

ADVANCES IN VISUAL PERCEPTION, PSYC 526 Winter, 2019

Course summary

Instructors: Professors Fred Kingdom and Kathy Mullen. The course will be given on Tuesdays and Thursdays 11:30 -1:00pm in the Stewart Biology Bldg. Room S3/4, unless otherwise stated.

Structure of the course:

Each week covers a different topic. The first session of each topic will be lecture based and the second session will involve a combination of lecture and interactive discussions. Students will be expected to participate in any discussion based on reading(s) assigned for that week, and on questions provided by the instructor. Each student will be required to submit two essays during the semester. A choice of essay topics with suggested readings will be made available early in the course. The essays will require evaluation of the research and ideas concerning a topical issue in the form of a paper. Undergraduate students are expected to write about 5-6 sides (double spaced, 12 point), and graduate students 10-12 sides, with figures additional. The mid-term examination will be one-and-a-half hours long and will require short written answers. The final, 3-hour examination will consist of a mixture of multiple-choice questions and written essays.

Evaluation

Final examination: 50%

Mid-term examination: 20%

Two essay papers, each 15%

Note: The method of evaluation and the format of the examinations may be changed in the event of circumstances beyond the instructor's control.

Content: The aim of the course is to tackle fundamental questions about the organization of the visual system in humans and other mammals. The majority of the course will be spent considering the visual system as a model sense system, however parallels will be drawn with other sensory systems to demonstrate general principles of organization. We will address the problems from both a physiological and a behavioral basis, seeking to link the two into a unified explanation. A detailed description of the course content is supplied.

Among the range of issues addressed will be:

- * How does color vision work?
- * How do we explain visual illusions?
- * How do neurons encode the visual image?
- * Imaging methods (fMRI) of investigating the human brain.

Readings: Available as PDFs on myCourses.

Text book: "Basic Vision", Robert Snowden, Peter Thompson, and Tom Troscianko, Oxford University Press. McGill Bookstore. Revised edition.

PowerPoint presentations. The PowerPoint presentations accompanying the lectures can be viewed on myCourses and will be up-dated after each session.

Office hours

All course instructors are located at the McGill Vision Research Unit, in the Montreal General Hospital on the 11th floor of Livingstone Hall. They are available for consultation with students by appointment at a mutually agreed time.

Contacts

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Final Examination

The date for the final examination is set by McGill and cannot be changed. Please make sure you do NOT make end-of-semester travel arrangements that conflict with the final exam.