

ANTHROPOLOGY 349C / BIOLOGY 337
HUMAN VARIATION
SPRING 2019

COURSE INFORMATION: Unique #31730, 31735, 31740, 48380, 48385, and 48390
MW 3-4 pm (lecture, RLP 0.112)
M 12-1, W 12-1, F 12-1 (discussion sections, SAC 5.172)

COURSE INSTRUCTOR: Dr. Aida Miró-Herrans
E-mail: amiroherrans@utexas.edu
Office Hours: SAC 5.132 Wed 11-1 pm *or by appointment*

TEACHING ASSISTANTS: Rachel Voyt
E-mail: ravo@utexas.edu
Office Hours: SAC4.116 Wed 12-2 pm

Angelina Locker
E-mail: angelina.sweeney@utexas.edu
Office Hours: SAC.136 Mon 1-3 pm

COURSE DESCRIPTION:

This course explores the biological variation found in our species and places our knowledge of human biodiversity within a historical, scientific, and social context. In the first part of the course, we will survey the ways that scientists have studied and made sense of human biological variation over the last several centuries, and then consider conceptions of race in detail. We will discuss debates about whether race is a biological or social construct, and explore how the social realities of race and racism can have biological consequences. In the second part of the course, we will cover some basic principles of genetics and evolutionary theory, and examine the genetic, physical, and behavioral traits found in our species. We'll consider these traits from an anthropological and scientific perspective, and discuss the evolutionary and cultural processes that have shaped these traits. We will also explore how culture can influence our understanding of human biology, and discuss how studies of human variation have impacted society in the past and present. For all topics (especially controversial ones!), we will examine the scientific data and evaluate how the data have been interpreted in scientific journals *and* the popular press.

This class will be a mixture of lecture and discussion, and you will learn to understand, evaluate, and interpret scientific studies of human variation. You will also improve your writing and critical thinking skills. The course is open to any student with sophomore standing or above.

WRITING FLAG:

This course carries the Writing Flag. Writing Flag courses are designed to provide experience with writing in an academic discipline. In this class, you can expect to write regularly, complete substantial writing projects, and receive feedback from your instructors to help you improve your writing. You will also have the opportunity to revise one homework assignment based on this feedback. You should expect a substantial portion of your grade to come from written work. Writing Flag classes meet Core Communications objectives of Critical Thinking, Communication, Teamwork, and Personal Responsibility, established by the Texas Higher Education Coordinating Board.

COURSE REQUIREMENTS:

1. Exam 1. The first exam on **February 20** will cover material presented in the lectures,

discussions, films, *and* readings. The exam may include multiple choice, matching, short answer, and essay questions.

2. **Exam 2.** The second exam on **April 4** will cover material presented in the lectures, discussions, films, *and* readings following the first exam. Exam format will be similar to that of the first exam.
 3. **Exam 3.** The third exam on **May 8** will be comprehensive, but with an emphasis on material covered in the last third of class (after Exam 2). Exam format will be similar to that of the midterm exams.
 4. **Research Paper Annotated Bibliography.** This bibliography will include ten summarized references that will be included in your Research Paper.
 5. **Research Paper** The research paper will allow you to explore a relevant topic of your choice in more detail. A research paper proposal is due on **March 4**. Students will exchange drafts of their research papers in class on **April 17** and get/give feedback in discussion sections during the week of **April 22-26**. The final research paper is due on the week of **April 29-May3**. Detailed instructions for the paper will be handed out in February.
 6. **Class Participation.** This portion of your grade will be based on your preparation for and participation in discussion sections. You are expected to read the starred readings each week **BEFORE** coming to discussion section. Participation in class activities and discussions is expected.
7. **Homework Assignments.**

COURSE WEBSITE:

Class information, handouts, and a discussion forum will be available at the course website on Canvas (<http://canvas.utexas.edu>). Course updates will be sent to your university e-mail account. Please check both regularly as course topics are subject to change.

