ANTH 610: CONTEMPORARY ISSUES IN BIOLOGICAL ANTHROPOLOGY
Spring 2012 4 Credit Hours

Class Time & Location: Wednesdays 6:00 - 8:50 pm, 330 Condon Hall

Instructor: Dr. Josh Snodgrass
Phone: 346-4823
E-mail: jjosh@uoregon.edu
Office Hours: Mondays & Wednesdays 1-2 & by appointment

Course Description: A graduate seminar course focused on current topics in biological anthropology.

Course Content: This course serves as a core graduate requirement for biological anthropology students but may also be appropriate for other students in anthropology or other disciplines. The course introduces students to key issues in human evolutionary biology through an in-depth examination of current research and controversies in biological anthropology. The course emphasizes topics that cut across multiple areas of biological anthropology, and which require integration of datasets from paleoanthropology, human biology, primatology, anthropological genetics, and behavioral ecology.

Required Readings: A collection of readings consisting of articles and book chapters

Evaluation Criteria:
Grading in the course will be based on: class attendance & participation in discussions; completion of an annotated bibliography on each of the assigned articles; and leading discussion during one class meeting.

Class Attendance & Participation	40%
Annotated Bibliography (Due: 5/9 & 6/14)	40%
Leading Discussion	20%

All students in the class are expected to fully participate in each discussion and to have read the required readings by class time. Due to the seminar format of the class and its emphasis on participation, class attendance is essential. Students should be active participants in discussion during every class.

Students will compile an annotated bibliography that summarizes each of the assigned readings. Each entry should be between ½ -1 page (single-spaced) in length and should: 1) briefly summarize the main point(s) of the article, and 2) place the article into the framework of the class, linking it with other ideas and critically evaluating it. Writing should be concise and focused around a few main points. The annotated bibliography from the first five weeks will be due May 9 and from the second half of the class on June 14.

Each student will be responsible for leading class discussion once during the term. This is not meant to be a presentation (NO powerpoint!) but instead the student should facilitate discussion and to link that week's material to other course material or related topics in anthropology. Prepared discussion questions are encouraged.

Assignments must be completed at the scheduled time—under no circumstances will assignment extensions be given without a legitimate excuse. If you will not be able to complete an assignment at the designated time, you should notify me in advance if at all possible.

Appropriate accommodations will be provided for students with documented disabilities. If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me. Please bring a notification letter from Disability Services outlining your accommodations.

Schedule:

Date	Topics	Required Readings
4/4	**Life History Theory I: The Human Life History Pattern**	1) Kaplan et al. 2000 2) Bogin 2006 3) Hawkes 2010
4/11	**No Class—AAPA & HBA meetings**	No readings
4/18	**Life History Theory II: An Interspecific Perspective**	1) Leigh & Blomquist 2007 2) McGrew 2010 3) Montgomery et al. 2010 4) Jones 2011
4/25	**Developmental Plasticity**	1) Altmann & Alberts 2005 2) Walker et al. 2006 3) Migliano et al. 2007 4) Kuzawa & Thayer 2011
5/2	**Detecting Selection in Human and Primate Genomes—Guest: Dr. Kirstin Sterner**	1) Pritchard et al. 2010 2) Simonson et al. 2010 3) Bradley & Lawler 2011 4) Hernandez et al. 2011
5/9	**Energetics and Ecology** **1st Set of Annotated Bibliographies Due**	1) Gibson & Mace 2006 2) Ellison 2008 3) Pontzer et al. 2010 4) Snodgrass 2012
5/16	**Cooperative Breeding/Behavior**	1) Kuhn and Stiner 2006 2) Herrmann et al. 2007 3) Burkhart et al. 2009 4) Kramer and Ellison 2010 5) Weiss et al. 2011
5/23	**Evolution of the Human Diet**	1) Aiello & Wheeler 1995 2) Cordain et al. 2000 3) Leonard et al. 2003 4) Richards & Trinkaus 2009 5) Wrangham & Carmody 2010
5/30	**Climate and Human Evolution**	1) Potts 1998 2) Snodgrass et al. 2007 3) Perry & Dominy 2008 4) Leonard & Katzmarzyk, 2010
6/6	**Current Controversies in Biological Anthropology**	1) Bramble & Lieberman 2004 2) Lovejoy 2009 3) Berger et al. 2010 4) Brown 2012 5) Hare et al. 2012
	2nd Set of Annotated Bibliographies Due (by 6/14)	

REQUIRED READINGS

Week 1 (Life History Theory I: The Human Life History Pattern)

Kaplan H, Hill K, Lancaster J, Hurtado AM. 2000. A theory of human life history evolution: Diet, intelligence, and longevity. *Evolutionary Anthropology* 9: 156-185.

