ANTH 369: Human Growth & Development (v. 1.2.2022)
Winter Quarter 2022 (CRN 22982), 4 credit hours

Course Time: Mondays and Wednesdays, 2:00 – 3:20 pm Course Location: 123 GSH

Instructor: Dr. Josh Snodgrass
e-mail: jjosh@uoregon.edu; website: http://www.pinniped.net/snodgrass.html
office hours: Mondays 11-12 (by zoom), Wednesdays 12-1 (in-person: Pacific 12), & by appointment

Graduate Teaching Assistant/GE: Kelsi Kuehn
e-mail: kelsik@uoregon.edu; website: https://anthropology.uoregon.edu/profile/kelsik/
office hours: TBA & by appointment

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

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

Course Format: Flipped class with pre-recorded video lectures, live in-person discussion-based classes, and in-person labs consisting of lab activities and discussions

This course can be used to satisfy the following requirements: Anthropology major (Biological concentration or Elective); Anthropology minor; Core Ed Science; Biology major; General Science major; Global Health minor; Global Service minor; Human Physiology major; Special Education minor

Canvas: A Canvas site will be used extensively, it being the main source for course materials, information, readings, and announcements. Make sure that you check your Canvas-linked e-mail account daily.

Accommodations: Appropriate accommodations will be provided for students with documented needs. Please make arrangements to meet with me to discuss these accommodations.

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

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.

Course Expectations & Grading: Viewing of lectures and participation in laboratory sections are required to successfully complete the course. Students are strongly encouraged to attend and participate in the in-person live classes, which will review lecture material and provide a space for discussion and questions. Course readings are helpful as a supplement to lectures.

Your grade in the course will reflect your performance on four quizzes (taken on Canvas), completion of four lab write-ups, and submission of three response papers.

Canvas Quizzes 50%
- Practice Quiz (Online end of Week 3; Covers Weeks 1-3; Must be taken 1/21 – 1/23), 0%
- Quiz 1 (Online end of Week 4; Covers Weeks 1-4; Must be taken 1/28 - 1/30), 12.5%
- Quiz 2 (Online end of Week 6; Covers Weeks 5 & 6; Must be taken 2/11 - 2/13), 12.5%
- Quiz 3 (Online end of Week 8; Covers Weeks 7 & 8; Must be taken 2/25 - 2/27), 12.5%
- Quiz 4 (Online end of Week 10; Covers Weeks 9 & 10; Must be taken 3/11 - 3/13), 12.5%

Lab Worksheets 20%
- Week 2 Lab (The Scientific Method & Evolutionary Theory; Write-up due 1/20), 5%
- Week 4 Lab (Fetal Development & Embryology; Write-up due 2/3), 5%
- Week 6 Lab (Skeletal Growth & Development; Write-up due 2/17), 5%
- Week 8 Lab (Skeletal Aging in Adults; Write-up due 3/3), 5%

Response Papers 30%
- Special Topic #1 (Vaccination & the social contract; Due 2/3), 10%
- Special Topic #2 (Academic pressure & Teen suicide or Mental health & Covid pandemic; Due 2/17), 10%
- Special Topic #3 (Parenting in space and time; Due 3/3), 10%

Assignment Information

Quizzes: The quizzes are based on lectures, class discussions, and labs. They are multiple choice on Canvas. Quizzes must be taken at the scheduled time. Make-up quizzes will not be given without a documented excuse (e.g., note from your doctor). If you will not be able to take a quiz, you must notify us in advance by e-mail.

Lab Worksheets: During the term, 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 the week after the corresponding lab. All lab sections are held on Thursdays and will be run by teaching assistant/GE Kelsi Kuehn.

Response Papers: During the quarter, each student will write three short (3-4 page) response papers on assigned articles. These response papers provide opportunities for discussion and critical analysis of current
biological and social issues related to human growth and development. Response papers are fairly short so writing should be concise and focused on a couple of main points. Response papers are due the week of lab section. Your participation in these discussions is an important component to this course.

**Course Grades:**

Grades will be assigned as follows: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F < 60% (with minus and plus grades assigned at appropriate cutoffs). The grading system used in this course is as follows:

- **A** – Outstanding performance relative to that required to meet course requirements; demonstrates a mastery of course content at the highest level.
- **B** – Performance that is significantly above that required to meet course requirements; demonstrates a mastery of course content at a high level.
- **C** – Performance that meets the course requirements in every respect; demonstrates an adequate understanding of course content.
- **D** – Performance that is at the minimal level necessary to pass the course but does not fully meet the course requirements; demonstrates a marginal understanding of course content.
- **F** – Performance in the course, for whatever reason, is unacceptable and does not meet the course requirements; demonstrates an inadequate understanding of the course content.