REQUIRED READINGS:

1. Mielke, James H., Lyle W. Konigsberg, and John H. Relethford. 2010. *Human Biological Variation*. Second edition. Oxford University Press. Available at the UT Co-op.
2. Articles and book excerpts will be available in PDF form on the course website.

CLASSROOM POLICIES:

Every student has the right to learn and the responsibility to not deprive others of their right to learn. In order for you and your fellow students to get the most out of this class, please abide by the following policies:

1. Attend class and arrive on time. It will be difficult to perform well if you do not come regularly.
2. Do not use your cell phone, send emails, visit websites, or play games during class.
3. No audio or video recording of any lecture or class activity is permitted without my prior written approval. The materials used in this class — including, but not limited to, exams, handouts, Powerpoint slides, and homework assignments — are copyright protected works. Any unauthorized copying of class materials is a violation of federal law and may result in disciplinary actions being taken against you. Sharing class materials without my specific, written approval may also be a violation of the University's Student Honor Code and an act of academic dishonesty, which could result in further disciplinary action. This

includes, among other things, uploading class materials to websites for the purpose of sharing those materials with other current or future students.

4. This course addresses a number of sensitive topics, including race, ethnicity, sex, gender, sexual orientation, and violence. Students are expected to maintain civility in the classroom at all times. We welcome and encourage you to express your ideas, and to listen carefully to others even when your ideas differ. You may disagree with the opinions and perspectives of others in this class, including classmates, instructors, and the authors of assigned readings, and we encourage discussion about points of disagreement. However, we expect you to remain polite and respectful even during heated debates, and will not tolerate aggressive or hateful behavior in the classroom.
5. Please let us know if you have any problem that is preventing you from performing satisfactorily in this class.

GRADING POLICIES:

If an assignment is turned in late, the assignment grade will be lowered by 10% for each day that the assignment is late. If a serious issue (i.e. illness, family death, etc.) arises that may prevent you from attending class, turning in an assignment on time, or taking an exam, contact Dr. Miró-Herrans by e-mail or phone as soon as possible to discuss an assignment extension or to schedule a make-up exam. Students should notify Miró-Herrans in advance of a missed assignment or test whenever possible. Please note that **we will not give extra credit assignments**, so you should pay close attention to exam dates and assignment due dates.

Final letter grades will be assigned using the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%). Plus/minus grades will be assigned.

Re-grading Policy: If you believe that an exam or assignment has been graded incorrectly, submit a written request for a re-grade to Dr. Miró-Herrans within one week of when the graded exam or assignment was returned. The written request should include an explanation of your position and be attached to the graded exam or assignment. If you suspect that a simple addition error was made, speak to the instructor or TA to have the error corrected.

Credit/No-Credit Policy: To receive credit if you enrolled in this course on the pass/fail basis, you must 1) take the three exams, 2) turn in a paper proposal, annotated bibliography, and research paper, 3) complete at least 75% of the homework assignments, and 4) receive the equivalent of a D or higher in the class.

Attendance: We do not formally take attendance, but are aware of who comes to class and who does not. Attendance is necessary to earn points for class participation, and consistent attendance can help raise your grade if you end up with a borderline final grade. Whether or not you come to class, you are responsible for keeping up with what happens in class.

ACADEMIC DISHONESTY:

Each student in this course is expected to abide by the University of Texas Honor Code. Any work submitted by a student in this course for academic credit must be the student's own work. You are encouraged to study together and to discuss information with other students. You can give or receive "consulting" help, but one student should never have possession of a copy of all or part of the work done by someone else (in electronic or paper form). Should copying occur, both the student who copied work from another student and the student who gave material to be copied will automatically receive a zero for the assignment. Similarly, you must do your own work during exams. Any collaborative behavior during exams will result in failure of the exam. If a student's written work closely mimics that of another student, academic dishonesty may be

suspected. Cheating and plagiarism will be reported to the Dean of Students, and the penalty may include failure of the course and University disciplinary action. For more information, see <http://www.lib.utexas.edu/services/instruction/learningmodules/plagiarism> and http://deanofstudents.utexas.edu/sjs/acint_student.php.

