

The Early Life Origins of Health and Well-Being: Evolution, Ecology, and Politics



ANT 385 | Fall 2020
Tu/Th 6:00-7:30 PM EST

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Course Description

What does it mean to develop ‘normally’? Do deviations from a typical pattern of growth and development indicate disease and deficit? Definitions of what is normal and what is pathological influence medical practice, policy decisions, and how a person will be treated in society. In this way, the study of human development is deeply historical, political, and cultural. But human development is also the result of an interaction between genetic and socio-ecological factors, themselves shaped by long evolutionary histories. This course takes an integrative ecological, evolutionary, and developmental perspective on health and well-being.

Through, readings, and discussions, we will consider: (i) why early life conditions often have an outsized impact on adult health, (ii) how these early life effects can be understood in light of evolutionary theory, and finally (iii) how the science of human development affects our lives via policy and public discourse. Focal topics include prenatal health, childbirth, caretaking and socialization, physical growth, metabolic disease, and mental health.

Accessing Course Content and Attending Class

- This class will be delivered 100% online.
 - All course content will be posted to Canvas in weekly modules. **There is no textbook.** Readings and other assigned content will be posted on Canvas far in advance of class. Modules will be opened for access Friday (the day after our synchronous meeting) of each week.
 - Our class is scheduled for Tu/Th 6:00-7:30 PM EST, but we will not always have synchronous meetings. **Most weeks we will only meet synchronously on Thursdays**, with “On your own” posted for you to work through during the week. Please keep the Tuesday time open as we may use it, especially during final presentations. <https://emory.zoom.us/j/91040805333>
 - **Synchronous meetings are marked with an “S” in the calendar.** We will share a **Zoom link** on Canvas in advance of class.
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Contacting Instructors & Office Hours

- If you have a question or concern, **please post it to the Canvas Q&A board before emailing us**. This will help your classmates! If you need to know something or are confused, it's a safe bet that other people are wondering the same. Of course if you have a sensitive question, we are happy to respond to you individually. If you email us with a question others would benefit from, we will reply with a gentle reminder to post it to the Q&A board.
 - Feel free to email both of us if you have a question that is personal, and one of us will get back to you within 24 hours.
 - Office hours are by appointment, and we will meet with you via Zoom. Don't let that scare you! We would love the chance to learn more about you and support you in your learning.
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Assessment and Grading

"When a measure becomes a target, it ceases to be a good measure" - Goodhart's Law

Grading can sometimes get in the way of learning. Grade points take the place of genuine growth and curiosity, and grading is always somewhat subjective and biased. To address these problems we will follow these principles:

- We will make our grading as simple and transparent as possible.
- We will respect your time by not assigning busy-work. There are no participation points.
- **Students will choose how different assessment components are weighted** towards their final grade. This means that if you know you don't perform your best on exams, you can downweight that portion of your grade. Or, if you like exams and loathe reflective writing, you can put more weight towards the

midterm.

- All students have the right to take a Pass/Fail, for any reason. If you choose to do this, we will draft a contract together based on your circumstances and preferences.

Overview of Graded Components

Graded Component	Percent of your grade	How is it graded?
Weekly knowledge checks	10% (fixed)	0-1: complete/incomplete
Reflection Journal, bi-weekly - For full credit, complete 5/7 journals.	10% - 60%	0-2: incomplete, unsatisfactory, satisfactory
Midterm	10% - 60%	0-1 Multiple choice, T/F 0-2 Short answer
Final Project	10% - 60%	0-10 Graded by instructors

Weekly Knowledge Checks (10% of grade, fixed)

- Each week, you will take a short (5 questions or fewer) “knowledge check” on Canvas. These tap into foundational knowledge that we want all students to know.
- Questions will be based on the weekly learning objectives and draw from readings and other “on your own” material.
- Question formats include true/false, multiple choice, and matching.