**Class Schedule**

Note: Green means an assignment must be completed (i.e., a quiz, lab, or response paper)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Readings (R = required; O = optional)</th>
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</table>
| 1    | 1/3/2022   | Lecture 1 (live-in-person lecture & discussion): Introduction and course overview; Why study growth? Introduction to CoreEd; Scientific method; Evolutionary & biocultural approaches; Human auxology | 1) Bogin 1999 (O)  
2) Rosenberg & Trevathan 2014 (O)  
3) Ball & Russell 2014 (O) |
|      | 1/5/2022   | Lecture 2 (prerecorded video with live discussion class): Historical perspective on human growth & development; Alternative approaches to studying growth & development | 1) Tanner 1998 (O) |
|      | Lab (1/6/2022) | Lab 1: Introductions; Course info; What do you want to get from the course?; Building community | |
| 2    | 1/10/2022  | Lecture 3 (prerecorded video with live discussion class): Basic principles; Methods for assessing growth and maturity; Biocultural perspective on growth & development | 1) Cameron 2012 (O)  
2) Cole 2013 (O)  
3) Wiley & Allen 2013 (O) |
|      | 1/12/2022  | Lecture 4 (prerecorded video with live discussion class): Evolutionary perspective on human growth | 1) Bogin 2012 (O) |
|      | Lab (1/13/2022) | Lab 2: The scientific method; Evolutionary theory (Worksheet due in one week—1/20 @ 8 pm) | 1) Firestein 2012 (R)  
2) Underst Evol 2010 (R) |
<p>| 3    | 1/17/2022  | No class—MLK Holiday | |
|      | 1/19/2022  | Lecture 5 (prerecorded video with live discussion class): Human brain evolution and our life history | 1) Leonard et al. 2012 (O) |
|      | Lab (1/20/2022) | Lab 3: Video: Life’s Greatest Miracle (Worksheet for studying but not turned in) (No in-person labs) | |
|      | 1/20/2022  | Worksheet for Lab 2 due @ 8 pm | |
|      | 1/21/2022 – 1/23/2022 | Practice Quiz (does not count towards your grade; covers weeks 1-3 [taken on Canvas by 1/23 at 8 pm]) | |</p>
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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading Sources</th>
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<tbody>
<tr>
<td>4</td>
<td>1/24/2022</td>
<td>Lecture 6 (prerecorded video with live discussion class): Ovarian cycle regulation; Conception; Prenatal growth &amp; development; Embryology</td>
<td>1) Berk &amp; Meyers 2015 (Ch. 3) (O)</td>
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<td>1/26/2022</td>
<td>Lecture 7 (prerecorded video with live discussion class): Prenatal growth &amp; development (cont’d); Pregnancy; Fetal “programming” &amp; the Developmental Origins of Health and Disease (DOHaD)</td>
<td>1) Low et al. 2015 (O)</td>
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<td>Lab (1/27/2022)</td>
<td>Lab 4: Fetal development &amp; embryology (Worksheet due in one week—2/3 @ 8 pm)</td>
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<td>1/28/2022 – 1/30/2022</td>
<td>Quiz 1 (covers everything weeks 1-4 [taken on Canvas by 1/30 at 8 pm])</td>
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<td>5</td>
<td>1/31/2022</td>
<td>Lecture 8 (prerecorded video with live discussion class): Birth; Birth outcomes; Advantages &amp; disadvantages of our evolutionary heritage</td>
<td>1) Trevathan 2015 (O) 2) Trevathan &amp; Rosenberg 2014 (O)</td>
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<td>2/2/2022</td>
<td>Lecture 9 (prerecorded video with live discussion class): Infancy; Infant growth &amp; development; Breastfeeding</td>
<td>1) Berk &amp; Meyers 2015 (Ch5 part) (O) 2) Hoi &amp; McKerracher 2015 (O)</td>
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<td>Lab (2/3/2022)</td>
<td>Lab 5: Discussion of special topics prompt #1: Vaccination &amp; the social contract</td>
<td>1) Smarch 2021 (R) 2) Sreedhar &amp; Gopal 2021 (R)</td>
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<td>2/3/2022</td>
<td>Worksheet for Lab 4 due @ 8 pm</td>
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<td>2/3/2022</td>
<td>Special Topics Response Paper #1 due @ 8 pm</td>
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<td>2/7/2022</td>
<td>Lecture 10 (prerecorded video with live discussion class): Case Study—Growth &amp; development research among the Shuar of Amazonian Ecuador</td>
<td>1) Urlacher et al. 2018 (O) 2) Williams 2018 (O)</td>
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<td>2/9/2022</td>
<td>Lecture 11 (prerecorded video with live discussion class): Childhood &amp; juvenile growth; Why grow up?</td>
<td>1) Berk &amp; Meyers 2015 (Ch8 part) (O) 2) Berk &amp; Meyers 2015 (Ch11part) (O)</td>
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<td>Lab (2/10/2022)</td>
<td>Lab 6: Skeletal growth &amp; development (Worksheet due in one week—2/17 @ 8 pm)</td>
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<td>2/11/2022 – 2/13/2022</td>
<td>Quiz 2 (covers everything weeks 5 &amp; 6 [taken on Canvas by 2/13 by 8 pm])</td>
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<td>7</td>
<td>2/14/2022</td>
