

ANTHROPOLOGY 2240B-001
Evolution, Ecology and Human Health
Department of Anthropology
BRIEF COURSE OUTLINE
Winter 2023

Version date: August 5, 2022

Classes:

Day/time: Tuesdays 1:30-3:30 pm

Classroom: UCC-41

Instructor:

Dr. Jay Stock (he/him)

Email: jay.stock@uwo.ca

Office and hours: SSC-3316 – TBA / By Appointment

The human body and our biology are the products of millions of years of evolution, yet we live in a world of rapid cultural and environmental change. This has implications for human health. This course considers the evolution of the human body, cultural change and niche construction, and the impact on the patterns of human health and disease in the world today.

Requisites:

Antirequisites: None.

Course Description

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. (2014) *The Story of the Human Body: Evolution, Health and Disease*. Vintage Books.

<https://www.penguinrandomhouse.ca/books/206671/the-story-of-the-human-body-by-daniel-e-lieberman/9780307907417>

Additional weekly readings have been selected from the academic literature and will be available on OWL. Readings have been chosen to represent either landmark reviews of earlier work in the field, or recent perspectives of topical interest. 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.

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	20%
Reflection Assignment 2	35%
Final Exam	45%

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.

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 and two related articles that you will find in refereed academic journals. The idea is to reflect on how that reading contributes to the course in general

and our understanding of human health, how it presents something that is new to you and on how it relates to the additional articles you have chosen.

The final exam will be written during the final exam period. The format will be multiple choice and short answer.

In order to pass this course, students must submit both written assignments, complete the final exam, and receive a passing grade on one of two written assignments.

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. Please visit Western Libraries to [read about What is Plagiarism?](#)

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](#).

Statement on Seeking Special Accommodations

No accommodations will be granted retroactively more than 10 days after an assignment's due date or a missed quiz or test. Please see your academic counsellor immediately if you will be seeking accommodations based on medical or compassionate grounds.

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](#).

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](#)