PSYCHOLOGY 467/667 SEMINAR: INFANT COGNITION

Fall, 2018

Instructor: Dr. Paul C. Quinn

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Required Readings: Articles and book chapters (and associated study questions) will be distributed as pdfs throughout the semester.

Course Description:

Scholars from different fields including cognitive science, computer science, linguistics, neuroscience, philosophy, and psychology are interested in understanding the mechanisms of higher mental function. Some of these scholars have in recent years turned their research efforts toward defining the initial cognitive state of the human organism. Studying the beginnings of cognition in infancy presents a formidable set of empirical challenges; however, investigators of infants share a belief that fundamental perceptual and cognitive capacities may be more accessible in the infant than in the adult. The expression of these capacities is not obscured by the layers of acquired knowledge and idiosyncratic processing strategies characteristic of adult cognition.

The course will be designed to provide an overview of selected aspects of perceptual and cognitive development during the infancy period defined broadly here as the first two years of life. Special emphasis will be placed on the acquisition of knowledge including the abilities of human infants to organize what they see into coherent wholes, to represent properties of hidden objects, to form category representations for classes of objects, spatial relations, and people, to build non-obvious and social concepts from perceptual categories, and to represent the sound structure of human language. Concern will also be given to some possible constraints on early knowledge acquisition, such as the biological limitations of sensory systems, the operation of perceptual-cognitive biases that enable rapid learning, and innate limits on human thought. A range of theoretical descriptions of infant development will be considered including Piaget and the modern discontinuity theorists, constructivism and the efforts to model development in connectionist learning systems, and various forms of nativism from Edelman’s selectionism to Fodor’s radical nativism.

The course will be taught in a seminar format and consist of discussions of readings inclusive of primary source research papers. Students will also formulate two research proposals based on a topic and idea inspired by the reading.
Course Goals:

The course is designed to give students an opportunity to engage in advanced readings, think deeply and critically about the issues raised in the readings, and eventually propose project ideas that would have the potential to be conducted as empirical research studies in a laboratory setting under the direction of a faculty supervisor. The course seeks to expose students to the Classroom Seminar-Laboratory Research Model of graduate education in the sciences. The course is valuable to undergraduate students planning to enter doctoral programs in psychology, cognitive science, and neural science. The course is also valuable to graduate students in all areas of graduate training related to cognitive studies at the University of Delaware. The exposure to new issues, research rationales, and methodologies will give you additional breadth of preparation in an era of increased interdisciplinary inquiry, and may also have implications for work in your area, in some instances providing novel perspectives for approaching long-standing controversies.

Specific goals for the individual student include: (1) attaining knowledge of theory and research in cognition, social process, neural mechanisms of behavior, and development, (2) acquiring an understanding of research design, data analysis, and interpretation of empirical findings, (3) developing the ability to evaluate the adequacy of claims about human behavior, and (4) enhancing communication skills.

Course Requirements:

Students will be required to:

1. Attend all class meetings, unless an absence has been excused. The three categories of excused absence are described on the top of p. 3.

2. Read the assigned articles and chapters before class. Be prepared for class discussion of the reading materials. Bring to class printed hard copies of the articles or your laptop with electronic copies of the articles. Come to class with questions about what you read. Make notes about what you read so that you can refer to them in class discussion. Answer the study questions with written notes. I will call upon you during class from time to time to discuss your answers to particular study questions. Remember that class will be no fun for either of us unless you come prepared. The readings listed on the syllabus will be our guide, although I reserve the right to add, subtract, substitute, or change individual readings as the term takes shape, depending on how we are progressing. The readings reflect a mix of book chapters and empirical papers, theoretical pieces along with experiments, and classic as well as more contemporary readings.

3. Complete two exams. Each exam will have two parts. The first part will be in-class (Oct 9 for Exam 1, Dec 6 for Exam 2) and consist of answering essay questions adapted from the study questions associated with the readings. The second part will consist of proposing an idea for a research study (i.e., an idea for an experiment based on the readings). The Midterm research proposal is due on Oct 16, and the Final research proposal is due on the date on which your final exam is scheduled (TBA). Given that we’ll have covered fewer empirical research topics by the Midterm, I will allow some leeway with that proposal (for example, instead of proposing an experiment, you could prepare a critique of an existing theoretical view, suggest a new
methodology to measure a particular ability, or propose a new theoretical view of how development may occur).

**Grading:**

Midterm.................................................................................................................................45% (Part 1 20%, Part 2 20%)
Final.................................................................................................................................50% (Part 1 25%, Part 2 25%)
Seminar Participation...........................................................................................................10%

With regard to the in-class exams, if you miss an exam for one of the three reasons listed below, you will have to take a make-up. It is your responsibility to contact the instructor to schedule a make-up exam. Make-up exams are given ONLY under the following circumstances:

1. Absence from an exam due to athletic participation or other extracurricular activities, in which the student is an official representative of the University, shall be recognized when the student informs the instructor in writing during the first two weeks of the semester of these planned absences for the semester.

2. Absence from an exam due to serious illness or death within a student's family. To validate such absences, the student should present evidence to the Dean's Office of his or her college. The Dean's Office will then provide a letter of verification to the student's instructor.

3. Absence from an exam due to serious illness (e.g., hospitalization, surgery, or protracted medical illness or convalescence). To validate such absences, the student should present evidence of the illness to the Dean's Office of his or her college. The student will need to request that the Student Health Service provide supportive evidence directly to the respective Dean.

If you miss an exam for a reason other than the 3 exceptions noted, no make-up exam can be provided, and your score for that exam will be entered as a 0 when final grades are computed.

With regard to the research proposals, late penalty for the research proposal is one grade for each day that the paper is late. For example, if a paper were to receive an A, it would receive an A- for one day late, a B+ for two days late, a B for three days late, and so on.

**Academic Honesty:**

Students who are caught plagiarizing will be treated in accord with the Official Policy of the University of Delaware as prescribed by the Office of Student Conduct, 218 Hullihen Hall. You are encouraged to become familiar with the policies that govern academic integrity at the University of Delaware at [http://www.udel.edu/studentconduct/](http://www.udel.edu/studentconduct/)

**Dates, Topics, and Readings**

**Part I: Theoretical Approaches**


**Part II: Infant Methodologies and Sensory Constraints**


**Part III: Organization, Recognition, and Representation of Objects**


**Exam 1: Part 1 on Oct 9. No class meeting on Oct 11. Part 2 due on Oct 16 in class.**

**Part IV: Representation of Object and Spatial Concepts**


**Part V: Perceptual-Cognitive Foundations of Language Development**


**Part VI: Perceptual-Cognitive Foundations of Social Development**


**Dec 6 (last class day): Part 1 of Exam 2**

**Final Exam Week (Dec 10-14): Part 2 of Exam 2 due at regularly scheduled Final Exam time**