

**Winter Quarter 2019**  
**HDE 198: The Developing Adolescent Brain (CRN 37477); 4 units**  
**Human Development & Family Studies**  
**Department of Human Ecology**  
**University of California, Davis**

**Instructor:**

Name: **Professor Amanda E. Guyer**  
Office Hours: **Thursdays, 9:30am-11:30am; By appointment**  
Office: 2337 Hart Hall  
Phone: 530-754-0199  
E-mail: [aeguyer@ucdavis.edu](mailto:aeguyer@ucdavis.edu)

**Location:** Wellman Hall, Room 205

**Class Time:** Tuesday & Thursday, 12:10pm-2:00pm; January 8 – March 14, 2019

**Graduate Teaching Assistant:**

Name: **Andrea Buhler**  
Office Hours: **Wednesdays, 12:10-1:10pm**  
Office: 2420 Hart Hall  
E-mail: [acbuhler@ucdavis.edu](mailto:acbuhler@ucdavis.edu)

**Course Goals:**

In this course, we will explore the relation between adolescent brain development and behavior, focusing on how cognitive neuroscience can inform study of adolescent development and how a developmental approach can advance progress in cognitive and developmental sciences. This course is designed to provide students with deep knowledge about brain development during the adolescent period. Past research and even popular press has often characterized adolescence based on the hormonal changes of puberty and pushing one's self away from parents and towards peers. New research on the changes in the brain during adolescence has created great interest and new understanding of adolescence as a sensitive period for brain development. Studying the complexity of the brain's functions and development has expanded our knowledge about what contributes to adolescent behavior and maturation. While the course aims to emphasize the biological and neurobiological changes that occur during adolescence, we will also place these changes within a holistic understanding of adolescent development and the contexts in which brain development is situated. Class time will largely involve lecture and group discussions, videos, in-class exercises, and group projects. Out of class time will involve reading, reviewing, integrating, summarizing, and intensive writing about course material. Pre-requisites: HDE 100B.

**Course Learning Objectives:**

After this course you should be able to,

- Describe major theories about adolescent brain development and discuss their significance.

- Understand the ways in which researchers have studied brain development.
- Identify and discuss key research findings on brain development during adolescence.
- Consider the relation between scientific research findings on brain development and policies that affect adolescents.
- Effectively communicate orally about scientific research findings on adolescent brain development.
- Effectively communicate in writing about scientific research findings on adolescent brain development.

**Lecture Structure:**

- Tuesdays: Discuss material from textbook; group discussion in reaction to prompts
- Thursdays: Discuss focused journal articles/response questions; student presentations

**Required Reading:**

- (1) Galvan, A. (2017). *The Neuroscience of Adolescence*. New York: Cambridge University Press. Available at UCD Bookstore, Amazon, on reserve at Shields Library.
- (2) Selected journal articles/chapters listed in Course Outline. Available on Canvas under Files.

**Course Requirements and Grading:**

Your final course grade will be based on the following:

<b>Assessment</b>	<b># points</b>	<b>Notes</b>
<b>Reading I:</b> Discussion participation	10 points	Read the assigned textbook chapters and empirical articles before class to fully understand the material and contribute to class discussions. Actively engage in class discussions.
<b>Reading II:</b> Discussion questions	10 points	Generate one probing discussion question in response to the Thursday empirical reading each week to share in class that day. Submit via Canvas by Wednesday night.
<b>Writing I:</b> Candidate statement (2 pages)	10 points	Write a two-page statement similar to what is required for graduate-level programs or job applications. Your statement should focus on describing why you are interested in understanding adolescent brain development, what skills/ideas you might offer to the field in which you would like to work, and what your goals are in pursuing this program/job.
<b>Writing II:</b> Position piece (2 pages)	10 points	Select one of the following policy-related issues - school start times, health decisions, or driving age - and assert your position for/against the policy drawing on research findings about adolescent brain development.
<b>Writing III:</b> Research proposal (6 pages)	30 points	Review background literature on topic of interest related to adolescent brain development. Propose a new research question and method to assess it to address a gap in your topic of interest.

<b>Project I:</b> Group oral presentation	15 points	Select an issue from among a list to be provided. Work in a small group (TBD based on class size) to create a 15 minute oral presentation to give as a group in class.
<b>Project II:</b> Individual's slides from presentation	15 points	Submit the PowerPoint slides that you as an individual contributed to the presentation.
<b>TOTAL</b>	100 points	

- Detailed information for each assignment will be provided in class and on Canvas.
- Students are responsible for completing all reading assignments; we may not cover in depth all topics covered in readings.

**Note:** The mode of grading will be other than that listed in the General Catalog. Because the course is listed as P/NP, each student has the option of reinstating the original grading mode in the following way. By the usual P/NP deadline (the 25th day of instruction) the student must take a copy of the syllabus to the Office of the Registrar and file a 'Grading Variance Exception' petition.