Bogin B. 2006. Modern human life history: The evolution of human childhood and fertility. In: Hawkes K, Paine RR (eds.) The Evolution of Human Life History. Santa Fe: School of American Research, pp. 197-230.

Hawkes K. 2010. How grandmother effects plus individual variation in frailty shape fertility and mortality: Guidance from human-chimpanzee comparisons. *Proceedings of the National Academy of Sciences USA 107 (Supplement 2)*: 8977-8984.

Week 2 – No Class

No readings

Week 3 (Life History Theory II: An Interspecific Perspective)

Leigh, SR, Blomquist GE. 2007. Life history. In Campbell CJ et al. (eds.) Primates in Perspective. New York: Oxford University Press, pp. 396-407.

McGrew WC. 2010. In search of the last common ancestor: New findings on wild chimpanzees. *Philosophical Transactions of the Royal Society B* 365: 3267-3276.

Montgomery SH, Capellini I, Barton RA, Mundy NI. 2010. Reconstructing the ups and downs of primate brain evolution: Implications for adaptive hypotheses and *Homo floresiensis*. *BMC Biology* 8: 9 (19 pages).

Jones JH. 2011. Primates and the evolution of long, slow life histories. *Current Biology* 21: R708-R717.

Week 4 (Developmental Plasticity)

Altmann J, Alberts SC. 2005. Growth rates in a wild primate population: Ecological influences and maternal effects. *Behavioral Ecology and Sociobiology* 57: 490-501.

Walker R, Gurven M, Hill K, Migliano A, Chagnon N, De Souza R, Djurovic G, Hames R, Hurtado AM, Kaplan H, Kramer K, Oliver WJ, Valeggia C, Yamauchi T. 2006. Growth rates and life histories in twenty-two small-scale societies. *American Journal of Human Biology* 18: 295-311.

Migliano AB, Vinicius L, Lahr MM. 2007. Life history trade-offs explain the evolution of human pygmies. *Proceedings of the National Academy of Sciences USA*. 104:20216-20219.

Kuzawa CW, Thayer ZM. 2011. Timescales of human adaptation: The role of epigenetic processes. *Epigenomics* 3: 221-234.

Week 5 (Detecting Selection in Human and Primate Genomes)

Pritchard JK, Pickrell JK, Coop G. 2010. The genetics of human adaptation: Hard sweeps, soft sweeps, and polygenic adaptation. *Current Biology* 20: R208-R215.

Simonson TS, Yang Y, Huff CD, Yun H Qin G, Witherspoon DJ, Bai Z, Lorenzo FR, Xing J, Jorde LB, Prchal JT, Ge R. 2010. Genetic Evidence for High-Altitude Adaptation in Tibet. *Science* 329: 72-75.

Bradley BJ, Lawler RR. 2011. Linking genotypes, phenotypes, and fitness in wild primate populations. *Evolutionary Anthropology* 20: 104-119.

Hernandez RD, Kelley JL, Elyashiv E, Melton SC, Auton A, McVean G, 1000 Genomes Project, Sella G, Przeworski M. 2011. Classic selective sweeps were rare in recent human evolution. *Science* 331:920-924.

Week 6 (Energetics and Ecology)

Gibson MA, Mace R. 2006. An energy-saving development initiative increases birth rate and childhood malnutrition in rural Ethiopia. PLoS Medicine 3(4): e87.

Ellison PT. 2008. Energetics, reproductive ecology, and human evolution. *Paleoanthropology* 2008: 172-200.

