

Bruce Ellis **Teaching Statement**

Course instruction

1. Teaching Philosophy

Teaching is fundamentally important to me, and I put a great deal of effort into making the learning experiences of my students as valuable and rewarding as possible. I believe that my strength is that I work hard to understand what students need and to consistently improve my effectiveness in meeting those needs. I have made efforts to be truly interdisciplinary in my teaching. For example, both my undergraduate course (Psy/Ant 3290) and my graduate course (Psy/Ant/FCS/Soc 6465) are cross-listed across different CSBS departments. I developed these courses to cover a domain of knowledge—the operation of the genome and how analysis of genetic and epigenetic variation contributes to our understanding of individual differences in brain development and function, from cell biology to physiology to emotional-cognitive states to behavior—that simply extends beyond any single discipline or area of expertise. That makes these courses unique, I believe, not only at the University of Utah, but possibly in the world. It provides the opportunity for students to learn, at multiple levels ranging from neurons to neighborhoods, how environmental information guides the developing phenotype. These courses are challenging yet rewarding (to both the students and teacher) because they weave together so many fields of knowledge and levels of analysis. I am proud that both my undergraduate and graduate courses are consistently rated by students above the (very high) Psychology Department average on “learned great deal.”

In terms of content-based teaching, my fundamental goals as an instructor are to challenge and expand students’ understanding of human development, to maximize student engagement and involvement, to teach students to be critical consumers of scientific theory and research, to inspire students to apply what they have learned beyond the classroom, and to provide them with the skills and strategies to do so. This involves a variety of methods:

Linking teaching and research. I draw on my core knowledge of evolution, stress, and development to provide an overarching framework for my classes. This framework allows me to apply a common set of functional questions to each topic in the course, and to enhance these topics by lecturing in areas that I have the greatest knowledge and experience.

Student feedback. I make intensive use of feedback from students to maximize my effectiveness as a teacher. Specifically, I collect extensive formal and informal evaluation data, study and tabulate that data, and use it to implement positive changes in my courses and teaching. I also make notes after each lecture concerning what did and did not work and use these notes as a basis for revising the lecture in the future.

Book of PPT slides. For my undergraduate class, I prepare all of my PPT slides in advance and put them in a spiral notebook for students to use when they come to

class. These notebooks replace the use of electronics in the classroom (which I do not allow). These notebooks not only greatly reduce distractions (by eliminating electronics) and facilitate hand-written note taking (which is an evidence-based practice), but also keep students organized, orient them to major points and significant questions, provide guideposts through complex material, and increase the scope of material that I can cover in class. The outlines are greatly appreciated by students (as evidenced by student comments).

In-class demonstrations. In my undergraduate teaching, I punctuate my lectures with at least one in-class demonstration or activity that is designed to bring the material to life and facilitate hands-on learning. These kinds of classroom demonstrations evoke high levels of student interest and enables me to make difficult and abstract concepts more clear and accessible.

Outreach to struggling students. It is critical that students do not feel invisible—that they do not feel that they could just fail a class or drift away without being seen. My first assignment in my undergraduate class is to have students introduce themselves to me (in a short video). One prompt for that video is to tell me why they are taking the class (e.g., “What goals do you hope this class will help you to achieve?”). When a student is struggling, I email them a personal message, in which I talk about their goals and what they need to do in class to achieve them. These messages tend to have a powerful effect on students.

Scaffolding students with study guides and review sessions. To help students in my undergraduate class prepare for tests and quizzes, and to reduce their anxiety, I prepare study guides for each assigned reading, and I hold review sessions. This allows students to know what is coming, and to discuss any content that they are unsure about. I have found that this type of scaffolding improves student learning and performance.

Integrating knowledge through writing. In my graduate course, and more recently in my undergraduate course, I have student post discussion questions, and respond to discussion questions from other students, that involve integrating knowledge across multiple readings and lecture materials. This makes students process the material at a deeper level to make connections across content areas. I also work with students to apply the knowledge to real-life issues and events.

2. Teaching Portfolio

To show the teaching methods that I use in my courses, I have put together a teaching portfolio that includes my most recent undergraduate and graduate course syllabi. These syllabi include detailed descriptions of assignments.

