Anthropology 105: The Human Species
Fall 2024

Instructor: Dr. Stephanie Levy
Email: stephanie.levy@hunter.cuny.edu
Office: 728 North Building
Lecture: 10:30 – 11:20 am, Tuesdays and Fridays, room W615 West Building
Office Hours: 1:30– 2:30 pm, Tuesdays and Fridays. If you are not available during that time range, please email Professor Levy to set up a different time to meet via Zoom.

Course Description:
In this course we examine human biology from evolutionary and biocultural perspectives, comparing our anatomy, physiology, and behavior to those of living primates and other mammals. We will discuss the relative roles of genes ("nature") and environment ("nurture"), the biological basis of behavior, and local biological adaptations evident in modern human populations. Students will also actively engage in the development of scientific hypotheses, data collection, and data synthesis, as part of laboratory research experiences throughout the semester. Material covered will help prepare students to understand and evaluate recent advances in genetics, physiology, medicine and evolution.

Course Objectives:
At the completion of this course, students should be able to:

- Summarize the basic principles of evolutionary biology, the major trends in human evolution, the process of human adaptation, and their relevance for human health
- Evaluate competing explanations for human biological variation
- Practice skills related to data collection, analysis, and interpretation

Lectures: 10:30 – 11:20 am, Tuesdays and Fridays, room W615 West Building

Lecture slides will be posted by 10:30 am before class.

Lecture Questions:
The Lecture Questions are designed to help you think critically about the material presented in lecture or the readings and review previous material. **You are required to submit your answer to the Lecture Question on Blackboard by the deadline** (see **Course Schedule** and *How to Submit Your Response to a Lecture Question* below). The Lecture Questions will be discussed during lecture and will be viewable in the lecture slides (see *How to Find Lecture Slides*). Lecture questions will be graded as complete or incomplete.

Navigating the Blackboard Page:

How to Find Lecture Slideshows
Enter Blackboard and click on the link for this class. On the left side in the purple section, click on "Course Materials", then click "Lecture Slideshows". In this folder you should find the PowerPoint presentations for each lecture. The lecture slides will be updated with an answer to the Lecture Question after the deadline has passed.

How to Submit Your Response to a Lecture Question
Enter Blackboard and click on the link for this class. On the left side in the purple section, click on "Course Materials", then click "Lecture Questions". Click on the appropriate lecture and then click "Write Submission" to type in your response. This Blackboard application works best on computers and tablets and does not work well on smart phones. If you plan on submitting your answer on a smart phone,

please just email me your answer (stephanie.levy@hunter.cuny.edu). Responses are graded as complete or incomplete.

Labs:
Check your registration for the schedule. **Check your lab section's Blackboard page for the lab syllabus!** Your lab grade will contribute to your final grade in this class. You may only attend the lab section that you registered for.

Text:
There is **no** required textbook for this course. **All readings are available online or on Blackboard.**

Assessment:

Participation:	6%
Lab grade:	40%
Exam I:	18%
Exam II:	18%
Exam III:	18%

Exams:
Exam I will take place on **Tuesday, March 5** and will cover material from lecture 1 through lecture 10.

Exam II will take place on **Tuesday, April 9** and will cover material from lecture 11 through lecture 19. While this exam is not cumulative, the material covered in lectures 11 through 19 builds off concepts tested in the first exam.

Exam III will take place on **Wednesday, May 22 at 9:00 am** and will cover material from lectures 20 through lecture 26. Again, while this exam is not cumulative, the material builds off of concepts tested in the first and second exams.

THERE ARE NO MAKE-UP EXAMS. The lowest exam grade will be dropped.

Each exam consists of 40 questions – 13 True/False questions and 27 multiple choice questions.

Course Policies:

Academic Integrity
Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

Sexual Harassment Policy
In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College. a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444). b. All Other Forms of Sexual Misconduct: Students are

also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123. CUNY Policy on Sexual Misconduct Link: https://www.cuny.edu/wp-content/uploads/sites/4/pageassets/about/administration/offices/ovsa/policies/Sexual-misconduct-8.30.18-PSM-2018-005.pdf

Grades

Please regularly check your grades on Blackboard. Grades will not be changed after May 28, 2024.

If you wish to discuss or dispute any of the grades you receive in this course, as a first step please draft a short memo explaining your concerns and e-mail it to Professor Levy within one week of receiving the grade. Final course grades will be awarded on a letter scale (A+ to F) calculated according to the percentage of weights listed below as follows:

A+ = 98 – 100	B- = 80 – 83
A = 93 – 97	C+ = 77 – 79
A- = 90 – 93	C = 70 – 76
B+ = 87 – 89	D = 60 – 69
B = 83 – 86	F = 59 or below

Accommodations

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772-4857 or (212) 650-3230.

Resources:

Skirball Science Learning Center (SLC): A tutor has been hired to provide support with this class. Stay tuned for more information regarding their office hours. https://library.hunter.cuny.edu/skirball-science-learning-center

Rockowitz Writing Center (RWC): The RWC is also located at on the 7th floor the East Building. You can receive help with your writing by either registering for ongoing tutoring sessions or dropping into their office hours, which are listed here: http://www.hunter.cuny.edu/rwc If you are unhappy with your grade on your first lab report, I strongly recommend seeking out help at the RWC.

