AANT 416 TOPICS IN HUMAN BIOLOGY: MIGRATION AND HUMAN BIOLOGY SPRING 2021, UNIVERSITY AT ALBANY

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ABOUT THIS COURSE

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COURSE DESCRIPTION

Humans have been migrating for much of the history of our species, seeking new, incredibly diverse environments. With these migrations, humans influence the new geographical regions they move into (and the other populations that may live there). Through migration, humans also move their bodies into new environments, exposing their bodies to new factors that can shape human biology.

This course will explore the intersection of human migration and human biology through the following questions:

- What does migration tell us about the influence of the environment on human biology?
- How do the circumstances and process of migration affect the biology of individual migrants?
- How does migration influence population-level characteristics of human biology of both the sending and receiving populations?
- How do human political and economic decisions throughout history determine who migrates in ways that shape human biology on both individual and population levels?

Prerequisites for this course are AANT 110 (Introduction to Human Evolution) and AANT 211 (Human Population Biology) – the knowledge from both courses is necessary to understand some of these topics, and you may need to review content from these courses to fully understand this course's content.

COURSE OBJECTIVES

At the end of this course, students should be able to do the following:

- Identify the main pathways by which migration affects the biology of individuals and populations
- Describe how studies of migration can show the influence of the environment on human biology
- Explain how population genetics can be influenced by migration through gene flow
- Describe the significant trends in how migration has affected human biology
- Analyze reports of specific situations of migration by comparing reports to published research on the intersection of migration and human biology

READINGS

There is no required textbook for this course. All readings are posted in the appropriate module on Blackboard.

Assigned readings will need to be completed prior to engaging in discussion for that topic. You should give yourself multiple days to read these articles as some may be complicated and require multiple readings to understand.

GRADING POLICIES

There will be no grades on individual assignments throughout the course, only a grade for the overall course that you and I will jointly discuss. When you complete an assignment, I will note it in the gradebook as 1 for completed (0 or blank indicates not yet completed). You can still navigate to my feedback this way.

Throughout the course you will conduct self-assessments on your own work, receive individualized feedback from me, and conduct/receive peer-assessments on some of your work. This will help you understand how you are doing in the course, and provide documentation that we will reference at the end of the course. It will also help you build your meta-cognitive skills – your awareness of how you learn and your progress in learning – which will help you better learn content and skills after you graduate.

At the end of the course, I will meet with each of you one-on-one, preferably over zoom or the phone. You will present your grade proposal (what grade you think you should receive for the overall course), as well as examples from your work throughout the course to support your point. I will discuss with you whether I think that is the appropriate grade, also with examples from your work and assessments throughout the course, and together we will reach a consensus on your course grade.

I will ask for your feedback on this approach at the beginning and end of the semester, to make sure I am meeting your needs in this course and to help me refine this approach for future students.

You need to complete all assignments to receive a grade for the course, otherwise you will receive an incomplete. If this is not possible for any reason, please contact me immediately and we will work together to find a solution.

WHY THESE GRADING POLICIES

My philosophy on education is conceptually informed by Paolo Friere, bell hooks, and Alfie Kohn, and methodologically informed by other professors such as Jesse Stommel, Marc Kissel, Dada Docot, and Susan Blum. My goal is to provide guided opportunities for people to learn new information and experiment with new skills or improve skills. I will be glad to discuss more of my perspective if anyone has questions. My rationale can be distilled into the following points: 1) Grading is inherently subjective and arbitrary, 2) Grading is counterintuitive to how we typically learn, 3) Grading inhibits creativity and risk-taking, and 4) Removing grading allows for better, more valuable communication like individualized feedback, and encourages in-class practices that are more oriented to real-world skills.

If you would like to read more about ungrading approaches and participatory learning, you can check out the following resources:

"Ungrading" by Susan Blum (can access ebook through UAlbany's library)

"How to Ungrade" by Jesse Stommel

"Reconceptualizing Participation grading as Skill Building" by Alanna Gillis

ABSENCES

As there is no penalty for late work, any "absences" from the class for any reason do not need to be explained or excused. Simply submit your work when you are able. I do encourage you to complete your work ahead of any planned absences, as it will be difficult to complete your work adequately if too much of piles up.

If I notice you have not submitted anything within a week, I will check in with you to see how you're doing.

UNIVERSITY RESOURCES AND STANDARDS

ACCOMMODATIONS

Reasonable accommodations will be provided for students with documented physical, sensory, systemic, medical, cognitive, learning and mental health (psychiatric) disabilities.