If students wish to use Facebook, Twitter, Google Documents, or other internet resources to collaborate or share anything related to this course, the TA and instructor must be invited to join the group to monitor for academic dishonesty. If students do not notify the TA and instructor and we discover the group on our own, all group administrators and participants will be considered in violation of the academic honor code and will be reported to the Dean of Students for collusion.

Note: Assignments in this course may be processed by TurnItIn, a tool that compares submitted material to an archived database of published work to check for potential plagiarism. Other methods may also be used to determine if a paper is the student's original work. Regardless of the results of any TurnItIn submission, the instructor will make the final determination as to whether or not a paper has been plagiarized.

ACCOMODATIONS:

Students with disabilities or a chronic illness may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities at <http://www.utexas.edu/diversity/ddce/ssd>, 512-471-6259 (voice), or 512-410-6644 (video phone). Please notify Dr. Miró-Herrans as soon as possible of any accommodations that will be needed.

RELIGIOUS HOLY DAYS:

By UT Austin policy, you should notify Dr. Miró-Herrans of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, exam, or assignment in order to observe a religious holy day, we will give you an opportunity to complete the missed work within a reasonable time after the absence.

FEEDBACK POLICY:

We will periodically ask for feedback on your learning, including through anonymous surveys. It's important for us to know your reaction to what we do in class, so please respond to these surveys and help us create an effective environment for teaching and learning.

SAFETY AND EMERGENCY EVACUATION POLICY:

It is my goal to maintain a safe and welcoming classroom environment for all students. If you hold a license to carry a concealed weapon, it is your responsibility to know and follow the Texas and University policies listed here: <https://campuscarry.utexas.edu/students>. Visible weapons or threatening behavior will be reported to the UT Police Department immediately. Based on my legal right to ban guns from my UT office, **no guns are allowed in my office (SAC 5.132)**. Leaving a gun unattended (as it would be, if left outside my office) is against the law. Please plan accordingly. **YOU** are always welcome in my office, just not your gun.

Occupants of UT buildings are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency. Please be aware of these evacuation policies: (1) Familiarize yourself with exits to the classroom and building. The nearest exit may not be the one you used when you entered the building. (2) If you require assistance to evacuate,

inform the instructor in writing during the first week of class. (3) In the event of an evacuation, follow the instructor's directions. (4) Do not re-enter a building unless you're given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

BEHAVIOR CONCERNS ADVICE LINE (BCAL):

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>.

RELEVANT RESOURCES AT UT AUSTIN:

The University of Texas at Austin has numerous resources for students to provide assistance and support for your learning:

- (1) Sanger Learning and Career Center: <http://lifelearning.utexas.edu/>
- (2) Undergraduate Writing Center: <http://uwc.utexas.edu/>
- (3) Counseling & Mental Health Center: <http://cmhc.utexas.edu/>
- (4) Vick Center for Strategic Advising and Career Counseling: <http://ugs.utexas.edu/vick>
- (5) Student Emergency Services: <http://deanofstudents.utexas.edu/emergency/>

SCHEDULE OF TOPICS, READINGS, AND IMPORTANT DATES:DS = discussion section; *HBV* = Mielke et al. textbook; HW = Homework

