

AANT 211 (9186)

HUMAN POPULATION BIOLOGY

Fall 2011

<u>Instructor:</u>	Dr. Robert McCarthy	<u>TA:</u>	Sarah Heins	<u>Time:</u>	T Th 2:45 – 4:05
Office:	AS 107		AS 106	<u>Place:</u>	LC 23
Phone:	(518)442-4715		-	<u>Format:</u>	Lecture and discussion
E-mail:	rmccarthy2@albany.edu		sh518871@albany.edu		
Office hours:	T 8-10, Th 12-2, F 12-2		T Th 1:30-2:30		

Course objectives:

This course surveys human variation and adaptation within living populations, placing the study of human variation within the framework of evolutionary theory, population genetics, and phenotypic integration. In addition, this course looks at factors influencing human variation, such as gene flow, exercise, nutrition, and growth and development; and explores common cultural misconceptions about “race” and ethnicity. By the end of the course, students should be knowledgeable about current anthropological thinking on human “race” and variation, including why the word “race” is in quotes. Each class meeting will combine lecture and discussion, so students are expected to read the textbook and appropriate articles prior to class and to come prepared with questions and comments.

Textbook and readings:

Mielke, J.H., Konigsberg, L.W., Relethford, J.H. (2011). *Human Biological Variation*, 2nd ed. Oxford University Press, Oxford.

In addition to reading the textbook, students will be expected to read supplemental articles and handouts posted on Blackboard. Please be sure to check Blackboard regularly, as there will be new announcements, articles, handouts, and grades posted throughout the semester.

- (1) (1996). AAPA statement on biological aspects of race. *Am. J. Phys. Anthropol.* 101, 565-570.
<http://www.physanth.org/association/position-statements/biological-aspects-of-race>
- (2) Mayr, E. (1975). Typological vs. population thinking. From *Evolution and the Diversity of Life*. Harvard Univ. Press, pp. 26-29.
- (3) Lieberman, D.E. (1997). Making behavioral and phylogenetic inferences from fossils: considering the developmental influence of mechanical forces. *Ann. Rev. Anthropol.* 26, 185-210.
- (4) Schell, L.M., Knutsen, K.L. (2002). Environmental effects on growth. In: Cameron, N. (Ed). *Human Growth and Development*. Academic Press, New York, pp. 165-196.
- (5) Jablonski, N.G., Chaplin, G. (2000). The evolution of human skin coloration. *J. Hum. Evol.* 39, 57-106.
- (6) Green, R.E. et al. (2010). A draft sequence of the Neanderthal genome. *Science* 328, 710-722.
- (7) Selections from Gould, S.J. (1981). *The Mismeasure of Man* and Hershstein, R., Murray, C. (1994). *The Bell Curve*.
- (8) Selections from Entine, J., Smith, E. (1999). *Taboo: Why Black Athletes Dominate Sports and Why We're Afraid to Talk About It*.

Grading:

Your grade in this course will be based on three exams (25% each) and three quizzes (cumulatively, 25%). The exams and quizzes will be composed of multiple choice questions; further details will be posted on Blackboard before each exam. Please notify me ahead of time, whenever possible, if you need to schedule a make-up due to a **documented** emergency.

Academic Integrity and Students with Disabilities:

Cheating on exams will not be tolerated. Students will be expected to contribute positively to the general learning atmosphere in class; therefore, disruptions of lectures and discussions will result in appropriate disciplinary action. PLEASE TURN OFF YOUR CELL PHONES PRIOR TO CLASS.

COURSE SCHEDULE

<u>Day</u>	<u>Date</u>	<u>Lecture/discussion</u>	<u>Reading</u>
T	8/30	Course introduction	Handout
R	9/1	Racial classifications and typological systems	Mielke ch. 1, SR(1)
T	9/6	Eugenics	SR
R	9/8	New Synthesis and “Population Thinking”	QUIZ #1 ; SR(2)
T	9/13	Chromosomes and cell division	Mielke ch. 2
R	9/15	DNA	Mielke ch. 2
T	9/20	Mendelian genetics	Mielke ch. 2
R	9/22	-	EXAM #1
T	9/27	Probability and Hardy-Weinberg	Mielke 50-67; handout
R	9/29	NO CLASS	
T	10/4	Evolutionary forces	Mielke 68-88; handout
R	10/6	Blood group polymorphisms I	Mielke ch. 4
T	10/11	Blood group polymorphisms II	QUIZ #2
R	10/13	Plasma proteins	Mielke ch. 5
T	10/18		
R	10/20	Human Leukocyte Antigen polymorphism	Mielke ch. 6
T	10/25	Human hemoglobin, milk, taste, cerumen	Mielke ch. 7, 8
R	10/27	DNA markers I	Mielke ch. 9, handout
T	11/1	DNA markers II	Mielke ch. 9
R	11/3	-	EXAM #2
T	11/8	Quantitative variation	Mielke ch. 10
R	11/10	Anthropometric variation	Mielke ch. 10
T	11/15	Climate, exercise, growth and development	SR(3,4)
R	11/17	Pigmentation	QUIZ #3 ; SR(5)
T	11/22	Population history	Handout
R	11/24	NO CLASS - THANKSGIVING	
T	11/29	Neanderthal DNA	SR(6)
R	12/1	Behavioral traits	SR(7)
T	12/6	Behavioral traits	SR(8)
R	12/8	NO CLASS – READING DAY	
R	12/15	LECTURE ROOM 23 1 – 3 pm	FINAL EXAM