

Population Issues in Anthropology (Anth 5234/6334)**Fall 2023****3 credits (QI, SUST)**

Instructor: Renee Pennington

Office: GC 4625

Hours: MW after class; Zoom by appointment or announcement

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Department Phone: (801) 581-6251 (I do not have a phone at my desk)

Web: Canvas

Classroom: Anth 5234 & Anth 6334 meet together MWF 9:40–10:30 AM in GC 5750

Description

This is an advanced course in biological anthropology. It is about the history and dynamics of the human population. Topics include changes in numbers of people and their age distributions; land use, residence patterns and density; epidemiology of pre- and post-industrial cultures; history of the human diet; the Industrial Revolution and its social and evolutionary consequences.

Prerequisites

The course is for juniors and seniors (Anth 5234) who have some background in anthropology and for graduate students interested in advanced concepts in biological anthropology (Anth 6334).

The course involves use of quantitative methods so you will need some basic math skills to succeed.

Anth 5234

Either

- Math 1030 or higher and an introductory course in anthropology (either Anth 1010, Anth 1020, Anth 1030 or Anth 1050) *or*
- graduate standing.

Anth 6334

- Graduate standing.

Course materials

There is no textbook to buy. Instead, you will be reading articles (available electronically) and following in-class lectures about how to do simple (though perhaps tedious) quantitative measurements of population; you will then use the methods you learn to interpret data and make inferences about population

problems. I post my course notes for you to read and study and assign articles about the relevance of the quantitative approach to understanding population problems in anthropology on Canvas.

Students can do the course problems using a scientific hand calculator and graph paper. However, many of the problems involve using recursive formulas. Recursive formulas require using a previous calculation to find the solution to a subsequent problem. For these types of problems, many students will be more successful doing some assignments using software such as Excel.

In sum, to do this course you will need

- Internet (to access online readings and course communications).
- A basic (i.e. inexpensive) scientific hand calculator such as the Texas Instruments TI-30XA to use for the midterms as no phones allowed during exams. A scientific calculator will have logarithm, exponent and root functions.
- Graph paper.
- Access to software such as MS Excel or programming skills to do recursive computation and text editing software such as MS Word to type up the qualitative component of homework assignments.

Grading

Anth 5234

Assuming we are able to do the course as anticipated, 60 percent of the course grade will be from homework, and 40 percent from two in-person midterms. Midterm One covers the first half of the course, and Midterm Two covers the second half of the course.

Each of the sections has a large homework assignment, due about every 2 weeks. The assignment will be distributed in class and posted on Canvas about one week before it is due.

For each assignment students typically prepare a short, neatly written report in which they analyze data using a quantitative method learned in class; produce graphical representation of the quantitative analysis; and write a page or two about the connections among the math, the graph and the population issue in anthropology.

Ideally the homework assignment is prepared as a single document, as if you were an expert contractor providing a report for an employer. In addition to providing correct solutions, you will be graded on ability to communicate your results. This requires a neatly prepared (legible) homework response.

Assume the following percentages for grades: > 93 A, 90-93 A-, 87-89 B+, 83-86 B, 80-82 B-, 77-79 C+, 73-76 C, 70-72 C-, 67-69 D+, 63-66 D, 60-62 D-, and < 60 Fail. I may curve the grades at the end of the semester.

Anth 6334

Students enrolled in Anth 6334 should meet with me early in the semester about additional requirements for graduate credit. Normally Anth 6334 students complete a research project in addition to the Anth 5234 requirements. The research project is normally a component of a student's thesis and worth 10 percent of the course grade. The homework and exams are therefore 54 percent and 36 percent of the course grade; they are scaled separately from Anth 5234 students.

Dates

The first midterm will be during class Friday, October 20, 2023. The second midterm will be during the final exam period scheduled by the University for this course, which is Wednesday, December 13, 2023, from 8-10am in the usual classroom. The midterms may incorporate short "take home" writing assignments.

The first homework assignment is due Friday, September 8, 2023. Subsequent homework assignments will be due about every two weeks, depending on the pace of the course. You may submit assignments in person (preferred) or electronically through Canvas, and you may submit them before their due date.

Attendance Requirements

Per University policy (<https://regulations.utah.edu/academics/6-100.php>) I expect regular class attendance. Since attendance is not, technically, part of your grade, I give an extra credit point here and there to students who participate in class. Class participation includes asking questions or providing commentary during class time as well as responding to (or initiating) discussions in Canvas about course content. I also reward students who notify me of errors in course content (such as typos, broken links). Increases to final course grades are normally limited to one-third of a letter grade.

Late work

Life happens. To you and to me.

In general I accept most late work for partial (80%) credit, but it should be completed relatively quickly.

Homework that is due the first half of the semester should be submitted before Midterm One (scheduled for October 20), and homework that is due the second half of the semester should be submitted by the end of classes (December 8). Therefore, students will be penalized 20 percentage points on homework submitted after its due date but before the subsequent midterm and, barring exceptional circumstances, will receive a zero on homework not submitted by the subsequent midterm.