3. Graduate Teaching

I taught my graduate course—ANT/FCS/PSY/SOC 6465: Biosocial Mechanisms of Stress, Development, and Health—in Spring 2017 (when it was officially a Special Topics class), Spring 2018, and Spring 2020. The course has received consistently strong course evaluations. When I taught the course most recently, in Spring 2020, it was interrupted by the pandemic, as well as by an earthquake, a snow day, and the

worst case of flu that I ever had. This caused an extraordinary level of disruption to the class. Not surprisingly, course evaluations dropped slightly from previous times I taught this class. However, the class was still rated above the Psychology Department average on “learned great deal.”

4. Undergraduate Teaching

I taught my undergraduate course—Psy 3290: Biology of Stress and Development—in Fall 2017 and Fall 2019. When I taught this class in 2017, it was the first time that I had taught an undergraduate class in a decade. I had to learn how to pitch the class, set expectations, and determine workload for our undergraduate students. Some of my experimenting was not very successful. I essentially spent all of my time writing lectures, writing study guides, writing tests, writing answer keys, and configuring grading schemes. From the perspective of the students, the class was not very successful. Before teaching the class again in 2019, I consulted with the Center for Teaching and Learning Excellence, consulted with Ilse DeKoeyer, and read a lot of scholarly literature on teaching. As a result, I completely revamped the course, employing the methods that I describe above in my teaching philosophy statement. From the perspective of the students, this time the class was a real success, scoring above Psychology Department averages on “learned great deal” and “overall effective course.”

Curriculum and Program Development

1. Curriculum Development

During the current review period, I developed two new courses:

Psy/Ant 3290 (Biology of Stress and Development), which fulfills a Psychology Core Area Requirement (Developmental) and is a Topical Elective in the Anthropology Health Emphasis track and the Integrative Human Biology minor.

ANT/FCS/PSY/SOC 6465 (Biosocial Mechanisms of Stress, Development, and Health), which is taken by graduate students in Psychology, Anthropology, Family and Consumer Studies, Sociology, Biology, and Public Health. The class fulfills a Core Area Requirement for Developmental graduate students, the Advanced Integrative Requirement for Clinical graduate students, the Clinical Child and Family (CCF) Requirement for an advanced CCF/Developmental course, and a graduate seminar requirement in Health Psychology.

2. Development of Training Programs

Beginning late in 2016, I initiated a new research and training program—the Developmental Adaptations, Stress, and Health (DASH) Collaborative—for which I now serve as Co-Director (with Lisa Diamond). DASH is a network of faculty and graduate students at the University of Utah who collaborate in research and graduate training focused on understanding how childhood experiences, and particularly levels of stress and support in and around the family, get “under the skin” to effect durable changes in biological systems involved in physical and psychological development. This has led

to multiple collaborative grant submissions, symposium at conferences, and publications. Before the pandemic, DASH had biweekly meetings, which provided an exceptional opportunity for multiple mentoring of students and collaboration across diverse scholars and laboratories in research and training.

Research Supervision.

1. Graduate Students and Postdocs

During the review period, I have served as the primary advisor of two Masters Students (Nila Shakiba and Susan Brener), served as the co-advisor of three Doctoral Students (Alex Horn, Biology, University of Utah; Meike Slagt, Utrecht University; JeanMarie Bianchi, University of Arizona), served as the primary advisor of one Postdoctoral Fellow (Danielle DelPriore, University of Utah), served as the co-advisor of one Postdoctoral Fellow (Ethan Young, Utrecht University), and served as a member on the Masters and/or Doctoral Committees of three other students: Jenna Alley, Mindy Brown, and Zoe Caron. With each graduate student or postdoc for whom I serve or have served as their primary advisor or co-advisor, I have co-authored publications:

Nila Shakiba (4 publications)

- *Shakiba, N., Conradt., E., & **Ellis, B. J.** (2019). Biological sensitivity to context: A framework for understanding relations between early life experiences and problem behaviors. In E. P. Hayden, & K. Harkness (Eds.), *The Oxford handbook of stress and mental health*. New York: Oxford University Press. Published online January 2019.
- *DelPriore, D.J., *Shakiba, N., *Schlomer, G.S., Hill, S.E., & **Ellis, B.J.** (2019). The effects of fathers on daughters' expectations for men. *Developmental Psychology*, 55, 1523-1536
- *Shakiba, N., **Ellis, B. J.**, Bush, N. R., & Boyce, W.T. (2020). Biological Sensitivity to Context: A test of the hypothesized U-shaped relation between early adversity and stress responsivity. *Development and Psychopathology*, 32, 641-660.
- **Ellis, B.J.**, *Shakiba, N., Adkins, D.E., & Lester, B.M. (2020). Early external-environmental and internal-health predictors of risky sexual and aggressive behavior in adolescence: An integrative approach. *Developmental Psychobiology*. DOI: 10.1002/dev.22029