- **Knowledge checks are graded based on completion.** This means that you will not be penalized for incorrect answers. There is no time limit, but don't worry about spending too much time on them. The idea is to get an assay of your knowledge and comprehension.
- Knowledge checks are useful for students to check their comprehension and recall of important material. But they are also useful for your instructors, because we will use student performance on these questions to gauge class understanding.

Reflection Journal, every two weeks

- All students will keep a running reflection journal, stored as a Google Doc.
- The main purpose of the journal is to keep a cumulative, running record of your growth throughout the class. We will provide some structured prompts to respond to, but what you write will be personal and reflective, not an assessment of any particular piece of knowledge.
- You may also want to take notes and class-related thoughts in your journal. This is welcomed but not required and won't count towards assessment.
- Aim for 500 words per reflection.
- Journal entries will be particularly important as you work towards the final project.
- The grading rubric for journal entries is simple:
 - 0 = You didn't submit anything.
 - 1 = You submitted something, but it is too short or is incomplete
 - 2 = Satisfactory submission. A thoughtful ~500 word reflection.

Midterm

- The midterm is a culmination of the first half of the course and will assess your core knowledge and understanding of evolutionary theory, human biology, and the social/structural context of human development.

- You will be well-prepared for this assessment if you engage with all of the assigned materials, come to class, and make use of the weekly knowledge checks. We will hold a review session during the Tuesday before the midterm.
- Question formats include multiple choice, true/false, matching, and short answer. Short answer questions will be graded using the 0 (no answer), 1 (incomplete/unsatisfactory), 2 (satisfactory) rubric.

Final Project ([see details here](#))

- The final project is a class-wide digital conference, organized by students, oriented around the central question: “What is normal X?”. X is a phenomena of your choosing, and could be a behavior, a pattern of growth, a mental or physiological trait.
- Your task is to investigate this topic in an integrative way, considering its social/structural, ecological, and evolutionary context.
- You will work in a small group with classmates who share similar topic interests, and each group will be in charge of organizing a “symposium” or special conference session on your topic. Within each group, members may specialize and consider different angles on the same phenomena, or complementary topics.
- Nov 19 & 24 will be dedicated to the final presentations, and we will all meet synchronously to watch and engage with group presentations.
- Your grade will be a mixture of your group’s overall session quality and your own contribution, as well as intermediate drafts and proposals along the way. We will share a final rubric with you by midterm at the latest.

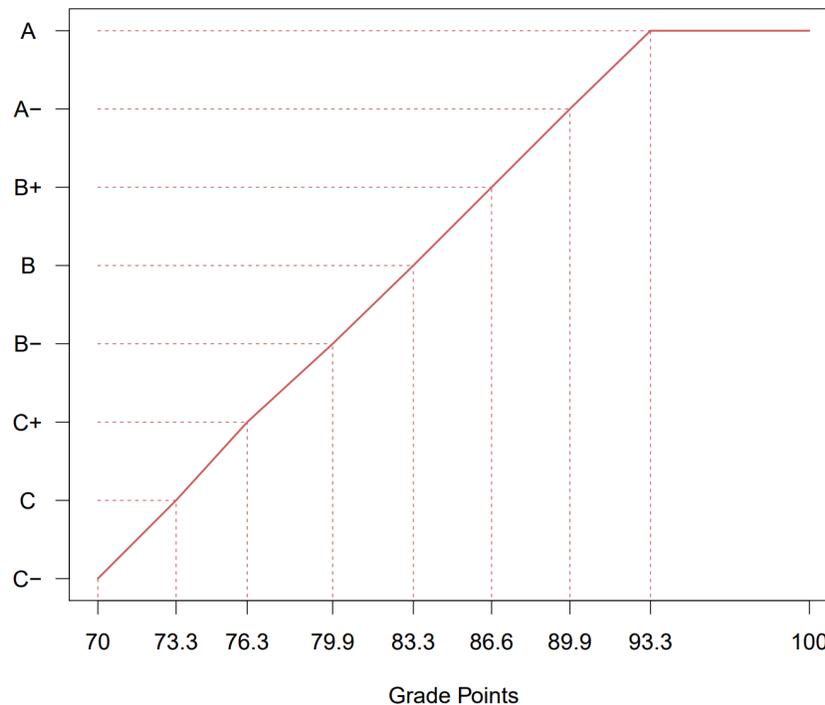
How do assessments map onto letter grades?

