

## VISUAL NEUROSCIENCE (3J03): COURSE OUTLINES

Winter term 2: Jan-May 2010

Tue, Wed and Thu 5:30 to 6:20 pm in ITB/AB102

The primary goal of this course is to explore brain processes through the field of vision. We will explore biological, psychological and clinical dimensions using research findings from the leading past and current scientific literature. The course will focus on developing analytical, critical thinking and communication skills.

**Course Instructor:** Dr. G. Ullal

Contact: Department of Psychology, Neuroscience and Behaviour.

Tel. 21331; email: [ullalg@mcmaster.ca](mailto:ullalg@mcmaster.ca) Room # 108 Psych. Bldg.

**Office Hours:** Will be posted.

**Teaching Assistants:** To be announced.

### **Organization of Lecture Sessions:**

One theme per week: Lectures of Wednesdays and Thursdays will be followed by Seminars on the same theme on the following Tuesday.

**Textbook:** There is no textbook for the course. All the lectures will be based on specific research papers that will be posted on the course site periodically.

### **Evaluation:**

**1. Seminars:** Each Tuesday we will have two group presentations. Each group will have 5-7 students. The seminar will be worth **15%** of the total mark. Fifteen-minute PowerPoint presentation will be followed by a 5-7 minute discussion. There will be a group mark for the seminar. You will be provided with the rubric for marking the seminars, seminar topics etc. during the first week of the course.

**2. Examinations:** You will have two mid-term exams and one final exam worth **20%, 20% and 35%** of the total respectively. Final is cumulative. The mid-term as well as the final exams will have short answer questions only.

Midterm: Forty minutes duration; 90% of lecture material and 10% of the assigned reading from a research paper for each lecture. The second midterm examination will cover 90% of the lecture material and 10% of the corresponding assigned readings after the 1<sup>st</sup> midterm examination.

Final examination: 90 minutes duration; Cumulative, 90% of the entire lecture material and the corresponding assigned readings from research papers.

**3. Assignment:** One paper worth **10%** of the total to be submitted before the **1<sup>st</sup> of April**. Students can choose any of the themes covered in the course **except their seminar topic** and critically evaluate a group of articles in the area. Details of the assignment will be provided later. They may be submitted in class. A penalty of 10% /day will be applied for delayed submission. After the 3<sup>rd</sup> day, the assignment will get a zero. In the event of an illness or any legitimate reasons, an official permission should be routed through the Administration excusing the delayed submission.

**MISSED EXAMINATIONS:** There will **NOT** be a re-examination for missing any of the midterm examinations. However, if a student misses any examination owing to an illness or any other legitimate reason, the final examination will be rated proportionately higher provided an official permission is routed

through the University Administration. No examination will be re-scheduled unless there is cancellation of the class by the University.

**CONFLICT OF EXAMINATIONS:** Since the midterm examinations are conducted during the regular class-hour, if any other examination conflicts with this examination, please contact the authorities conducting the other examination.

**IMPORTANT ANNOUNCEMENTS:** Important announcements regarding the course will be periodically posted in the **Announcement Box** of the course. Please remain updated.

**MCMASTER UNIVERSITY GRADING SCALE:**

Grade	Equivalent Grade Point	Equivalent Percentages
A+	12	90-100
A	11	85-89
A-	10	80-84
B+	9	77-79
B	8	73-76
B-	7	70-72
C+	6	67-69
C	5	63-66
C-	4	60-62
D+	3	57-59
D	2	53-56
D-	1	50-52
F	0	0-49

**COURSE-CALENDER**

**Please Note:**

1. The assigned readings from the journals for each of the themes will be posted prior to each week.
2. All the lectures are on Wednesdays and Thursdays. The seminars are on the following Tuesdays.
3. Both the mid-term examinations are in class, on Wednesdays. The final exam is conducted by the University.
4. There are no seminars during the week of mid-term examinations.

<b><u>Date</u></b>	<b><u>Theme/Activity</u></b>
January 5	Introduction to the course
6 and 7	'Saga of visual neuroscience'
12	Seminars 1-2
13 and 14	Refractory media of the eye
19	Seminars 3-4
20 and 21	Phototransduction
26	Seminars 5-6
27, 28 and	
February 2	Retinal mechanisms cont'd.
3	FIRST MID-TERM EXAMINATION (in class)
4	Retinal mechanisms cont'd.
9	Seminars 7-8
10 and 11	Projections of retina
15- 19	RECESS

23	Seminars 9-10
24 and 25	Organization of visual cortex-1
March 2	Seminars 11-12
3 and 4	Organization of visual corex-2
9	Seminars 13-14
10 and 11	Colour and form perception
16	Colour and form perception cont'd.
17	SECOND MID-TERM EXAMINATION (in class)
18	Face perception
23	Seminars 15-16
24 and 25	Perception of motion
30	Seminars 17-18
March 31 and	
April 1	Stereoscopic vision (DEADLINE FOR HANDING ASSIGNMENT)
6	Seminars 19-20
7 and 8	Leftover material/ Review

## **DISCLAIMER**

The instructor and University reserve the right to modify elements of the course during the term. The University may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

## **NOTE ABOUT ACADEMIC INTEGRITY**

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at <http://www.mcmaster.ca/academicintegrity>

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group-work.
3. Copying or using unauthorized aids in tests and examinations.

## ***Message from the Chair of Psychology***

The Instructor cannot be responsible for returning long distance calls from students. Any student wishing to reach an Instructor is invited to e-mail the instructor. Emails should be sent through the McMaster ID indicating the subject of the email.