<td>Lecture 12 (prerecorded video with live discussion class): Puberty; Adolescent growth &amp; development</td>
<td>1) Berk &amp; Meyers 2015 (Ch. 14) (O)</td>
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<td>2/16/2022</td>
<td>Lecture 13 (prerecorded video with live discussion class): Reproductive maturity; Emerging Adulthood; Social dimensions of adolescence and the transition to adulthood</td>
<td>1) Berger 2011 (O) 2) Gluckman &amp; Hanson 2006 (O)</td>
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<td>Lab (2/17/2022)</td>
<td>Lab 7: Discussion of special topics prompt #2: Academic pressure &amp; Teen suicide or Mental health &amp; the Covid pandemic</td>
<td>1) Rosin 2015 (R) or 2) Parker-Pope 2021 (R)</td>
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<td>2/17/2022</td>
<td>Worksheet for Lab 6 due @ 8 pm</td>
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<td>2/17/2022</td>
<td>Special Topics Response Paper #2 due @ 8 pm</td>
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<td>8</td>
<td>2/21/2022</td>
<td>Lecture 14 (prerecorded video with live discussion class): Reproductive ecology; Regulation of fecundity in females and males</td>
<td>1) Valeggia &amp; Núñez-de la Mora 2015 (O)</td>
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<td>2/23/2022</td>
<td>Lecture 15 (prerecorded video with live discussion class): Aging &amp; Older adulthood; Senescence; Aging in global context</td>
<td>1) Brown 2020 (O)</td>
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<td>Lab (2/24/2022)</td>
<td>Lab 8: Skeletal aging in adults (Worksheet due in one week—3/3 @ 8 pm)</td>
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<td>2/25/2022 – 2/27/2022</td>
<td>Quiz 3 (covers everything weeks 7 &amp; 8 [taken on Canvas by 2/27 by 8 pm])</td>
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<td>Week</td>
<td>Date</td>
<td>Lecture</td>
<td>Reading Notes</td>
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<td>9</td>
<td>2/28/2022</td>
<td>Lecture 16 (prerecorded video with live discussion class): Variation in growth between populations; Genetic influences on growth</td>
<td>1) Stinson 2012 (O)</td>
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<td>3/2/2022</td>
<td>Lecture 17 (prerecorded video with live discussion class): Variation in growth within populations; Secular trends; Biocultural approaches</td>
<td>1) Hoke &amp; Schell 2020 (O)</td>
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<td>Lab (3/3/2022)</td>
<td>Lab 9: Discussion of special topics prompt #3: Parenting in space and time</td>
<td>1) Doucelf &amp; Greenhalgh 2019 (R); 2) Tierney 2011 (R); and/or 3) St. George 2015 (R)</td>
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<td>3/3/2022</td>
<td>Worksheet for Lab 8 due @ 8 pm</td>
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<td>3/3/2022</td>
<td>Special Topics Response Paper #3 due @ 8 pm</td>
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<td>10</td>
<td>3/7/2022</td>
<td>Lecture 18 (prerecorded video with live discussion class): Social determinants of growth, development, and health; SES; Stress; Nutrition; Infectious disease</td>
<td>1) Valeggia &amp; Snodgrass 2015 (O) 2) Said-Mohamed et al. 2018 (O) 3) Bogin &amp; Varea 2020 (O)</td>
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<td>3/9/2022</td>
<td>Lecture 19 (prerecorded video with live discussion class): Putting it all together &amp; How to live a long and healthy life</td>
<td>No new readings for 3/9</td>
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<td>Lab (3/10/2022)</td>
<td>Lab 10: Video: Secrets in Our DNA (Worksheet for studying but not turned in) (No in-person labs)</td>
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<td>3/11/2022 – 3/13/2022</td>
<td>Quiz 4 (covers everything weeks 9 &amp; 10 [taken on Canvas by 3/13 by 8 pm])</td>
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**Anthropology 369 Human Growth and Development (Winter 2022) – Optional (Black) & Required (Red) Readings**

**Week 1**

**for Monday’s Class (1/3)**


**for Wednesday’s class (1/5)**


**Week 2**

**for Monday’s class (1/10)**

for Wednesday's class (1/12)


Week 2 Lab Readings for Scientific Method & Evolutionary Theory Lab


Week 3

for Wednesday's class (1/19)


Week 4

for Monday's class (1/24)


for Wednesday's class (1/26)


Week 5

for Monday's class (1/31)


for Wednesday's class (2/2)


Week 5 Lab/Special Topics Response Paper Readings for Vaccination & the Social Contract


Week 6

for Monday's class (2/7)


for Wednesday's class (2/9)


Week 7

for Monday’s class (2/14)


for Wednesday’s class (2/16)


Week 7 Lab/Special Topics Response Paper Readings for Academic pressure & Teen suicide or Mental health & the Covid pandemic


Week 8

for Monday’s class (2/21)


for Wednesday’s class (2/23)

**Week 9**

**for Monday’s class (2/28)**


**for Wednesday’s class (3/2)**


**Week 9 Lab/Special Topics Response Paper Readings on Parenting in space and time**


**Week 10**

**for Monday’s class (3/7)**


**for Wednesday’s class (3/9)**

- No new reading