Perception – PSYC 724

Fall - 2007

General Information

Course Description

This course is a seminar on visual perception that is divided into two, six-week modules. Each week we will discuss several research papers or a chapter from *The Visual Neurosciences*, and it is imperative that everyone reads the papers prior to class. To facilitate this process, students will be expected to submit a short (i.e., one page) summary of each week’s reading assignments at the beginning of each class. The summary should include comments and/or questions on the material which can be discussed in class. During each module, each student will be responsible for presenting one research paper to the class and leading the discussion about that paper. There will be a take-home exam at the end of each module. Grades for each module will be based on class participation, summary papers, in-class presentations, and take-home exams.

Meeting Times

There will be one, three-hour class per week. The time and place for the class are not yet determined.

Module 1 - Efficiency & Noise

Human performance in some perceptual tasks is remarkably good. For example, under optimal conditions, visual sensitivity approaches the limits imposed by the quantal nature of light. Even in more complex tasks — symmetry detection, for instance — human performance is remarkably good. And yet performance in many other tasks falls far short of ideal, or optimal, levels. It is generally believed that performance in such tasks is limited by noise and/or inefficient strategies of collecting information from the environment. In this module, we will discuss the theoretical tools used to measure optimal performance (e.g., the ideal observer), as well as ways of measuring the constraints imposed by noise and inefficient processing on human performance.

Module 2 - The Perception of Patterns & Objects

In this section of the course we will discuss the mechanisms that enable us to detect, discriminate, and identify visual patterns, textures, and objects.

Readings

The readings will be research articles and chapters from *The Visual Neurosciences*. The exact reading list is yet to be determined. The following two sections illustrate the kind of material that may be assigned.
Possible Readings for Module 1


Possible Readings for Module 2