As mentioned above, students will be able to adjust the weighting of the four types of assessment so that their final grade depends on which parts of the class they choose to emphasize. We have two ground rules:

1. The weekly knowledge checks will comprise 10% of everyone’s grades
2. Every other component needs to be at least 10% and no more than 60%.

You will get to choose your weights during the 2nd week of class, with an option to revise your preferred weighting scheme after the midterm.

Anything below 70 points is a D, and anything over 93.3 is an A. The other grade points map onto letter grades in the usual way (see below).



Emory University Honor Code

The Emory Honor Code will be in effect during all examinations and assignments for this class. Students are responsible for reading and understanding the material on the link: <http://catalog.college.emory.edu/academic/policies-regulations/honor-code.html>.

Attendance and Late Work Policy

- You do not need instructor permission or forgiveness to miss class. But you should plan to attend all synchronous meetings. Skipping is not recommended for two reasons:

(1) **Lectures** and **small-group discussion** will help you understand the material better.

(2) We will lecture/go into greater depth on some material that does not appear in readings and other “On your own” material.

- **If you do miss a class meeting:** (1) review the Zoom recording/ slides and (2) write responses to the questions that you would have discussed in small groups and put them in your reflection journal. Notify us via email when you have done so.

Accommodations and Accessibility

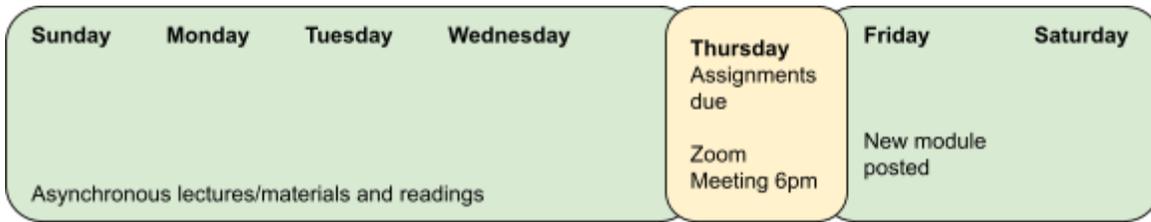
If you anticipate issues related to the format or requirements of this course, please meet with us. We would like us to discuss ways to ensure your full participation in the course. If you determine that disability related accommodations are necessary, you may register with Accessibility Services at (404) 727-9877 or via e-mail at accessibility@emory.edu. To register with OAS, students must self-identify and initiate contact with the OAS office.

Schedule

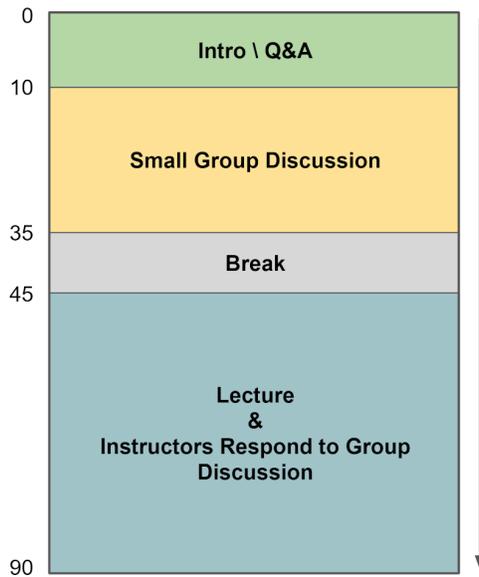
Every week, you will log into Canvas and access that week’s course material in preparation for our meeting on Thursday. **Everything is due by class time Thursday.** You should expect to:

