# Population Issues in Anthropology (Anth 5234) Fall 2020 3 credits (QBQI, SUSL)

Instructor: Renee Pennington Hours: by appointment

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# Description

This class 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

• Math 1030 or higher

• either Anth 1010, Anth 1020, Anth 1030 or Anth 1050

#### Course materials

There is no textbook to buy. All required readings will be on Canvas, e-Reserve at Marriott Library, or retrievable from other internet sites.

Students can do the course problems using a scientific hand calculator (such as the Texas Instruments TI-30XA or a phone app) and graphing paper, but I recommend you use something like a spreadsheet program such as Excel to do some of the computations and graphs.

## Due dates and grading

The course is divided into 6 sections. Your grade will be primarily based on large homework assignments associated with each of these sections and a final writing assignment about the whole course.

The homework will usually involves computing a series of related problems, producing graphs of your results, and writing about what your computations mean. You are expected to prepare each as a short report and submit it online through Canvas.

In addition, I may assign some videos and ask you to submit answers to questions about them. There may be an online quiz here or there.

The first homework will be due Friday, September 11, 2020. Subsequent homework will be due about every 2 weeks. The final homework is due Friday, December 11, 2020. Assignments are normally posted on Canvas about one

week in advance of due dates. Once the assignment is due, you will have 2 days to submit before it is considered late.

Each course section is equally weighted. If we get through all 6, each will be worth 14 percent of the course grade (84 percent total); the final homework is worth 16 percent of the course grade.

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.

#### Late work

You will be penalized 20 percentage points for submitting work after it is due and the grace period has expired. If you experience unusually difficult circumstances such as severe illness or family tragedy that prevent you from doing school work, please get in touch about a possible extension.

#### Time commitment

A general rule of thumb is that students will need to spend about two hours outside of class for every credit hour in-class. Therefore, in addition to the time spent going through lecture material I post, students should plan to spend about six hours per week outside of class on readings and assignments.

# **Topics**

Below is a list of topics I cover in the course. Readings will be assigned as we go and listed on Canvas. Each topic corresponds to a homework assignment.

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. Population growth models and projection. Exponential growth of heterogeneous populations associated with changes in technology.
- 2. Hunter gatherer life tables. Estimating expectation of life.
- 3. Food, energy, and nutrition in human history. Nutritional disease associated with agriculture.
- 4. Population growth and age distributions. What they can and can't tell us about prehistory.
- 5. Logistic growth models. Carrying capacity, maximum sustainable yield.
- Infectious disease and population size. The S-I-R model and disease epidemics.
- 7. Review What age structure reveals about population history.

## Course objectives and learning outcomes

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

Specifically students will project population from exponential models of growth and related concepts; learn how to estimate expectation of life; tabulate age composition of stable populations; use models such as the logistic model of growth to infer harvesting strategies and differences in living standards by examining equilibrium points; predict threshold population size for spread of certain diseases; identify basic energy and nutritional requirements of children and adults and compute macronutrient contents of foods critical to the human diet; and infer birth rates, historical events and family organization from graphical representations of population.

# Teaching and learning methods

Online lectures, graded and ungraded homework, videos and possibly online discussions.

#### **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 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 (http://www.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 (http://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.