ANTH 369: HUMAN GROWTH & DEVELOPMENT
Spring Quarter 2019 (CRN 30261)
4 credit hours (Satisfies an SC requirement)

Course Time: Mondays and Wednesdays, Noon - 1:20 pm
Course Location: Pacific 123

Instructor: Dr. Josh Snodgrass (website: http://www.pinniped.net/snodgrass.html)
Office: Pacific 12
Office Hours: Wed 1:30-3:00 & by appointment
E-mail: jjosh@uoregon.edu

Graduate Teaching Assistants: Elisabeth Goldman
E-mail: egoldman@uoregon.edu
Evan Simons
E-mail: esimons@uoregon.edu

Prerequisite: None; ANTH 173, ANTH 175, ANTH 270, or equivalent highly recommended

Course Description: Examines key issues in human and nonhuman primate growth and development; addresses genetic, social, and ecological determinants of variation in growth.

Course Format: Lecture, in-class discussion, and required weekly laboratory sections.

Expanded Course Description: This is a science group satisfying course that examines key issues in human growth and development, focusing particular attention on human physical growth. In this course, human growth and development is viewed as a biocultural process that demands an integrated analysis. This course uses a scientific approach, drawing on the methods, theories, and bodies of knowledge from various scientific disciplines, including evolutionary biology, genetics, neuroscience, physiology, nutritional sciences, and medicine.

This course has three main sections:

Section 1 builds the framework for understanding human growth and development. This section begins by providing an historical overview of growth studies, focusing particular attention on developments during the 20th century. This is followed by discussions of the scientific method and evolutionary theory, with particular attention directed towards the adaptation concept and life history theory. This comparative evolutionary perspective on human growth incorporates studies of living primates and fossil human ancestors.

Section 2 focuses on the basic principles of human growth and development, from conception through older adulthood. For each life stage, the major shifts in anatomy, physiology, and brain development are discussed. This section also covers techniques for assessing human growth status and the application of the knowledge of patterns of growth and development to bioarchaeology and forensic anthropology.

Section 3 focuses on variation in human growth and development. Beyond simply describing differences in growth and development within and between groups, this course uses a biocultural framework that incorporates genetic, social, and ecological factors to explain why these patterns of variation exist. This section spends considerable time on illustrating how specific dietary factors, disease exposure, and parenting practices can shape variation in growth and development, as well as patterns of aging.

Canvas: A Canvas site will be maintained for this class, which will be your main source for course information, documents, lab materials, and announcements. Make sure that you regularly check your Canvas-linked e-mail account.
Accommodations: Appropriate accommodations will be provided for students with documented disabilities. Please make arrangements to meet with me or your TA to discuss these accommodations.

Required Readings: Assorted articles and book chapters (see below—all available on Canvas).

Expectations and Grading: Regular attendance at lectures and participation in laboratory sections are required. Course readings are required and are essential to passing exams, completing lab assignments, and participating in lab section activities. Your grade in the course will reflect your performance on a midterm exam, final exam, two quizzes, four short (2-3 page each) reaction papers, and 4 short (1-2 page) lab write-ups.

<table>
<thead>
<tr>
<th>Quiz 1</th>
<th>Online; Must be taken 4/18-4/21</th>
<th>10%</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
<td>Monday, 5/6</td>
<td>25%</td>
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<tr>
<td>Quiz 2</td>
<td>Online; Must be taken 5/23-5/26</td>
<td>10%</td>
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<tr>
<td>Final Exam</td>
<td>Monday, 6/10, 10:15-12:15</td>
<td>25%</td>
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<tr>
<td>Reaction Papers</td>
<td>4 Special Topics Reaction Papers @ 5% each</td>
<td>20%</td>
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<tr>
<td>Lab Exercises</td>
<td>4 Lab Write-Ups @ 2.5% each</td>
<td>10%</td>
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Grades will be assigned as follows: A = 90-100%, B = 80-89%, C = 70-69%, D = 60-69%, F < 60% (with minus and plus grades assigned at appropriate cutoffs).

Exams: The midterm and final exams will be based on lectures, videos, readings, and class discussions, and will include objective (multiple choice & matching), fill-in-the-blank, short answer, and short essay sections. The final exam will emphasize the material from the second half of the class, but it will also require integration of course material from throughout the course (not just the material introduced after the midterm). Exams must be taken at the scheduled time. Under no circumstances will make-up exams be given without a documented excuse (e.g., signed note from your doctor). If you will not be able to take an exam, you must notify me in advance (preferably by e-mail).

Reaction Papers: During the quarter, each student will write four short (2-3 page) reaction papers on articles provided by the instructor (see “Special Topics” on the schedule). These response papers provide opportunities for discussion and critical analysis of current biological, cultural, and social issues related to human growth and development. Reaction papers are only 2-3 pages long so writing should be concise and focused around a couple of main points. Reaction papers are due the week of discussion section. Your participation in these discussions is an essential component to this course.

