids.
- Looking at someone else's answers during an exam or test.
- Misrepresenting your identity.

In academic work:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

On sharing instructor's intellectual property covered by the Canadian Copyright Act:

- Posting test, essay, or exam questions to message boards or social media.

- Creating, accessing, and sharing assessment questions and answers in virtual course groups.

Lesser-known academic offenses:

- Accessing unauthorized resources (search engines, chat rooms, Reddit, etc.) for assessments.
- Using technological aids (e.g. software) beyond what is listed as permitted in an assessment.
- The unauthorized use of Artificial Intelligence (AI) tools to assist in academic work.

**Plagiarism:** It shall be an offence for a student knowingly:

(a) to forge or in any other way alter or falsify any document or evidence required by the University, or to utter, circulate or make use of any such forged, altered or falsified document, whether the record be in print or electronic form;

(b) to use or possess an unauthorized aid or aids or obtain unauthorized assistance in any academic examination or term test or in connection with any other form of academic work;

(c) to personate another person, or to have another person personate, at any academic examination or term test or in connection with any other form of academic work;

(d) to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e. to commit plagiarism (for a more detailed account of plagiarism, see Appendix "A")

(e) to submit, without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course or program of study in the University or elsewhere;

(f) to submit any academic work containing a purported statement of fact or reference to a source that has been concocted.

(cited from the Code of Behaviour on Academic Matters)

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other [institutional resources](#).

## **COURSE COMMUNICATION**

Please use your utoronto.ca email address to ensure that your email messages are not filtered out by spam software and include "**ANT337**" in the subject line. I will try to reply to all appropriate emails within 48 hours on business days.

## **NOTICE OF VIDEO RECORDING AND SHARING**

This course, including your participation, may be recorded on video and made available to students in the course for viewing remotely and after each session. Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation, and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor. For questions about recording and use of videos in which you appear please contact your instructor.

## **CLASSROOM CONDUCT**

To be respectful of all individuals in the class, please follow the following guidelines:

- All cellphones must be silent during the lectures.
- You are expected to abide by the [University of Toronto's code of student conduct](#).
- Students who do not abide by the code of conduct will be asked to leave the lecture.

## **FINAL MARKS**

Final marks are tentative until approved by the Department of Anthropology Chair, the Office of the Dean, and recorded in the Office of the Registrar.

[Final Grades \(UTM Academic Calendar\)](#)

## **RE-GRADING POLICY**

A student who believes that their written term work has been unfairly marked may ask the person who marked the work for re-evaluation. Students have up to one month from the date of return of an item of term work to inquire about the mark. If the student is not satisfied with this re-evaluation, they may appeal to the instructor in charge of the course if the work was not marked by the instructor (e.g., was marked by a TA). Such re-marking may involve the entire piece of work, and may raise or lower the mark.

See [Re-marking Pieces of Term Work \(UTM Academic Calendar\)](#) for further details.

## **STUDENT CONDUCT**

If a student wishes to record, photograph, or otherwise reproduce lecture presentations, course notes or other similar materials provided by instructors, they must obtain the instructor's written consent beforehand. Otherwise, all such reproduction is an infringement of copyright and is absolutely prohibited. In the case of private use by students with disabilities, the instructor's consent will not be unreasonably withheld.

See [Taping / Recording / Photographing Lectures is Not Allowed](#) (UTM Academic Calendar) for further details.

## **SUPPORT AND RESOURCES**

### **ACCESSIBILITY ACCOMMODATION**

Students with diverse learning styles and needs are welcome in this course. If you have a disability/health consideration that may require accommodations, please consult with [UTM's Accessibility Services](#) at the beginning of your courses so that the proper supports are in place.

If there are any additional concerns with regard to this course, please reach out to the instructor in advance to discuss how we might work together to ensure a successful semester.

### **EQUITY, HUMAN RIGHTS, AND RESPECT FOR DIVERSITY**

At the University of Toronto, we strive to be an equitable and inclusive community, rich with diversity, protecting the human rights of all persons, and based upon understanding and mutual respect for the dignity and worth of every person. We seek to ensure to the greatest extent possible that all students and employees enjoy the opportunity to participate as they see fit in the full range of activities that the University offers, and to achieve their full potential as members of the University community.

See [U of T Statement on Equity, Diversity, and Excellence](#) for further information.

### **RELIGIOUS OBSERVANCE ACCOMMODATION**

The University of Toronto welcomes and includes students, staff and faculty from a broadly diverse range of communities and backgrounds. The University community comprises one of the most diverse campus populations anywhere. Students, staff and faculty have a wide range of backgrounds, cultural traditions and spiritual beliefs. With reference to the University's commitment to human rights as articulated in the [Statement on Human Rights](#) and in accordance with the accommodation principles of the Ontario [Human Rights Code](#), this policy is concerned with accommodations for students with respect to observances of religious holy days.

See [U of T Statement on Religious Observances, Policy on Scheduling of Classes and Examinations and Other Accommodations for Religious Observances](#) for more information.

### **STUDENT HEALTH & WELL-BEING SUPPORT**

For resources to support studental health and well-being, visit [Student Health & Well-being Support \(UTM Health & Counselling Centre\)](#).

## **ACADEMIC SKILLS CENTER**

The Robert Gillespie Academic Skills Centre (RGASC) is UTM's hub for learning and teaching. Visit [Academic Skills Centre](#) to learn about academic skill development available for students.