Office of AccessAbility: The Office of AccessAbility offers fantastic workshops on studying and time management skills for all Hunter students. Check out their calendar of events here: http://www.hunter.cuny.edu/access/events-news/Events

Course Schedule:

Week	Date	Topic	Readings and Assignments
1	Tuesday 1/30	**Lecture 1** The scientific method, DNA, genes, and chromosomes	Readings for Lecture 2: • Byrnes, W. M. (2015). The forgotten father of epigenetics. *Am. Sci*, *103*(2), 106-109. • Units 1.1-1.5 of Miko & LeJune, L. eds. (2009) *Essentials of Genetics.* Cambridge, MA: NPG Education.
	Friday 2/2	**Lecture 2** The scientific method, DNA, genes, and chromosomes	**Answers to the Lecture 1 Question Due at 10:30 am** Readings for Lecture 3: • Units 2.3-2.6, 3.2-3.5 of Miko & LeJune, L. eds. (2009) *Essentials of Genetics.* Cambridge, MA: NPG Education.
2	Tuesday 2/6	**Lecture 3** Genetic variation, chromosomal inheritance and simple traits	**Answers to the Lecture 2 Question Due at 10:30 am** Readings for Lecture 4: • Ainsworth, C. (2015). Sex redefined. *Nature* 518, 291-298. • Thayer, Z & Non A. (2015). Anthropology meets epigenetics: current and future directions. *American Anthropologist* 117(4), 722-735. **Only pages 1-3 required**
	Friday 2/9	**Lecture 4** Complex traits, plasticity, and epigenetics	**Answers to the Lecture 3 Question Due at 10:30 am** Readings for Lecture 5 • Forbes, A.A. and Krimmel, B.A. (2010) Evolution is change in the inherited traits of a population through successive generations. *Nature Education Knowledge* 3(10):6. • Andrews, C.A. (2010) Natural selection, genetic drift, and gene flow do not act in isolation in natural populations. *Nature Education Knowledge* 3(10):5. • Unknown. (2014) Negative selection. *Nature Education.*
3	Tuesday 2/13	**Lecture 5** Evolutionary theory part 1	**Answers to the Lecture 4 Question Due at 10:30 am** Readings for Lecture 6: • Duret, L. (2008). Neutral theory: the null hypothesis of molecular evolution. *Nature Education* 1(1), 218.
	Friday 2/16	**Lecture 6** Evolutionary theory part 2	**Answers to the Lecture 5 Question Due at 10:30 am** Readings/Video for Lecture 7:

			• *Your Inner Fish: The Ancient History of the Human Hand, We Hear with the Bones that Reptiles Eat With, Our Fishy Brain*. • Silcox, M. (2014). Primate origins and the plesiadapiformes. *Nature Education Knowledge* 5(3):1.
4	Tuesday 2/20	**Lecture 7** Evolution of Vertebrata, Mammalia, and Primates	**Answers to the Lecture 6 Question Due at 10:30 am** Readings for Lecture 8: • Pontzer, H. (2012). Overview of hominin evolution. *Nature Education* 3(10), 8. Leonard, WR. (2002). Food for thought. Dietary change was a driving force in human evolution. *Scientific American* 287(6), 106-115
	Friday 2/23	**Lecture 8** Evolution of genus *Homo*	**Answers to the Lecture 7 Question Due at 10:30 am** Reading for Lecture 9: • Leonard, WR et al. (2012). Chapter 15: Comparative and evolutionary perspectives on human brain growth. In: N Cameron & B Bogin (eds): *Human Growth and Development, Second edition.* Elsevier Inc: London, UK
5	Tuesday 2/27	**Lecture 9** Evolution of the human brain	**Answers to the Lecture 8 Question Due at 10:30 am** •
	Friday 3/1	**Lecture 10** Exam I Review	**Answers to the Lecture 9 Question Due at 10:30 am**
6	Tuesday 3/5	**EXAM I**	Readings/Video for Lecture 11: • Watch "The Story About Race" movie Explore the History of Race Timeline and read the sections marked with the "science" symbol.
	Friday 3/8	**Lecture 11** Historical perspectives on human variation and race	Readings for Lecture 12: • Graves J.L. (2005). How biology refutes our racial myths. In: *The Race Myth.* Penguin: New York, NY Watch: https://www.youtube.com/watch?v=VzyjDR_AWzE&list=PLDToukXRDVMSkxrabFfSb5u6cE82huRpD&index=19&t=0s
7	Tuesday 3/12	**Lecture 12** Contemporary perspectives of human biological variation	**Answers to the Lecture 11 Question Due at 10:30 am** Readings for Lecture 13:

			• Ocobock C. (2020). Human energy expenditure in Anthropology and beyond. *American Anthropologist* 122(2): 236-349. • Bosy-Westphal & Müller (2021). Diagnosis of obesity based on body composition-associated health risks – time for a change in paradigm. *Obesity Reviews* e13190.
	Friday 3/15	**Lecture 13** Human energetics, nutrition, and obesity	**Answers to the Lecture 12 Question Due at 10:30 am** Readings for Lecture 14: • Sapolsky R. (2004). Why Don't Zebras Get Ulcers? (Chapter 1). In: Why Don't Zebras Get Ulcers? St. Martin's Press. **Read only pp. 1-16**. • Sapolsky R. (2004). Glands, Gooseflesh, and Hormones. (Chapter 2). In: Why Don't Zebras Get Ulcers? St. Martin's Press. pp. 19-36.
8	Tuesday 3/19	**Lecture 14** Psychosocial stress **LECTURE RECORDED ONLINE, NO IN-PERSON CLASS**	**Answers to the Lecture 13 Question Due at 10:30 am** Readings for Lecture 15: • Jablonski, N.G. & Chaplin, G. (2016). The colours of humanity: the evolution of pigmentation in the human lineage. *Philosophical Transactions B* 372: 20160349
	Friday 3/22	**Lecture 15** Biological adaptations to UV radiation **LECTURE RECORDED ONLINE, NO IN-PERSON CLASS**	**Answers to the Lecture 14 Question Due at 10:30 am** Readings for Lecture 16: • Leonard, W.R. (2015). Chapter 18 Physiological adaptations to environmental stressors. In: Basics in Human Evolution. **Pages 251-263**.
9	Tuesday 3/26	**Lecture 16** Biological adaptations to cold and hot climates	**Answers to the Lecture 15 Question Due at 10:30 am** Readings for Lecture 17: • Leonard, W.R. (2015). Chapter 18 Physiological adaptations to environmental stressors. In: Basics in Human Evolution. **Pages 263-269**.
	Friday 3/29	**NO CLASS**	
10	Tuesday 4/2	**Lecture 17** Biological adaptations to high altitude hypoxia	**Answers to the Lecture 16 Question Due at 10:30 am** Readings for Lecture 18:

			• Zuk M. (2007). Friendly worms and the price of victory (Chapter 2). In: Riddled with Life: Friendly Worms, Ladybug Sex, and the Parasites that Make Us Who We Are. Hartcourt Press. pp. 38-63. • Tollefson, J. (2020). Why deforestation and extinctions make pandemics more likely. *Nature* 584:175-176.
	Friday 4/5	**Lecture 18** Exam II Review	**Answers to the Lecture 18 Question Due at 10:30 am** Readings for Lecture 19 • Fabian, D. (2012) Life History Evolution. *Nature Education Knowledge* 3(10):24. • Kaplan, H. et al. (2000) A theory of human life history evolution: diet intelligence, and longevity. *Evolutionary Anthropology*. **Only pages 1-4 required.**
11	Tuesday 4/9	**Lecture 19** Human life history characteristics	
	Friday 4/12	**EXAM II**	Reading for Lecture 20: Smith, T. (2013). Reconstructing Hominin Life History. *Nature Education Knowledge* 4(4):2.
12	Tuesday 4/16	**Lecture 20** The evolution of human life history characteristics	**Answers to the Lecture 20 Question Due at 10:30 am** Reading for Lecture 21: • Hoke, M. (2018). Baby fat is about more than cuteness. *Sapiens.* Nelson, R.G. (2016). Residential context, institutional alloparental care, and child growth in Jamaica. *American Journal of Human Biology* 28:493-502.
	Friday 4/19	**Lecture 21** Fetal development, infancy, childhood and adolescence	**Answers to the Lecture 21 Question Due at 10:30 am** Readings for Lecture 22: • Jasienska, G. (2010) Chapter 19: Why Women Differ in Ovarian Function: Genetic Polymorphism, Developmental Conditions, and Adult Lifestyle. In: *Human Evolutionary Biology*, ed. M.P. Muehlenbein. Cambridge, UK: Cambridge University Press. pp. 322-337.
13	Tuesday 4/23	**NO CLASS**	
	Friday 4/26	**NO CLASS**	
14	Tuesday	**NO CLASS**	

	4/30		
	Friday 5/3	**Lecture 22** Reproductive ecology part I **LECTURE RECORDED ONLINE, NO IN-PERSON CLASS**	**Answers to the Lecture 22 Question Due at 10:30 am** Readings for Lecture 23: Gettler, L.T. (2010) Direct male care and hominin evolution: why male-child interaction is more than a nice social idea. *American Anthropologist 112*(1), 7-21.
15	Tuesday 5/7	**Lecture 23** Reproductive ecology part II	**Answers to the Lecture 23 Question Due at 10:30 am** Readings for Lecture 24: • Kaplan et al. (2017) Coronary atherosclerosis in indigenous South American Tsimane: a cross-sectional cohort study. *The Lancet*, *389*(10080), 1730-1739.
	Friday 5/10	**Lecture 24** Aging and the human lifespan	**Answers to the Lecture 24 Question Due at 10:30 am**
16	Tuesday 5/14	**Lecture 25** Exam III Review	**Answers to the Lecture 25 Question Due at 10:30 am**
17	**Wednesday 5/22 at 9:00 am**	**Exam III**	