Course grades will be determined using the standard UC Davis grading scale as below:

97-100% = A+	87-89.999% = B+	77-79.999% = C+	67-69.999% = D+	< 60% = F
93-96.999% = A	83-86.999% = B	73-76.999% = C	63-66.999% = D	
90-92.999% = A-	80-82.999% = B-	70-72.999% = C-	60-62.999% = D-	

- Grades will NOT be rounded up.
- Extra credit is NOT available.

### **Course Communication:**

- Check your e-mail and Canvas regularly for announcements, resources, and important information as well as the posting of lecture information, study guides, and grades.
- You are responsible for all announcements made in class whether you are present or not (even if you are traveling for sports). If you miss class, contact another student for notes.
- **I will not discuss any grades via email.** If you need to discuss anything about your grade, you must make an appointment to meet with me in my office (e.g. not at the end of class).
- We make every effort to respond to email correspondence within 2 working days. In your email, include "HDE 198" and a brief subject in the subject line. Keep emails brief to allow quicker response time. For questions needing long responses, we may request that you attend office hours. A quick response at one time does not mean we can always respond quickly at other times.
- Responses to questions that may be relevant to the entire class will be delivered to the entire class when applicable (this will not include responses of a personal nature).
- Student athletes: It is your responsibility to come see me about any travel for games.

- Students with need for accommodations: It is your responsibility to contact the SDC office to arrange for any accommodations that you need.

**Class conduct:**

Contribute to a respectful class environment. During class time, turn off devices (e.g., cell/smart phones, etc) and stay until the end of class. You may take notes on a laptop computer. **Web-surfing, checking e-mail, texting, IM'ing, or game playing in class will not be tolerated.** Any disruptive cell phone or computer use will constitute disruptive behavior. Phones and laptops will not be allowed during exams. Leave these items at home or turned off in your bag. Disruptive behavior of any kind will not be tolerated in the classroom. As per university guidelines, students who engage in disruptive behavior will be asked to cease the behavior. If the behavior has not stopped, then that student will be asked to leave the classroom.

**UC Davis Code of Academic Conduct: Honesty, Fairness & Integrity (08/20/2018):**

The UC Davis Code of Academic Conduct exists to support high standards of behavior and to ensure fair evaluation of student learning. Students who violate the Code of Academic Conduct are subject to disciplinary sanctions that include censure, probation, suspension, deferred separation or dismissal from the University of California. Unless specifically authorized by the instructor in writing, misconduct includes, but is not limited to the following:

[https://ossja.ucdavis.edu/code-academic-conduct?utm\\_source=sja&utm\\_medium=redirect-page](https://ossja.ucdavis.edu/code-academic-conduct?utm_source=sja&utm_medium=redirect-page)

**Course Outline:** Aspects of this syllabus may change if deemed necessary by the instructor. Students will be informed of any necessary changes with as much advance notice as possible.

Week	Date	Topic	Assignment
1	1/8/19 (Tues)	Course and syllabus review Neurodevelopmental models	Ch. 1
	1/10/19 (Thurs)		Empirical reading 1 Discussion question 1
2	1/15/19 (Tues)	Puberty	Ch. 2
	1/17/19 (Thurs)	<b>Candidate statement due</b>	Empirical reading 2 Discussion question 2
3	1/22/19 (Tues)	Cognitive Neuroscience Methods	Ch. 3
	1/24/19 (Thurs)	Neuroethics	Empirical reading 3 Discussion question 3
4	1/29/19 (Tues)	Brain Plasticity	Ch. 4
	1/31/19 (Thurs)	<b>Position piece due</b>	Empirical reading 4 Discussion question 4
5	2/5/19 (Tues)	Neurocognitive Development	Ch. 5
	2/7/19 (Thurs)		Empirical reading 5 Discussion question 5
6	2/12/19 (Tues)	Motivational Brain Systems	Ch. 6
	2/14/19 (Thurs)		Empirical reading 6 Discussion question 6
7	2/19/19 (Tues)	Social Brain	Ch. 7
	2/21/19 (Thurs)	<b>Research proposal due</b>	Empirical reading 7 Discussion question 7
8	2/26/19 (Tues)	Emotional Brain & Mental Health	Monahan et al., 2015 chapter
	2/28/19 (Thurs)	<b>Group presentations</b>	Empirical reading 8 Discussion question 8
9	3/5/19 (Tues)	Policy Implications: Juvenile Justice & Driving <b>Group presentations</b>	Ch. 8
	3/7/19 (Thurs)	Guest lecture	Popular press reading 1 Discussion question 9
10	3/12/19 (Tues)	Policy Implications: Sleep & Media <b>Group presentations</b>	Ch. 8
	3/14/19 (Thurs)	<b>Group presentations</b>	Popular press reading 2 Discussion question 10