Seminar in Sensation and Perception  
PSYC4688

Course Information  
Date: Thursday 2:50-5:40  
Location: 274 NI

Instructor Information  
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Course Overview  
The Seminar in Sensation and Perception is a course based on detailed examination and in-depth discussion of primary-source publications on contemporary issues in perception science. In almost all areas of research, competing hypotheses and models are published that claim to provide the most comprehensive account of a particular class of observation or behavior. Each week, we will select a different controversy and review some of the research and arguments that support differing views. We will examine papers that attempt to translate research findings in basic science to clinical and health applications. Through careful reading of research papers, we will examine the credibility of the evidence and the rigor of the arguments for alternative viewpoints. Students will work in groups of 4 or 5 and each meeting will consist of brief presentations of subsets of the material, followed by a discussion of the issues.

Course Objectives  
Through the examination of research articles published in peer-reviewed journals, students will learn to read research papers critically. Students should become familiar with classic and contemporary debates and controversies in perception science and learn to evaluate data-based evidence. Students should actively participate in research discussions by contributing their opinions and responding thoughtfully to the contributions of classmates. Through these exchanges of ideas, students will gain experience in formulating and expressing their own opinions. Technical deconstruction of research articles will concentrate on mastering the following areas:

- Representative literature reviews with reliable source referencing  
- Fair representation of existing research hypotheses  
- Appropriate methods and designs for behavioral research  
- Adherence to ethical guidelines in the conduct of scientific inquiry  
- Appropriate statistical methods for data analysis  
- Accurate interpretation and evaluation of research data
Valid conclusions from the research study

- Literature citation in an appropriate format

**Reading Materials**

Journal articles will be assigned throughout the semester and distributed for download via Blackboard or during class. Reading the assigned material prior to class is mandatory.

**Grading**

This is an advanced seminar and it is expected that students will come to class prepared to ask and answer questions and to participate in group discussions.

**Attendance and Presentations**

Students will be randomly assigned to groups. Each week, each group will be assigned to work on a different section of the assigned material. Typically, one group will work on the *Introduction*, one on the *Methods*, one on the *Results* and one on the *Discussion* sections of standard format research papers. Each group will present their section and will be expected to facilitate discussion. Each student in the group should contribute equally to the presentation. Grades will be given to each student based on both group and individual presentation (4% each for each student’s best 10 presentations; 40% of final grade).

**Preparation Homework**

In preparation for class, each student will write a review of the assigned paper, similar to the peer-reviews that are used to determine eligibility for publication in a scientific journal. Each review will typically be 1-1½ pages long. These reviews will be submitted before each meeting (5% each for each student’s best 10 reviews; 50% of final grade).

**Participation**

Each group member will complete an evaluation form for the other members of their group. These evaluations are intended to provide constructive feedback (1% each for each student’s best 10 participation scores; 10% of final grade).

**Preliminary Schedule**

The following schedule is a preliminary list of discussion material, and we will finalize the schedule and select problems at our first meeting. Additionally, students are encouraged to suggest additional material based on their own experiences and interests. Additional topics may be included if new publications introduce new controversies.

**Do people with autism have higher visual sensitivity than neuro-typicals?**

What do we perceive where we have no sensation?


How reliable is security and radiography screening?


Can we feel sensations in phantom limbs and rubber hands?


Is intelligence correlated with sensory performance?


Is visual pattern matching reliable enough for criminal conviction?


Does sensory context affect face perception?


How does the presentation of food alter its taste?

Piqueras-Fiszman, B., Alcaide, J., Roura, E., & Spence, C. (2012). Is it the plate or is it the food? Assessing the influence of the color (black or white) and shape of the plate on the perception of the food placed on it. *Food Quality and Preference*, 24(1), 205–208.

Can synaesthesia facilitate sensory performance?


Does playing video games modify visual sensitivity?

Is surface lightness estimated by anchoring to the lightest point?


Why do people with visual impairment not detect their blind spots?


What can art teach us about our perceptual system and that of the artist?


Does time spent indoors cause near-sightedness?