Susan Brener (1 publication)

- *Delpriore, D.J., Hill, S.E., *Brener, S.A., & **Ellis, B.J.** (2020). Effects of fathers on adolescent daughters' substance use and risky sexual behaviors. *Journal of Research on Adolescence*. DOI: 10.1111/jora.12589

Alex Horn (1 publication)

- **Ellis, B.J.**, *Horn, A.J., Carter, C.S., van Ijzendoorn, M.H., & Bakermans-Kranenburg, M.J. (2021). Developmental Programming of Oxytocin through Variation in Early-Life Stress: Four Meta-Analyses and a Theoretical Reinterpretation. Revision submitted to *Clinical Psychology Review*.

Meike Slagt (3 publications)

- *Slagt, M., Dubas, J. S., van Aken, M. A. G., **Ellis, B. J.**, & Deković, M. (2017). Children's differential susceptibility to parenting: An experimental test of 'for better and for worse'. *Journal of Experimental Child Psychology*, 154, 78-97.
- *Slagt, M., Dubas, J.S., van Aken, M.A.G., **Ellis, B.J.**, & Deković, M. (2018). Sensory processing sensitivity as a marker of differential susceptibility to parenting. *Developmental Psychology*, 54, 543-558.
- *Slagt, M., Dubas, J.S., **Ellis, B.J.**, van Aken, M.A.G., & Deković, M. (2019). Linking emotional reactivity 'for better and for worse' to differential susceptibility to parenting among kindergartners. *Development and Psychopathology*, 31, 741-758.

JeanMarie Bianchi (2 publications)

- **Ellis, B.J.**, *Bianchi, J., Griskevicius, V., & Frankenhuis, W.E. (2017). Beyond risk and protective factors: An adaptation-based approach to resilience. *Perspectives on Psychological Science*, 12, 561-587.
- Frankenhuis, W. E., de Vries, S. A., *Bianchi, J., & **Ellis, B. J.** (2020). Hidden talents in harsh conditions? A preregistered study of memory and reasoning about social dominance. *Developmental Science*, 23, e12835.

Danielle DelPriore (4 publications)

- *DelPriore, D.J., *Schlomer, G.L., & **Ellis, B.J.** (2017). Impact of fathers on parental monitoring of daughters and their affiliation with sexually promiscuous peers: A genetically and environmentally controlled sibling study. *Developmental Psychology*, 53, 1330-1343.
- *DelPriore, D.J., Proffitt Leyva, R., **Ellis, B.J.**, Hill, S.E. (2018). The effects of paternal disengagement on women's perceptions of male mating intent. *Journal of Personality and Social Psychology*, 114, 286-302.
- *DelPriore, D.J., *Shakiba, N., *Schlomer, G.S., Hill, S.E., & **Ellis, B.J.** (2019). The effects of fathers on daughters' expectations for men. *Developmental Psychology*, 55, 1523-1536
- *DelPriore, D.J., Hill, S.E., *Brenner, S.A., & **Ellis, B.J.** (2020). Effects of fathers on adolescent daughters' substance use and risky sexual behaviors. *Journal of Research on Adolescence*. DOI: 10.1111/jora.12589

Ethan Young (2 publications)

- *Young, E.S., Frankenhuis, W.E., & **Ellis, B.J.** (2020). Theory and measurement of environmental unpredictability. *Evolution and Human Behavior*, 41, 550-556.
- Frankenhuis, W.E., *Young, E.S., & **Ellis, B.J.** (2020). The hidden talents approach: Theoretical and methodological challenges. *Trends in Cognitive Science*, 24, 569-581.

2. Undergraduates

During the review period, the following 11 undergraduate students worked in the Hidden Talents lab: Kristina Bennett, Nick Guyer, Monika Kowalski, Hannah Hebertson, Brandon Moncur, Madison Jones, Charlotte Riley-Vanwagoner, Paige Bolingbroke, Marilyn Santana, Joseph Colson, and Jayden Moss. They either worked

as paid research assistants (grant funded), as independent study students, or as UROP students. Each of these students received extensive research experience, including hands on data collection in the Boys and Girls Clubs of Greater Salt Lake and the Jordan School District. I have written letters of recommendation supporting almost all of these students for jobs or graduate school. Marilyn Santana and I wrote an article together for the University of Utah *Undergraduate Research Journal*.