Lab Exercises: During the quarter, each student will write four short (1-2 page) lab write-ups based on the exercises and questions from lab activities. Lab exercise write-ups are due in lab the following week. All lab sections are held on Thursdays in 330 Condon and will be run by TAs Evan Simons and Elisabeth Goldman.
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<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Reading Assignment</th>
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| 1    | 4/1  | Introduction and course overview; Why study growth? Introduction to GenEd & the scientific method; Evolutionary & biocultural approaches; Human auxology | 1) Bogin 1999  
2) Rosenberg & Trevathan 2014  
3) Ball & Russell 2014 |
|      | 4/3  | Historical perspective on human growth & development; Different approaches to studying growth & development | 1) Tanner 1998 |
|      |      | **Lab 1: Introduction to the Course; Scientific Method & Evolutionary Theory Exercise**  
**Lab Readings:**  
1) Firestein 2012  
2) Bering 2012 | |
| 2    | 4/8  | Basic principles; Methods for assessing growth and maturity; Biocultural perspective on growth & development | 1) Cameron 2012  
2) Cole 2013  
3) Wiley & Allen 2013 |
|      | 4/10 | Evolutionary/comparative perspective on human growth | 1) Bogin 2012 |
|      |      | **Lab 2: Anthropometry; Assessing growth and development**  
**Lab write-up due in lab the following week** | |
|      | 4/17 | Prenatal growth & development; Embryology  
*Video: Life’s Greatest Miracle* | 1) Berk & Meyers 2015 (Ch. 3)  
2) Leonard et al. 2012  
3) Brenner & Kolata 2018  
**RESPONSE PAPER DUE IN LAB SECTION**  
**Quiz on material from 1st three weeks**  
(Online—to be taken anytime 4/18-4/21)** |
| 4    | 4/22 | Prenatal growth & development (cont’d); Pregnancy; Fetal Programming/Developmental Origins of Health | 1) Low et al. 2015 |
2) Trevathan & Rosenberg 2014 |
|      |      | **Lab 4: Fetal Development & Embryology**  
**Lab write-up due in lab the following week** | |
| 5    | 4/29 | Infancy & Breastfeeding; Infant brain growth & development; Breastfeeding as the optimal way to feed an infant; Weaning & the end of infancy | 1) Berk & Meyers 2015 (Ch. 5, partial)  
2) Hoi & McKerracher 2015  
3) Hoi & McKerracher 2015  
**RESPONSE PAPER DUE IN LAB SECTION**  
**No new readings for today’s class** |
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<tr>
<td>6</td>
<td>5/6</td>
<td><strong>Midterm Exam</strong></td>
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<td>5/8</td>
<td>Case Study: Growth &amp; development research among the Shuar of Amazonian Ecuador; Life history tradeoffs</td>
<td>1) Urlacher et al. 2018 2) Williams 2018</td>
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<td>Lab 6: Video: Secret Life of the Brain (NOT covered on the midterm exam)</td>
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<td>7</td>
<td>5/13</td>
<td>Childhood &amp; juvenile growth; Why grow up?; Motor &amp; skeletal development; The evolution of childhood</td>
<td>1) Berk &amp; Meyers 2015 (Ch. 8, partial) 2) Berk &amp; Meyers 2015 (Ch. 11, partial)</td>
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<td>5/15</td>
<td>Puberty; Adolescent growth &amp; development</td>
<td>1) Berk &amp; Meyers 2015 (Ch. 14)</td>
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<td>Lab 7: Skeletal Development</td>
<td>Lab Reading: Loth &amp; Iscan 2000</td>
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<td><strong>(Lab write-up due in lab the following week)</strong></td>
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<td>8</td>
<td>5/20</td>
<td>Reproductive maturity; Emerging Adulthood; Social dimensions of adolescence and the transition to adulthood</td>
<td>1) Berger 2011 2) Gluckman &amp; Hanson 2006</td>
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<td>5/22</td>
<td>Reproductive ecology; Regulation of fecundity in women and men</td>
<td>1) Valeggia &amp; Núñez-de la Mora 2015</td>
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<td>Lab 8: Special Topics Discussion III: Academic pressure and teen suicide (Rosin 2015) &amp;/or Burnout (Rough 2019)</td>
<td><strong>RESPONSE PAPER DUE IN LAB SECTION</strong></td>
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<td><strong>Quiz on material from weeks 6-8 (Online—to be taken anytime 5/23-5/26)</strong></td>
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<td>9</td>
<td>5/27</td>
<td>No Class—Memorial Day</td>
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<td>5/29</td>
<td>Aging &amp; Older adulthood; Senescence; Aging in global context</td>
<td>Brown 2010</td>
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<td>Lab 9: Video: Rx for Survival: A Global Health Challenge (Back to the Basics)</td>
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<td>10</td>
<td>6/3</td>
<td>Variation in growth between populations; Genetic influences on growth</td>
<td>Stinson 2012</td>
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<td>6/5</td>
<td>Within population variation in growth; Secular trends; Environmental influences on growth; SES; Psychosocial stress; Nutrition; Infectious/parasitic disease</td>
<td>No new readings today</td>
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<td>Lab 10: Special Topics Discussion IV: Parenting in space and time (Doucleff and Greenhalgh 2019, Tierney 2011 &amp;/or St. George 2015)</td>
<td><strong>RESPONSE PAPER DUE IN LAB SECTION</strong></td>
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<td>11</td>
<td>6/10</td>
<td>Final Exam, 10:15-12:15 (Monday, June 10 in our regular classroom)</td>
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Anthropology 369 (Spring 2019): Human Growth and Development—Required Readings

Week 1

For Week 1 Lab:
- Bering J. 2012. How are they hanging? This is why they are. In: Why is the Penis Shaped Like That…And other Reflections on Being Human. Scientific American/FSG, pp. 3-10.

Week 2

Week 3

For Week 3 Response Paper:
- Video: NOVA—Cracking Your Genetic Code (2012); https://www.youtube.com/watch?v=1vxTqtyOZ-Q

Week 4

Week 5
For Week 5 Response Paper:
- Kerrigan S. 2013. Is it time to rethink co-sleeping? Commonhealth/WBUR.
- March of Dimes. No Date. Co-Sleeping.

Week 6

Week 7

For Week 7 Lab:

Week 8

For Week 8 Response Paper:
- Rough J. 2019. From moms to medical doctors, burnout is everywhere these days. Washington Post, March 30.

Week 9

Week 10

For Week 10 Response Paper