If you believe you have a disability requiring accommodation in this class, please notify the Disability Resource Center by contacting them at <u>DRC@ALBANY.EDU</u> or <u>518-442-5510</u>.

Upon verification and after the registration process is complete, the DRC will provide you with a letter that informs the course instructor that you are a student with a disability registered with the DRC and list the recommended reasonable accommodations.

ACADEMIC INTEGRITY

You must familiarize yourself with the University's Standards of Academic Integrity: https://www.albany.edu/undergraduate_bulletin/regulations.html

CAMPUS RESOURCES

If you are experiencing any difficulty in getting food or supplies, UAlbany's Purple Pantry is still operating with limited in-person contact. It provides free food and basic necessities. They can also screen and connect students to WIC and SNAP. More information is here: https://www.albany.edu/purplepantry

UAlbany Emergency Fund: This can help students with unexpected financial hardships. https://www.albany.edu/studentaffairs/emergencyfund.shtml

Purple Threads: This service helps provide students with professional clothing for jobs and interviews. https://www.albany.edu/studentaffairs/purplethreads.shtml [They might be closed for Spring 2021 due to COVID]

If you are struggling with any other issues that are making it difficult to complete your coursework, you can also reach out to the Office of the Dean of Students https://www.albany.edu/dos. They oversee the programs listed above and are aware of more programs and resources to help support students.

Student Health Services: https://www.albany.edu/health_center/

Student Counseling Services: If you feel like you are having difficulty getting through your classes or day-to-day life for whatever reason, please speak to someone at the counseling services. They are conducting phone visits, so even if you are off-campus you can access them. These services are free to students. https://www.albany.edu/counseling_center/faq.shtml

WHAT YOU WILL DO IN THIS CLASS - ASSIGNMENT DESCRIPTIONS

PART 1: WEEKLY READINGS, DISCUSSIONS, AND SELF-ASSESSMENTS

CLASS DISCUSSIONS

After completing the readings for the week, you will post a discussion question for the rest of the class to engage with. The subject of your post will be the question, so it is easily identified on the forum by other students. If your question is long, you can write out the full question in your post, and have a shortened version in the title (essentially reddit format).

Then you will respond to two other people's discussion questions in the forum. You should also respond to comments on your own discussion question, to keep the conversation going.

Skills developed: Scientific article reading comprehension, professional communication, how to use discussion with others to achieve a deeper understanding of concepts/material

READING RESPONSES

Each week, before engaging in the discussions, you will read 2 assigned scientific articles and respond to ~6 questions that I provide on the readings. Some of these questions will be the same for all readings (ex: identify the main thesis of the article), and some of them will vary across readings.

Reading responses are posted to a discussion forum so that you can read each others' responses and benefit from other students' insights and perspectives.

Skills developed: scientific article reading comprehension, applying research results to other domains (new research questions, scientific communication with the public, applying research to policy/health practice decisions), making connections between readings, applying evolutionary theory and anatomy/physiology to new research

SELF-ASSESSMENTS

On each reading response and assignment you complete, you will also complete a self-assessment. You will use these self-assessments help support your grade proposal at the end of the class. I will provide \sim 5 questions that will be the same for all assessments so you can easily get in the habit of completing these assessments.

Skills developed: meta-cognition of learning

PART 2: INDEPENDENT PROJECT

This final project will be a format and topic of your choosing. I encourage you to get creative with this project and explore something that builds on your strengths and interests! If you are having difficulty coming up with ideas, I've listed below some formats that students have done for their "un-essays" in other classes. We can also discuss one-on-one and brainstorm some ideas together. The only requirements for the un-essay are the following: 1) It relates to migration and human biology in some way, and 2) it is a large enough project that you will use the length of the semester to create it.

Some ideas:

- Make a music video
- Make a series of songs (like a musical or opera).
- Write a play.
- Create a series of cartoons or a comic book that illustrates something associated with this class
- Watercolor/painting/charcoal artwork
- Write a longform essay on a subject that you post to a sharing site
- Create a website/Wik about the topic
- Collect specific data and analyses/present it in a unique way
- Make a series of Buzzfeed style listicles (with a clickbaity headline!)
- Embroidery, knitting project
- Do a book review of a nonfiction or fiction book related to the class
- A research paper/essay, generally around 10 pages (good option if you are thinking of applying to grad school in a primarily research-focused field, you can use this as a writing sample)
- A research proposal, describing a research project that you would like to conduct (Great option if you are planning on going into a research field. If the proposal is well-developed and feasible, we may be able to turn this into a project that you can actually conduct as an independent study next semester, which would be a great addition to your resume or grade school application)
- A Wikipedia entry on a specific topic (good for those who are interested in more public outreach or educational careers)
- A YouTube video describing the topic of interest (great for people interested in education or public outreach or simply audiovisual production)
- A best practices brief for medicine or social services a summary of the topic and how medical practitioners or people working in social services can better address this topic in their own practice (good option for people planning on going into medical practice or social services)
- A migration narrative a description and analysis of an interview you conduct with someone who has
 migrated in their life and their experiences, especially as the experience of migration pertains to their
 health or biology (this can be great if you have a family member who migrated, and you want to learn
 more about them and their experiences)
- A presentation instructing your fellow students or some other audience on a relevant topic if the presentation is for the class, it should be on a topic that we haven't covered entirely in the course so your fellow students can learn something new.
- Op-Ed for a newspaper, could be Albany Student Press or a local paper like Times Union or Albany Proper
- Something else entirely!

To help you build a great final project that you are proud of, there are multiple steps that you'll complete and get feedback on.

STEP 1: PROJECT PROPOSAL

In <250 words, respond to the following:

- describe the topic or question you are planning to address in your final project, as well as the format you're expecting to follow (i.e. are you doing a research paper, video, op-ed, something else?).
- Explain your rationale for the format you're using and what audience you're expecting to reach (e.g. if you're writing an op-ed, where do you think you might submit it to be published?).
- Briefly explain why you chose this topic and what idea you are intending to argue/test/convey
- Identify any aspects of the project you think you may have difficulty with
- Specify what skills you hope to build/improve with this project

This project proposal will receive individualized feedback from me and from two of your peers in this class. You will also have to complete peer assessments for two other students, using guided questions I provide.

STEP 2: ANNOTATED BIBLIOGRAPHY

This annotated bibliography can be based on whatever topic of your choosing **that should be the same as your final topic**. This annotated bibliography should form the foundation of your final project. You may not end up directly citing these works in your final project, depending on the format, but you should use scientific sources to inform your final project.

In this annotated bibliography, you should include 15-20 scientific sources, including works both from the course and outside of the course.

For each source, you should answer the following questions in **very brief** bulletpoint:

- What is the population being studied?
- What is the type of data being used (i.e. qualitative vs. quantitative, survey or direct measurements or is it a review of previously published studies)?
- What are the main results/conclusions from the source that is relevant to your question/topic?
- How will you use this source in your project?

This bibliography will receive individualized feedback from me and from two of your peers in this class. You will also have to complete peer assessments for two other students, using guided questions I provide.

STEP 3: PROJECT UPDATE

In <250 words, you will provide an update on your project answering the following questions:

- What have you finished so far on your project?
- What do you have left to do?
- What is going well in making your project?
- What are you having difficulty with?

You may also provide a draft or some documentation of your project at the moment for feedback too.

This project update will receive individualized feedback from me. There will not be any peer review for this project update.

STEP 4: FINAL PROJECT SUBMISSION AND SHARE WITH THE CLASS

Your final project will be submitted to myself and to the entire class. You will attach your bibliography (does not need to be annotated), and a brief abstract (~250 word description of your project, you can see abstracts from our

You will ask questions on two of your fellow students' projects and respond to any questions on your own project.

COURSE SCHEDULE

Assignments are typically due Wednesdays, with follow-up assignments in response to other students due on Fridays. There are some exceptions due to holidays, so follow this schedule and the dates on each assignment in blackboard.

Week and Theme	Readings	Assignments
Week 1: 2/1 – 2/5 Introduction to Human Biology and Migration	Stinson et al. 2012 "Human Biology: An Evolutionary and Biocultural Perspective" in Human Biology: An Evolutionary and Biocultural Perspective. Lasker and Mascie-Taylor 1988 "The framework of migration studies" in Biological aspects of human migration.	Introduction post due 2/2 Introduction survey due 2/2 First self-assessment due 2/2 Reading response due 2/3 Discussion question due 2/3 Answer 2 other students' questions by 2/5
Week 2: 2/8 – 2/12 Migration Studies – what can migration tell us about phenotype and plasticity?	Mascie-Taylor and Krzyzanowska 2017 Biological aspects of human migration and mobility. Lasker 1996 "The study of migrants as a strategy for understanding human biological plasticity" in Human variability and plasticity. Gravlee et al., 2003 Changes in bodily form: the immigrant study, cranial plasticity, and Boas's Physical Anthropology. Optional readings: Speed 2020 The persistence of white supremacy: Indigenous women migrants and the structures of settler capitalism.	Reading response due 2/10 Discussion question due 2/10 Answer 2 other students' questions by 2/12