-  **Read** 2-3 readings providing depth on the week’s topic
-  **Watch** a short Voicethread lecture on key concepts
-  **Listen** to a 30 minute podcast with Erik, Luisa and guests
-  **Complete** a 5 question knowledge check/quiz
-  **Complete** any reflection journal prompts for that week
-  **Meet on Thursday @ 6:00 PM EST via Zoom**

Here is how a typical week of class will look:



And here is a breakdown of how we will spend our synchronous Zoom meetings, where 0 minutes is the start of class (6:00 PM) and 90 is the end of class (7:30 PM):



Calendar

<p>Week 1 (August 18-21)</p>	<p>Course Welcome and Overview</p>
<p>Thursday, August 20 (S)</p>	<p>On your own:</p> <p> Read: Course Syllabus</p> <p> Listen Podcast: Course intro & get to know your instructors</p> <hr/> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 2 (August 23-27)</p>	<p>The Developmental Origins of Health and Disease (DOHaD)</p>
<p>Thursday, August 27 (S)</p>	<p>On your own:</p> <p> Read Gillman (2005) Developmental origins of health and disease. <i>New England Journal of Medicine</i> NYT (2020) “Climate Change Tied to Pregnancy Risks” NYT (2020) “Where are the Premies?”</p> <p> Watch Voicethread: Introduction to DOHaD</p> <p> Listen Podcast: Early life effects and anthropology</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday) Reflection journal Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom</p>

	https://emory.zoom.us/j/91040805333
Week 3 (August 30 - September 3)	Intro to Evolution
Thursday, September 3 (S)	<p>On your own:</p> <p> Read D.S. Wilson, "Evolution for Everyone" (p.11-27) Bergstrom & Dugatkin, "3. Natural Selection"</p> <p> Watch Voicethread: Crash course in evolutionary theory</p> <p> Listen Podcast: Evolutionary baggage</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
Week 4 (September 6 - 10)	Human Genetics and Life History Evolution
	<p>On your own:</p> <p> Read Bergstrom & Dugatkin, "6. Transmission Genetics and the Sources of Genetic Variation"</p> <p>Jones (2011) "Primates and the Evolution of Long, Slow Life Histories"</p> <p>Ellison (2014) "Evolutionary Trade Offs"</p> <p> Watch Voicethread: Human Life History</p>

<p>Thursday, September 10 (S)</p>	<p> Listen Podcast: Allo-parenting and human life history</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Reflection journal Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 5 (September 13-17)</p>	<p>Our Phenotypes, Ourselves: Developmental Plasticity and Epigenetics</p>
<p>Thursday, September 17 (S)</p>	<p>On your own:</p> <p> Read: Bergstrom & Dugatkin, “13. Evolution and Development” Lock, M. (2013). The epigenome and nature/nurture reunification: A challenge for anthropology.</p> <p> Watch Voicethread : Rapid Fire Genetics</p> <p> Listen Podcast:None required, “Inheritance” from Radiolab recommended as optional!</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>

Week 6 (September 20-24)	Social & Structural Determinants of Health
<p>Thursday, September 24 (S)</p>	<p>On your own:</p> <p> Read:</p> <p>Krieger (2005). Embodiment: a conceptual glossary for epidemiology</p> <p>Marmot (2005). Social determinants of health inequalities</p> <p>Optional:</p> <p>Farmer, P. (1996). On suffering and structural violence: A view from below.</p> <p>Ryan, C. and Kuzawa, C.(2019) Germline epigenetic inheritance: Challenges and opportunities for linking human paternal experience with offspring biology and health</p> <p> Watch Voicethread: Embodiment and the social environment</p> <p> Listen Podcast: Father of mine</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Reflection journal Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>

	<p>Reflection journal</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
Week 9 (October 11-15)	The Maternal Fetal Interface and Perinatal Health
Thursday, October 15 (S)	<p>On your own:</p> <p> Read: Dunsworth, H. M. (2018). There is no "obstetrical dilemma": Towards a braver medicine with fewer childbirth interventions.</p> <p>Davis, D. A. (2019). Obstetric racism: the racial politics of pregnancy, labor, and birthing.</p> <p> Watch Voicethread: Pregnancy, childbirth, and lactation</p> <p> Listen Podcast: What do (pregnant) women want?</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Knowledge check Finalize group Assignments</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
Week 10 (October 18-22)	Physical Growth during Infancy and Childhood
	<p>On your own:</p> <p> Read</p>