Students must take the midterms as scheduled. If you somehow miss an exam get in touch immediately. If you have a documented and compelling

excuse (such as an unexpected and severe illness) for missing a midterm, I may allow you to take it an alternative time. In most cases you will be expected to take a missed exam immediately. In the event you miss Midterm 1 and refuse take it in a timely manner (and certainly no later than our last class on Wednesday, December 6), you will receive a zero on it. If you miss Midterm 2, and I allow you to take it an alternative time, I may not be able to grade it until after January 2024.

Time commitment

A general rule of thumb is that students will need to spend about two hours outside of class for every course credit hour. Therefore, in addition to the time spent attending class, you should plan to spend about six hours per week outside of class on readings, homework and exam preparation.

Course objectives and learning outcomes

By the end of the class students will be able to • apply anthropological research methods to answer a question or solve a problem and • explain aspects of human variation using evolutionary and social theory.

A central goal of the course is to teach students how to make powerful inferences about human population history using simple models.

Teaching and learning methods

Lectures, graded and ungraded homework, exams and possibly online discussions.

Topics

Below is a list of topics I plan to cover in the course and approximate due dates of the associated homework assignment. Readings will be assigned as we go and listed on Canvas.

We will spend about two weeks on each topic. Since I prefer to follow the interests and strengths of students in the class rather than a strict schedule, I may end up shifting things around a bit.

1. Stable population models. Use of stable population theory and projection in anthropology. Calculating and interpreting intrinsic growth rate, doubling time and half-life of populations. Applications to demographic change associated with transition from small hunter gathering groups to larger farming communities. (Homework 1 due about 8 September 2023.)
2. Population pyramids. What the age structure of a population reveals about its history and vital rates. (Homework 2 due about Sept 22.)
3. Life table models. The exponential formula as a failure time model. Applications to quantifying changes in death rates associated with human population expansions. (Homework 3 due about 6 October 2023.)
4. Infectious disease and population size. The SIR model and disease epidemics. Herd immunity and vaccination. This is the math behind why large populations can spread deadly infectious diseases faster than small, dispersed populations. (Homework 4 due about 10 November 2023.)
5. Logistic growth models. Carrying capacity, maximum sustainable yield and resource depletion. r - and K - species concept. Applications to food choice and to resource management among prehistoric peoples as well as modern herders and hunters. (Homework 5 due about 22 November 2023.)
6. Disease ecology. Why altering our habitat (e.g chopping down trees) may promote the proliferation of critters that make us sick. Applications to creation of new ecotones, loss of K -species habitats and spread of r -species disease vectors associated with human population expansions. This is likely to be a comprehensive homework assignment in which you will be asked to incorporate concepts from the entire semester into your response. (Homework 6 due about 6 December 2023.)

The point value of each homework assignment will be proportionate to the amount of time we spend on the topic in class. If we get through all six topics as scheduled each would be worth 10% of the course grade.

If we ended up spending more (or less) time on a topic than planned, I may need to shift the due dates and adjust the point value.

Boiler Plate Items

Faculty and student responsibilities

Please respect everyone's right and expectation to learn in the classroom. This means all of us should engage in respectful discussion with each other during class time and avoid behaviors that distract others.

You are responsible for making sure I receive assignments before the deadline and that you can access readings and other course materials well before you need them.

University and department policies

ADA Statement: The Americans with Disabilities Act. The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

Safety Statement: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit <https://safeu.utah.edu>.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Wellness Statement: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness (<https://wellness.utah.edu>; 801-581-7776).

Student Code: (Policy 6-400) All students are expected to maintain professional behavior in the classroom setting, according to the Student Code (<https://regulations.utah.edu/academics/6-400.php>). Students have specific

rights in the classroom as detailed in S. II of the Code. The Code also specifies standards of behavior (S. III) and academic conduct (S. V). “Students must adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, research misconduct, misrepresenting one’s work, and/or inappropriately collaborating” (S. VB). According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors. Students have the right to appeal such action to the Student Behavior Committee.

Incomplete Policy: An “I” will only be given for work not completed because of circumstances beyond the student’s control, providing the student is passing the course and needs to complete 20% or less of the work. Valid reasons for an “I” grade include: (a) An illness (documented by a medical statement) that precludes the ability of the student to perform; (b) an accident or situation that prevents the student from physically being present (documentation may be required); (c) Extreme emotional or other mental circumstances that are severe enough to interfere with a student’s normal academic performance. If you do receive an “I”, do not register for the course again. You must complete the required work in the time agreed by you and the instructor. If the work is not completed within one year, the grade will change to an “E”. Faculty will not accept additional work to change the grade after that one-year period. If a student has a problem with the course, please deal with it immediately. It is the student’s responsibility to contact instructors and submit necessary forms. If you delay, your instructor may have left the University or be out of the country. In such a case, you may find that there is nothing the Department can do.

Repeating a Course: Any course taken at the University may be repeated. If you wish to attend a class again, you must register for it and pay tuition for that semester. Note that some courses may be taught infrequently or discontinued.

Note: The syllabus is not a binding legal contract. It may be modified by the instructor when the student is given reasonable notice of the modification.