Pontzer H, Raichlen DA, Shumaker RW, Ocobock C, Wich SA. 2010. Metabolic adaptation for low energy throughput in orangutans. *Proceedings of the National Academy of Sciences USA* 107: 14048-14052.

Snodgrass JJ. 2012. Human energetics. In: Stinson et al. (eds.) Human Biology: An Evolutionary and Biocultural Approach (2nd Edition). New York: Wiley, pp. 327-386.

Week 7 (Cooperative Breeding/Behavior)

Kuhn SL, Stiner MC. 2006. What's a mother to do? The division of labor among Neandertals and modern humans in Eurasia. *Current Anthropology* 47: 953-980.

Herrmann, E., Josep Call, María V. Hernández-Lloreda, Brian Hare, and Michael Tomasello. 2007. Humans have evolved specialized skills of social cognition: the cultural intelligence hypothesis. *Science* 317:1360-1366.

Burkart, Judith M., Sarah B. Hrdy, and Carel P. van Schaik. 2009. Cooperative breeding and human cognitive evolution. *Evolutionary Anthropology* 18:175-186.

Kramer KL, Ellison PT. 2010. Pooled energy budgets: Resituating human energy allocation trade-offs. Evolutionary Anthropology 19: 136-147

Weiss KM, Buchanan AV, Lambert BW. 2011. The red queen and her king: Cooperation at all levels of life. *Yearbook of Physical Anthropology 146 (Supplement 53)*: 3-18.

Week 8 (Evolution of the Human Diet)

Aiello LC, Wheeler P. 1995. The expensive-tissue hypothesis: The brain and the digestive system in human and primate evolution. *Current Anthropology* 36: 199-221.

Cordain L, Brand-Miller J, Eaton SB, Mann N, Holt SHA, Speth JD. 2000. Plant to animal subsistence ratios and macronutrient energy estimations in world-wide hunter-gatherer diets. American Journal of Clinical Nutrition 71: 682-692.

Leonard WR, Robertson ML, Snodgrass JJ, Kuzawa CW. 2003. Metabolic correlates of hominid brain expansion. *Comparative Biochemistry and Physiology* 136A: 5-15.

Richards MP, Trinkaus E. 2009. Isotopic evidence for the diets of European Neanderthals and early modern humans. *Proceedings of the National Academy of Sciences USA* 106: 16034-16039**.**

Wrangham R, Carmody R. 2010. Human adaptation to the control of fire. *Evolutionary Anthropology* 19: 187-199.

Week 9 (Climate and Human Evolution)

Potts R. 1998. Variability selection in hominid evolution. *Evolutionary Anthropology* 7: 81-96.

Snodgrass JJ, Sorensen MV, Tarskaia LA, Leonard WR. 2007. Adaptive dimensions of health research among indigenous Siberians. *American Journal of Human Biology* 19: 165-180.

Perry GH, Dominy NJ. 2008. Evolution of the human pygmy phenotype. *Trends in Ecology and Evolution* 24:218-225.

Leonard WR, Katzmarzyk PT. 2010. Body size and shape: Climatic and nutritional influences on human body morphology. In: Muehlenbein MP (ed.) Human Evolutionary Biology. Cambridge: Cambridge University Press, pp 157-169.

Week 10 (Current Controversies in Biological Anthropology)

Bramble DM, Lieberman DE. 2004. Endurance running and the evolution of *Homo*. *Nature* 432: 345-352.

Lovejoy CO. 2009. Reexamining Human Origins in Light of *Ardipithecus ramidus*. *Science* 326 (74): e1-e8.

Berger LR, de Ruiter DJ, Churchill SE, Schmid P, Carlson KJ, Dirks PHGM, Kibii JM. 2010. *Australopithecus sediba*: A New Species of *Homo*-Like Australopith from South Africa. *Science* 328: 195-204.

Brown P. 2012. LB1 and LB6 *Homo floresiensis* are not modern human (*Homo sapiens*) cretins. *Journal of Human Evolution* 62: 201-224.

Hare B, Wobber V, Wrangham R. 2012. The self-domestication hypothesis: Evolution of bonobo psychology is due to selection against aggression. *Animal Behaviour* 83: 573-585.