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ANTY 510.01: Seminar in Human Variation and Evolution

Meradeth H. Snow

University of Montana, Missoula, meradeth.snow@umontana.edu

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Anthropology 510
Seminar in Human Variation and Evolution
Fall 2021
Tuesday & Thursday 2-3:20pm
Classroom TBA

Contact Information

Professor: Dr. Meradeth Snow

Email: meradeth.snow@umontana.edu

Office hours: Wednesday from 2-3:30pm on zoom <https://umontana.zoom.us/j/91781353337>
& by appointment

Preceptor:

Email:

Course Textbook

O'Rourke, Dennis H., ed. *A Companion to Anthropological Genetics*. Wiley-Blackwell, 2019.

Course Description

This course is designed to explore the historical and current theories that form the foundation for Molecular Anthropology and how it is encompassed within Physical Anthropology. We will be covering many broad topics that are central to current anthropological research and investigating how genetic data has allowed us to refine our understanding of modern humans and our evolution.

The class will combine presentations and discussions by students in a seminar format. Lectures/presentations and discussions are intended as a means for students to learn what practicing biological anthropologists do and highlight some of the major questions in the field of molecular anthropology today. They also allow for student to hone skills in public speaking and lecture preparation that will aid them in future employment.

Note About Graduate Courses: they are not the same as your undergraduate coursework! You are expected to learn a good deal on your own and not all information will be distributed in neat lectures with slides. You must prepare for every lecture, spend some time researching on your own, and come ready to discuss the topic and learn from one another about the material being covered. Working together is encouraged! There is no inter-student competition here.

Note About Human Remains: This class contains course materials that include depictions of ancient human remains. Their antiquity does not negate their humanity. Please ensure that you are respectful in referring to and while viewing these individuals. Please also feel free to reach out to you professor if these images are triggering or uncomfortable - I am happy to help direct you to university counseling services as well as additional resources that help to expand on anthropological interpretation and stewardship of deceased and interred individuals.

Course Goals

There are three main goals for this course:

1. Develop skills and experiences necessary for professional academic development.

2. Acquire knowledge regarding the major issues, questions, theories, and methods in the field of molecular and biological anthropology.
3. Develop fundamental research, teaching, reading, and writing skills.

Course Grade Breakdown

Leading discussion	40% (distributed evenly between # of presentations)
Research Paper	35%
Participation	25%

Course Requirements

Leading discussion: One of the most valuable tools you can leave graduate school with is the ability to put together and deliver a lecture for peers, colleagues, and students. To that end, I will be providing a list of topics you will be required to sign up for. Topics will be centered on molecular anthropology and should be something that you are interested in (within some reasonable measure!).

On the Thursday meeting of class, I will present on a subject for the class period, as well as discuss some of the readings and answer questions. You should have completed that topic's readings before this class meeting. The following Tuesday's meeting will be composed of the group assigned to that topic presenting on the subject.

Your presentation should include:

- Rundown of particularly onerous jargon not previously covered
- Discussion of relevant background or foundational ideas
- Where the topic currently sits in terms of research
- Conflicts or debates within the field
- Handouts for your classmates of the slides/notes that you utilize
 - If you would like these printed for you, you must email them at least two hours before class!
- A list of resources utilized, to be handed in to your professor upon completion
- **Your presentation should be interactive and engaging for fellow students.**
 - This could include but is not limited to: creating phylogenies from related objects (candy bars work great!), creating a video/podcast, playing a game related to the concepts, hands-on with casts/fossils, or other means of drawing student engagement.
 - Activities that teach/reinforce the topic are encouraged—higher scores will be given to those who can combine being interactive with actual teaching. This is your chance to hone those teaching skills, which will be vital for almost any career you decide on.
 - Please consult your professor for aid or guidance!
- Your presentation should go well beyond just the articles that are assigned and the review Dr. Snow does. You will be teaching this topic and are expected to delve deep into it. This means read widely in the area, using the assigned articles as merely a starting point.
 - If it helps, think of this presentation as one you might present at a workshop, or a class you might teach to strangers. (Seriously, don't wing it!)

In preparation for each lecture I will provide the class with relevant readings from the textbook and journal articles. Everyone is required to read these assigned readings and type up relevant notes and at least two questions for each reading. These will be used for participation as noted below.

Those who are presenting should use the list as a jumping-off point to delve further into the topic through articles, books, and other available resources; expect to read deeply into the area. If you need help finding resources, please ask your professor.

Due to the number of students enrolled and the number of topics, you will need to work in pairs or small groups for your presentation. Please be amenable to your fellow group members and divide the work up as evenly as possible. If problems arise, please speak with your professor in order to ensure credit is accurately distributed.

Research paper: you will be required to write a paper on the migration and peopling of a particular region/country (please keep your region limited to avoid being overwhelmed). It is preferable that you select a region that you personally find interesting, or that is related to other coursework or research. A region should be chosen by the end of the **fourth week** of class and submitted to your instructor at that time, either via email or in class. Duplicate topics between students will not be allowed, so selecting early is in your favor.

Your topic should address the prehistoric and historic migration into a particular area. You are welcome to utilize information gathered through multiple lines of evidence, but the bulk of your research should address the genetic/molecular evidence (**>50% of your supporting arguments!**). Through your research you should form an argument regarding the peopling of the region and use your paper to support this theory/hypothesis, while noting the potential for debate.