<p>Thursday, October 22 (S)</p>	<p>Bogin et al. (1997). "Plasticity, Political Economy, and Physical Growth Status of Guatemala Maya Children Living in the United States."</p> <p>Hruschka and Hadley (2016), "How much do universal anthropometric standards bias the global monitoring of obesity and undernutrition?"</p> <p>Yates-Doerr (2020) "Head Circumference"</p> <p> Watch Voicethread: <i>I'm short but I'm healthy, yeah</i></p> <p> Listen Podcast: In whose image?</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Reflection journal Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 11 (October 25 - 29)</p>	<p>Caregiving, Attachment, and Emotional Development</p>
	<p>On your own:</p> <p> Read:</p> <p>Sapolsky, "Glands, Gooseflesh, and Hormones"</p> <p>Keller, H. (2018). Universality claim of attachment theory: Children's socioemotional development across cultures. <i>Proceedings of the National Academy of Sciences</i>, 115(45), 11414-11419.</p> <p> Watch Voicethread: HPA axis, attachment, child maltreatment</p>

<p>Thursday, October 29 (S)</p>	<p> Listen Podcast: What counts as abuse?</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Knowledge check Group presentation proposal due</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 12 (November 1 - 5)</p>	<p>Linguistic and Cognitive Development</p>
<p>Thursday, November 5 (S)</p>	<p> Watch Baby and Toddler Milestones, Dr. Lisa Shulman</p> <p> Read: Madigan et al. (2019). Parenting behavior and child language: a meta-analysis.</p> <p>Cristia et al. (2019). Child-Directed speech is infrequent in a forager-farmer population: a time allocation study.</p> <p> Listen Podcast: “Motherese” and developmental milestones</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Reflection journal Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 13 (November 8 - 12)</p>	<p>The Immune System</p>

<p>Thursday, November 12 (S)</p>	<p>On your own:</p> <p> Read: McDade (2003), "Life history theory and the immune system: steps toward a human ecological immunology"</p> <p>Urlacher et al. (2019), "Constraint and trade-offs regulate energy expenditure during childhood"</p> <p> Watch Voicethread: The development of the immune system</p> <p> Listen Podcast: Old friends and antivaxxers</p> <hr/> <p> Assignments (due before 6:00 PM EST on Thursday): Knowledge check</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 14 (November 15-19)</p>	<p>Metabolic Disease</p>
<p>Tuesday, November 17 (S)</p>	<p> Read: Gurven et al. (2017) Cardiovascular disease and type 2 diabetes in evolutionary perspective: a critical role for helminths?</p> <p>Kuzawa, C. W., & Sweet, E. (2009). Epigenetics and the embodiment of race: developmental origins of US racial disparities in cardiovascular health. <i>American Journal of Human Biology: The Official Journal of the Human Biology Association</i>, 21(1), 2-15.</p> <p> Watch Voicethread: Stone-agers in the fastlane? Mismatch and metabolic disease</p> <p> Listen</p>

<p>Thursday, November 17 (S)</p>	<p>Podcast: Crossfit, Paleo Diets, and Health Disparities. Who benefits from the paleolithic prescription?</p> <hr/> <p> Final Project Presentations</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p>
<p>Week 15 (November 22-26)</p>	<p>Final Project Presentations</p>
<p>Tuesday, November 24 (S)</p> <p>Thursday, November 26 (S)</p>	<p> Final Project Presentations</p> <p> Meet @ 6:00 PM EST via Zoom https://emory.zoom.us/j/91040805333</p> <hr/> <p>Thanksgiving. No class.</p>
<p>Week 16 (Finals)</p>	<p>Course Wrap Up</p>
<p>December 10-14 (S)</p>	<p>Assignments:</p> <p>Final Reflection journal</p>