Week 3: 2/15 – 2/19 Migration in the evolution and dispersal of humans	Wells and Stock 2012 "The biology of human migration: the ape that won't commit?" in Causes and Consequences of Human Migration. Kuhn et al. 2016. What moves us? How mobility and movement are at the center of human evolution.	Project proposal due 2/17 Reading response due 2/17 Discussion question due 2/17 Answer 2 other students' questions by 2/19 Peer assessment to 2 other students' proposals due 2/19
Week 4: 2/22 – 2/26 Rural-to-urban migration	Szklarska et al. 2008 Biological condition of adult migrants and nonmigrants in Wroclaw, Poland. Dufour and Piperata 2004 Rural-to-urban migration in Latin America: an update and thoughts on the model.	Reading response due 2/24 Discussion question due 2/24 Answer 2 other students' questions by 2/26
Week 5: 3/1 – 3/5 Who migrates? A biological perspective	Matthews and Butler 2011 Novelty-seeking DRD4 polymorphisms are associated with human migration distance out-of-Africa after controlling for neutral population gene structure. Vang et al. 2015 The healthy immigrant effect in Canada: a systematic review Optional readings: Gagnon et al. 2005 Transmission of migration propensity increases genetic divergence between populations. Castrì et al. 2007 Indentured migration and differential gender gene flow: The origin and evolution of the East-Indian community of Limón Costa Rica.	Reading response due 3/2 (TUESDAY) Discussion question due 3/2 Answer 2 other students' questions by 3/5

Week 6: 3/8 – 3/12 Does when you migrate matter? Growth and development	Clarkin 2008 Adiposity and height of adult Hmong refugees: relationship with war-related early malnutrition and later migration Bogin and Loucky 1997 Plasticity, political economy, and physical growth status of Guatemala Maya children living in the United States.	Reading response due 3/10 Discussion question due 3/10 Answer 2 other students' questions by 3/12
Week 7: 3/15 – 3/19 How does migration impact infectious and chronic disease?	Ho 2003 Migratory journeys and tuberculosis risk. Houldcroft et al. 2017 Migrating microbes: what pathogens can tell us about population movements and human evolution. Optional readings: Kaplan 1988 "Migration and disease" in Biological aspects of human migration.	Annotated Bibliography due 3/17 Reading response due 3/17 Discussion question due 3/17 Answer 2 other students' questions by 3/19 Peer assessment to 2 other students' bibliographies due 3/19
Week 8: 3/22 – 3/26 How can migration studies show the impact of the climate and physical environment on human biology?	Little 2010 "Geography, migration, climate, and environmental plasticity as contributors to human variation" in <i>Human variation from the laboratory to the field</i> . Kappelman et al. 2008 First Homo erectus from Turkey and implications for migrations into temperate Eurasia.	2 nd self-assessment due 3/24 Reading response due 3/24 Discussion question due 3/24 Answer 2 other students' questions by 3/26

Week 9: 3/29 – 4/2 How does migration affect those who don't migrate?	Nelson 2020 Beyond the household: Caribbean families and biocultural models of alloparenting. McKerracher et al. 2017 The ex-pat effect: presence of recent Western immigrants is associated with changes in age at first birth and birth rate in a Maya population from rural Guatemala.	Reading response due 3/31 Discussion question due 3/31 Answer 2 other students' questions by 4/2
Week 10: 4/5 – 4/9 How does migration affect populations? A population genetics view	Cann and Lum 2004 Dispersal ghosts in Oceania. Livingstone 1958 Anthropological implications of sickle cell gene distribution in West Africa. Optional readings: Schurr et al. 2012 Clan, language, and migration history has shaped genetic diversity in Haida and Tlingit populations from Southeast Alaska. Davis et al. 2011 Mitochondrial DNA analysis of an immigrant basque population. Loss of diversity due to founder effects.	Project update due 4/7 Reading response due 4/7 Discussion question due 4/7 Answer 2 other students' questions by 4/9
Week 11: 4/12 – 4/16 How does migration affect populations? A demographic view.	Gage et al. 2012 "Demography Part 1: Mortality and Migration" in Human Biology. Coleman 1996 "Human migration: effects on people, effects on populations" in Human variability and plasticity.	Reading response due 4/14 Discussion question due 4/14 Answer 2 other students' questions by 4/16