

ANTHROPOLOGY 2240A-200
Evolution, Ecology and Human Health
Department of Anthropology

COURSE OUTLINE

Fall 2021

Version date: November 9, 2021

Class day/time: Wednesdays 10:30 am-12:30 pm + 1 hour asynchronous.

Classroom: SSC-3028

Instructor: Dr. Jay Stock (he/him)

Email: jay.stock@uwo.ca

Office and hours: Wednesdays, 2-3pm on Zoom – or By Appointment

Mode of Delivery:

It is intended that the course will be delivered synchronously, in person, with some additional asynchronous material provided most weeks on OWL. Regarding COVID-19 - All students will be expected to follow the guidelines issued by the Province and the University regarding vaccines and other precautions, and the mode of delivery is subject to change relative to current health guidance throughout the term.

Requisites:

Antirequisites: None.

Prerequisites: Completion of first year, including at least **one** course in Social Science, Science, or Health Sciences. *Recommended:* Anthropology 1020, Anthropology 1021A/B, Anthropology 1022A/B, Anthropology 1025F/G, Anthropology 1026F/G, Geography 1100, Geography 1300A/B, Geography 1400F/G, Geography 1500F/G, Biology 1225, Biology 1290B, Health Sciences 1001A/B or Health Sciences 1002A/B.

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. The decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Course Syllabus:

This course introduces the broader evolutionary context of modern human health and disease. The biology and physiology of the human body evolved over the past seven million years. The legacy of this evolution has shaped the biology of our species, yet we live in a world characterized by rapid cultural and environmental change. In this course we consider the impact of these changes on human health. The course begins with an introduction to evolutionary theory and a brief evolutionary history of the human body, before considering how our species has constructed and modified our ecological niche through cultural change. We will consider a range of mismatch

hypotheses that use evolutionary theory to interpret health in the 21st century. Specific issues covered will include: aging, mortality and cancer; parasites and pathogens; obstetrics and childbirth; diet, the microbiome and metabolic disease; activity and sport, and health in the Anthropocene. This course will be divided into a two-hour lecture and a one-hour tutorial each week. Readings will be assigned for lectures, and tutorial sessions will be used to critically discuss the readings and lecture material. Active participation in small group discussions during the tutorial sessions will deepen students' understanding of the course material and will be key to doing well on the exams.

A full course schedule including a week-by-week breakdown of topics and assigned readings will be available on the course's OWL site before the first day of class.

Learning Outcomes

By the end of this course, students will:

- Understand the evolutionary context for key aspects of human biology and how they relate to ecology
- Understand the concept of niche construction and how human cultural change influences our adaptive niche and health
- understand how environmental stress has driven human variation and adaptation
- characterize the influence of past and recent cultural change on human biology, and health
- evaluate the evidence of environmental discordance or 'mismatch' between human physiology and modern cultural environments

Course Materials:

Many readings in this course are drawn from the following book:

Lieberman, D. (2013) *The Story of the Human Body: Evolution, Health and Disease*. Vintage Books.

<https://bookstore.uwo.ca/product/9780307741806>

Additional weekly readings have been selected from the academic literature and will be available on OWL. Readings have been chosen to represent an overview or current perspectives on the themes we will be considering in the weekly lectures. None of the readings can be considered to provide exhaustive coverage of the topics, but will need to be considered in combination with the lecture material. Some topics in this course are changing rapidly (Covid-19 evolution for example) so the required readings may be subject to change if more current science is published during the course. Please check OWL for announcements regarding readings and other course material.

Registered students will be able to access course readings through the course site in OWL before the first day of class.

Evaluation:

Reflection Assignment 1 – 15%

The first reflection assignment will be on evolutionary theory, the mechanisms of variation, and why the process of evolution can lead to negative health outcomes. The reflection should not exceed 500 written words. It will be due on Wednesday October 20th, 2021 by 11:55pm.

Reflection Assignment 2 – 40%

The second assignment will be a 1,000 word (4 pages) reflection paper will allow you to think in detail about one of the course readings from weeks 5 through 12 and two related articles that you will find in refereed academic journals. Your task will be to reflect on how that reading contributes to the course in general and our understanding of human health. The two additional articles that you have sourced from the literature should be reviewed to identify their major findings. You should also discuss their relevance to the course readings and the themes of the course, and their relevance to broader issues in our understanding of health and disease. Finally, you will reflect on whether the group of readings provides new perspectives that help you understand the broader context of the related health conditions and their prevalence in society. This assignment will be due Friday November 26th, 2021 by 5pm.

Final Exam – 45%

The final exam will be a three-hour written during the exam period in December. The format will be a combination of multiple choice and short answer questions.

Academic and Accommodation Policies

Statement on Plagiarism

Students must write their assignments in their own words. Whenever students take an idea from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing. It is also a scholastic offence to submit the same work for credit in more than one course. Plagiarism is a major scholastic offence.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and [Turnitin.com](https://www.turnitin.com).

Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: [Academic Accommodation for Students with Disabilities](#).

Academic Consideration for Student Absence

Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the term, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,

- assessments worth more than 30% of the student's final grade,
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate if the absence is medical, or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. All documentation required for absences that are not covered by the Self Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.

For Western University policy on Consideration for Student Absence, see

[Policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs](#)

and the [form for the Student Medical Certificate](#) (SMC).

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

Institutional Statements and Policies

All students should familiarize themselves with Western's current academic policies regarding accessibility, plagiarism and scholastic offences, and medical accommodation. These policies are outlined in Western's academic policies by clicking on this link: [Western's academic policies](#)

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