* indicates readings that must be completed BEFORE the week's discussion section

Date	Topic and Readings	Important Dates
1/23	Introduction <i>READ: HBV</i> chapter 1, Molnar (2006) chapter 1 <i>WATCH: Race: The Power of an Illusion</i> , Episode 1 (film)	
DS	<i>No Discussion Sections This Week</i>	
1/28	Science and the Study of Human Variation <i>READ: Marks</i> (2009), <i>Marks</i> (1996)	
1/30	History of Human Variation Studies I <i>READ: Marks</i> (1995) 3 and 4	HW #1 Due
DS	Race, Biology, and History <i>READ: *Jacobson</i> (2001), <i>*Beinart</i> (2013), <i>*Borenstein</i> (2015)	
2/4	History of Human Variation Studies II <i>READ: Marks</i> (1995) chapters 6, <i>Marks</i> (2013)	
2/6	Problems with the Racial View of Human Diversity <i>READ: Barbujani</i> (2005), <i>*Graves</i> (2015a)	
DS	Race and Forensics <i>READ: *Sauer</i> (1992), <i>*Smay</i> (2000), <i>*Ousley</i> (2009)	HW #2 Due
2/11	Race as a Social Construct <i>READ: Lee</i> (1993), <i>Smedley</i> (2005), <i>Vega</i> (2014), <i>Vox</i> video(2015);	
2/13	Race and Disease in Sociohistorical Context <i>READ: Williams & Wyatt</i> (2015), <i>Kahn</i> (2007)	
DS	Structural Racism, Health, and Biology <i>READ: *Gravlee</i> (2009), <i>*Sullivan</i> (2013)	
2/18	Race and Racial Profiling in Medicine <i>READ: Satel</i> (2002), <i>Hoberman</i> (2005), <i>Brooks</i> (2015)	
2/20	Exam 1	Exam 1
DS	Research Paper Instructions	Revised HW #2 due
2/25	DNA, Mutation, and Genetic Variants <i>READ: HBV</i> chapter 2 and pp 198-209	
2/27	From DNA to Phenotype	
DS	Eugenics and Ethics <i>READ: *Marks</i> (1995) chapter 5, <i>*Hayden</i> (2011), <i>*Stein</i> (2012), <i>*Cha</i> (2017)	
3/4	Population Genetics <i>READ: *HBV</i> chapter 3	Paper Proposal Due
3/6	Evolutionary Forces and Genetic Variation I	
DS	Evolutionary Forces and Genetic Variation II	

Date	Topic and Readings	Important Dates
3/11	Population History and Human Variation <i>READ: HBV pp 210-236 and chapter 13, Tishkoff (2007) or Halverson & Bolnick (2008) or Bollongino et al. (2013)</i>	HW #3 Due
3/13	Simple Genetic Traits: Blood Group Variants <i>READ: HBV pp 99-116</i>	
DS	Genetic Essentialism <i>READ: *Dar Nimrod (2011), *Graves (2015b),</i>	
3/18-23	NO CLASS (Spring Break)	
3/25	<i>First Peoples: Africa</i> (film)	Annotated bibliography due
3/27	Simple Genetic Traits II <i>READ: HBV chapter 8</i>	
DS	<i>No Discussion Sections This Week</i>	
4/1	Simple Genetic Trait III <i>READ: HBV pp 133-137 and chapter 7</i>	Exam 2
4/3	Exam 2	
DS	DNA Testing and Ethics <i>READ: *Seife (2013), *Allyse (2013)</i>	
4/8	Complex Traits: Human Body Form <i>READ: HBV chapter 10 and pp 260-280</i>	HW#4 Due
4/10	Complex Traits: Skin, Eye, and Hair Color Variation <i>READ: HBV chapter 12</i>	
DS	Human Plasticity <i>READ: *Molnar (2006) Chapter 6, *Gravlee (2003)</i>	
4/15	Complex Traits: Temperature and Altitude Adaptations <i>READ: HBV pp 280-290</i>	Paper Draft Due
4/17	Complex Traits: Behavioral Variability and Athletic Ability <i>READ: HBV pp 344-348, Marks (1995) pp 237-243, Berkowitz (1996)</i>	
DS	Popular Perceptions of Behavioral Genetics <i>READ: *Hayden (2013)</i>	
4/22	Intelligence, IQ, and Political Behavior <i>READ: HBV pp 354-363, Cohen (2002)</i>	HW #5 Due
4/24	Deviance, Criminality, and Aggression <i>READ: Clark & Grunstein (2000), Sapolsky (1997)</i>	
DS	Research Paper Peer Review and Writing Tips	
4/29	Sex and Gender Variation <i>READ: Fausto-Sterling (2012), Ainsworth (2015), Sapolsky (2015), Ripley et al. (2005)</i>	Final Paper Due
5/1	Epigenetics <i>READ: TBD</i>	
DS	Biological Basis of Sexual Orientation <i>READ: *LeVay & Hamer (1994), *Byne (1994), *Sample (2014), *Balter (2015), *Yong (2015)</i>	
5/6	<i>Cracking the Code of Life</i> (film)	Exam 3
5/8	Exam 3	
DS	<i>No Discussion Sections This Week</i>	

