

Anthropology 4493F/9104A

Life History Approaches to Human Biology

Brief Course Outline

Fall 2020

Instructor: Dr. Jay Stock

Synchronous class time: Mondays 1:30 – 4:30 pm.

Mode of Delivery: For 2020 this course will be conducted online, synchronously, using Zoom technology. Presentations and discussions will be done in weekly Zoom meetings during class time.

Note: *This course is cross-listed with graduate and undergraduate students and has limited enrolment. Undergraduate students must apply using an online application provided by the Anthropology Department.*

Course Description

This course considers life history theory and how energetic ecology and the timing of key developmental events in the life course acts as a mechanism of adaptability in human populations. Particular focus will be placed on the relationship between ecology and early life development, puberty, and adulthood in human populations.

Antirequisites: none

Prerequisites: Registration in fourth year in Anthropology and permission of the instructor via application. Anthropology 2226A/B and 3336F/G are recommended.

Course Syllabus:

Life history theory is an analytical approach commonly used in biology to understand variation unique biology and behaviour of species. It considers that energy availability is finite, and that adaptive strategies will vary how energy is allocated to growth, reproduction, maintenance, immune function, and activity. There is considerable evidence that life history variation is a fundamental component of human adaptability and that variation in the timing of life history events relate to human ecology. This course will explore the processes by which human populations capture energy from the environment and the ways this shapes the biology of human populations. We will consider the relationship between subsistence strategies, growth, and demography, and investigate the ways which our energetic ecology influences human health. A range of topics will be considered in relation to our understanding of energetics and activity, including diet and foraging behaviour, growth and body size, locomotion, reproduction, immune function,

and changing patterns of labour. Throughout the course we will consider the interactions between four inter-related factors: energy, activity, cultural change and human biology.

Course Structure:

Class time will be divided between lectures, group discussions and student presentations. 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. Students will be expected to read and be prepared to discuss the assigned reading.

Learning Outcomes:

On successful completion of this course, students will be able to:

1. Explain the fundamentals of life history theory in human biology
2. Describe how energy is utilized throughout the lifespan, and how life history variation relates to adaptability
3. Distinguish the unique characteristics of human life history and the range of variation between populations
4. Critically evaluate the role of energy allocation within the lifespan on human phenotypic variation and health
5. Evaluate the roles of life history shifts recent epidemiological transitions and their impact on contemporary health.
6. Generate an effective proposal for new research to answer a novel research question of current relevance to the field.

Course Materials:

There is no single textbook available to sufficiently cover material relevant to this course, but a recent interest in activity and energetics within the field of biological anthropology has led to a range of research and review papers on the topic that will form the reading in this course. Relevant journal articles and book chapters will be made available under the Course Readings tab of the OWL course website. New developments within the field and articles chosen by students will be made available via the OWL site as the course progresses.

Evaluation:

Students will be expected to attend all classes, and to critically engage with the reading and in class discussions. Evaluation will consist of three components, as outlined below.

1. Class Participation - 15%: 10% for questions/comments, 5% for summary of research paper.

2. Subsistence strategies and Energetic Ecology presentation - 15%
3. Research Paper - 45%
4. Research Grant Proposal - 25%

Statement on Plagiarism:

Plagiarism is a major scholastic offence. 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. 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

Institutional Statements and Policies

All students should familiarize themselves with Western's current academic policies regarding medical accommodation, accessibility, plagiarism and scholastic offences in Western's Academic Calendar by clicking on this link:

<http://westerncalendar.uwo.ca/academicPolicies.cfm?SelectedCalendar=Live&ArchiveID=>