The paper itself should be at least ten full pages in length, 12pt Times font, with one-inch margins, double spaced. The ten pages do not include your bibliography, which should be in Chicago author-date format (see <https://vimeo.com/87083554> for more details). Sub-headers to organize your information are highly encouraged. Sources should be entirely peer-reviewed unless for extremely basic background information, in which case websites must be pre-approved. A draft of your paper will be due a few weeks before the end of the semester, and the final paper on the last day of class. Late papers will not be accepted.

Participation: In order to be prepared for each lecture you should read all of the assigned readings (both the textbook and articles) before Thursday's class and take notes. While reading, pay particular attention to the main questions being asked, what theoretical background is being addressed, terms and concepts, and any critical omissions or questions regarding the work.

In order to obtain full participation credit, you will need to **submit a short paragraph or bulleted list that reviews each of the assigned readings and textbook chapter(s) AND provides two possible discussion questions for each. These must be typed and submitted to class before each Thursday's lecture.**

During our final meeting, each student will be asked to present their research paper briefly to the class (~10 minutes). You will be asked to note the main source of evidence for your argument, as well as your conclusion of how individuals arrived and settled in the area you researched.

Code of Academic Misconduct

With regard to academic dishonesty, this class has a zero-tolerance policy and will promptly deal with any acts included therein (cheating, plagiarism, or unauthorized help on assignments, etc.) according to university policy. For further information on what falls into these categories see: <https://staging.umt.edu/student-affairs/community-standards/>. If you have questions or concerns, please feel free to contact your professor.

Students with Disabilities

Students with disabilities may request reasonable modifications by contacting your professor. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office of Disability Equity (ODE). “Reasonable” means the University permits no fundamental alterations of academic standards or retroactive modifications. For other options see <http://www.umt.edu/disability>.

COVID-19

Your Professor is fully aware of the worldwide pandemic taking place and asks that you be understanding and are flexible enough to handle changes that happen. This course is designed to be moved to remote teaching if necessary, in order to minimize all of our health risks, as well as interruptions to the course. That being said, there are personal concerns regarding your health. Please stay safe, wash your hands, and maintain social distancing. Additionally, please be sure to be mindful of your mental health—we are all struggling right now, so be as kind as possible and recognize that no one is in an idea situation (this goes for your classmates, fellow UM students, and your professors!). Should you or someone in your household become sick, please alert your professor to ensure she is able to advise you regarding completing the semester. Other extenuating circumstances are understandable, and indeed expected.

Mask use: despite wishing it were possible to enforce mask wearing in class, the university has said we can't. However, your professor will remain masked for your safety throughout the course, and highly recommends you do the same.

Please email or set up an appointment to talk in order to ensure that your needs are being met. I am here for you to aid you in succeeding in this course, even if there is a lot going on in the world around us all!

Basic Needs Statement

Any student who faces challenges securing food or housing and believes that this could affect their performance in this course is urged to contact any or all of the following campus resources. If you are comfortable, please feel free to email your Professor as well; I will do my best to help connect you with additional resources.

Food Pantry Program: UM offers a food pantry that students can access for emergency food. The pantry is located in UC 119. Pantry staff operate several satellite food cupboards on campus

(including one at Missoula College). For more information about this program, visit the pantry's website (<https://www.umt.edu/asum/agencies/food-pantry/default.php>).

ASUM Renter Center: The Renter Center has compiled a list of resources for UM students at risk of homelessness here: <http://www.umt.edu/asum/agencies/renter-center/default.php> and here: <https://medium.com/griz-renter-blog>. Students can schedule an appointment with Renter Center staff to discuss their situation and receive information, support, and referrals.

Course Calendar

Week		Date	Topic	Textbook Reading & assignments*
1	1	8/31	Introduction & scheduling	Sedig et al 2021 article
	2	9/2	Basic DNA introduction	
2	3	9/7	Basic DNA introduction Activity	
	4	9/9	History of Molecular Anthropology	Chapter 1
3	5	9/14	History of Molecular Anthropology Activity	
	6	9/16	Evolution & Speciation	Chapter 14
4	7	9/21	Evolution & Speciation Activity	
	8	9/23	Mitochondrial & Y-Chromosome DNA	Paper topics selected
5	9	9/28	Mitochondrial & Y-Chromosome DNA Activity	
	10	9/30	Ancient DNA	Chapter 13
6	11	10/5	Ancient DNA Activity	
	12	10/7	Human Origins & Hominin Relations	Chapter 6
7	13	10/12	Human Origins & Hominin Relations Activity	
	14	10/14	Human Diaspora	Chapter 9 & 10
8	15	10/19	Human Diaspora Activity	
	16	10/21	Selection on Modern Humans	Chapter 15 & 17
9	17	10/26	Selection on Modern Humans Activity	
	18	10/28	Ancestry	
10	19	11/2	Ancestry Activity	
	20	11/4	Molecular Forensic Approaches	
11	21	11/9	Molecular Forensic Approaches Activity	
	22	11/11	No Class	
12	23	11/16	No Class	Draft of Paper Due
	24	11/18	Personal Genome Analysis & Ethics	Chapter 2 & 3
13	25	11/23	No Class	
	26	11/25	No Class	
14	27	11/30	Personal Genome Analysis & Ethics Activity	
	28	12/2	DNA lab time—extractions	
15	29	12/7	DNA lab time—PCR	
	30	12/9	Student presentations on paper topics	Final Papers Due

* Changes may occur to this syllabus and will be announced widely. Please keep a close eye on your email and Moodle.