PDFS AND WEBSITE LINKS ON THE COURSE WEBSITE:

- California Newsreel. 2003. *Race: The Power of an Illusion. Episode 1: The Difference Between Us*. 58 min.
- Molnar S. 2006. 6th Ed. *Human Variation: Races, Types, and Ethnic Groups*. Pearson Prentice Hall. New Jersey. Chapters 1 and 6.
- Marks J. 2009. *Why I Am Not a Scientist: Anthropology and Modern Knowledge*. Berkeley: University of California Press. pp 1-24.
- Marks J. 1996. The anthropology of science part II: scientific norms and behaviors. *Evolutionary Anthropology* 5:75-80.
- Marks J. 1995. *Human Biodiversity: Genes, Race, and History* (Chapters 3-6). Aldine de Gruyter.
- Jacobson M. 2001. Becoming caucasian: Vicissitudes of whiteness in american politics and culture, *Identities Global Studies in Culture and Power*, 8:1, 83-104
- Beinart P. 2013. Are the Tsarnaevs White? *The Daily Beast*. April 24.
- Borenstein E. 2015. Dzhokhar Tsarnaev was 'black' in Russia. Is he white in America? *Washington Post*. January 8.
- Marks J. 2013. *The Nature/Culture of Genetic Facts*. *Annu. Rev. Anthropol.* 42:247–67.
- Graves J. 2015a. Why the Nonexistence of Biological Races Does Not Mean the Nonexistence of Racism. *American Behavioral Scientist*. 59(11) 1474–1495.
- Barbujani G. 2005. Human race: classifying people vs understanding diversity. *Current Genomics* 6:215-226.
- Sauer NJ. 1992. Forensic anthropology and the concept of race: if races don't exist, why are forensic anthropologists so good at identifying them? *Social Science and Medicine* 34:107-111.
- Smay D. 2000. Galileo Wept: A Critical Assessment of the Use of Race in Forensic Anthropology. *Transforming Anthropology*, 9(2): pp. 19-29.
- Ousley S. 2009. Understanding Race and Human Variation: Why Forensic Anthropologists are Good at Identifying Race. *American Journal Of Physical Anthropology* 139:68–76.
- Lee SM. 1993. Racial classifications in the US census: 1890-1990. *Ethnic and Racial Studies* 16:75-94.
- Smedley A. 2005. Race as Biology Is Fiction, Racism as a Social Problem Is Real: Anthropological and Historical Perspectives on the Social Construction of Race. *American Psychologist*. 60(1): 16–26.
- Vega T. 2014. Census considers how to measure a more diverse America. *The New York Times*, July 1.
- VOX. 2015. The myth of race, debunked in 3 min. www.youtube.com/watch?v=VnfKgffCZ7U
- Sullivan S. 2013. Inheriting racist disparities in health: epigenetics and the transgenerational effects of white racism. *Critical Philosophy of Race* 1:190-218.
- Gravlee CC. 2009. How race becomes biology: embodiment of social inequality. *American Journal of Physical Anthropology* 139:47-57.
- Williams DR, Wyatt R. 2015. Racial bias in health care and health: challenges and opportunities. *Journal of the American Medical Association* 314:555-556.
- Kahn J. 2007. Race in a bottle. *Scientific American* 297:40-45.
- Satel S. 2002. I am a racially-profiling doctor. *New York Times Magazine* May 5.
- Hoberman J. 2005. The primitive pelvis: the role of racial folklore in obstetrics and gynecology during the twentieth century. In: Forth CE, Crozier I, editors. *Body Parts: Critical Explorations in Corporeality*. Lanham: Lexington Books. pp.85-103.
- Brooks KC. 2015. A silent curriculum. *Journal of the American Medical Association* 313:1909-1910.
- Tishkoff S. 2007. Convergent Adaptation of Human Lactase Persistence in Africa and Europe. *Nature Genetics*. 39(1):31-40.

- Halverson MS, Bolnick DA. 2008. An ancient DNA test of a founder effect in Native American ABO blood group frequencies. *American Journal of Physical Anthropology* 137:342-347.
- Bollongino R, Nehlich O, Richards MP, Orschiedt J, Thomas MG, Sell C, Fajkosova Z, Powell A, Burger J. 2013. 2000 years of parallel societies in Stone Age Central Europe. *Science* 342:479-481.
- Dar Nimrod I. 2011. Genetic Essentialism: On the Deceptive Determinism of DNA. *Psychol Bull.* 137(5): 800–818.
- Graves J. 2015b. Great Is Their Sin: Biological Determinism in the Age of Genomics. *The ANNALS of the American Academy of Political and Social Science*, 661(1), 24–50.
- Hayden EC. 2011. Fetal gene screening comes to market. *Nature* 478:440.
- Stein R. 2012. Genome sequencing for babies brings knowledge and conflicts. *National Public Radio*, December 3. Click on “Listen to the Story” at: www.npr.org/blogs/health/2012/12/03/165272373/genome-sequencing-for-babies-brings-knowledge-and-conflicts
- Cha AE. 2017. Donor eggs, sperm banks, and the quest for ‘good genes’. *Washington Post*, October 21.
- Gravlee CC, Bernard HR, Leonard WR. 2003. Boas’s changes in bodily form: the immigrant study, cranial plasticity, and Boas’s physical anthropology. *American Anthropologist* 105:326-332.
- Allyse M. 2013. 23 and Me, We, and You: direct-to-consumer genetics, intellectual property, and informed consent. *Trends in Biotechnology* February 2013, Vol. 31, No. 2:68-69.
- Seife C. 2013. 23andMe Is Terrifying, but Not for the Reasons the FDA Thinks. *Scientific American*. November:1-11.
- Berkowitz A. 1996. Our Genes, Ourselves? *BioScience* 46:42-51.
- Cohen MN. 2002. An anthropologist looks at “race” and IQ testing. In: Fish JM, editor. *Race and Intelligence: Separating Science from Myth*. Mahwah: Lawrence Erlbaum Associates. pp 201-224.
- Hayden EC. 2013. Taboo genetics. *Nature* 502:26-28.
- Fausto-Sterling A. 2012. *Sex/Gender: Biology in a Social World*. New York: Routledge. pp 3-11.
- Ainsworth C. 2015. Sex redefined. *Nature* 518:288-291.
- Sapolsky R. 2015. Caitlyn Jenner and our cognitive dissonance. *Nautilus*, September 3. nautil.us/issue/28/2050/caitlyn-jenner-and-our-cognitive-dissonance
- Ripley A et al. 2005. Who says a woman can’t be Einstein? *Time* 165:50-61.
- Clark WR, Grunstein M. 2000. The genetics of aggression. *Are We Hardwired? The Role of Genes in Human Behavior*. Oxford: Oxford University Press. pp. 157-175.
- Sapolsky RM. 1997. *The Trouble with Testosterone, and Other Essays on the Biology of the Human Predicament*. New York: Simon and Schuster. pp. 339-342.
- LeVay S, Hamer DH. 1994. Evidence for a biological influence in male homosexuality. *Scientific American* May:44-49.
- Byne W. 1994. The biological evidence challenged. *Scientific American* May:50-55.
- Sample I. 2014. Male sexual orientation influenced by genes, study shows. *The Guardian*, February 13.
- Balter M. 2015. Can epigenetics explain homosexuality puzzle? *Science* 350:148.
- Yong E. 2015. No, scientists have not found the ‘gay gene’. *The Atlantic*, October 10.