Sensory Processes
Fall 2007
Course Outlines

Course Instructor: Dr. Ullal, G.

Contact: Department of Psychology, Neuroscience and Behaviour.
Tel. 21331; email: ullalg@mcmaster.ca

Office Hours: There are no specific “Office Hours”. Please feel free to email any one of us and make an appointment for any day during the week. Around the mid-term examinations and before the final examination special time-slots will be provided.

Lectures: Tue, Thu and Fri  8:30 am -9:20 am

Teaching Assistants (Email and office-contacts will be provided):
1. Sayegn Riziq email: sayeghr@mcmaster.ca
2. Aruffo Chris: nospm@aruffo.com
3. Depape Ann Marie: depape@yorku.ca

Course Description and Objectives:
Basic survival of an organism relies upon its knowing the world that surrounds it. The fundamental system that underlies this knowing is what “Sensory Processes” is all about. Perhaps, it may not be an exaggeration to state that in sensory mechanisms one sees the ‘constant endeavor’ of human consciousness to explore the world around. Exploring this is indeed an exciting task. The ever-growing tools of investigation make this attempt even more fascinating. Further, the clinical vignettes serve as ‘road-maps’ for our exciting and ambitious journey towards understanding the brain through Sensory Processes.

Textbook:
The text that may offer a helpful support for the course is “Sensation and Perception” – E B Goldstein (7th Edition) Wadsworth Publication.

NOTE: Examinations are based on lectures. The lectures will cover material from the textbook as well as from outside sources. Important PowerPoint slides for the lecture will be posted prior to every class. Students are advised to make their own notes in class.
Journal Articles for Home-Assignment: Besides the textbook, two journal articles will be reviewed in the course. The PDF format of the papers will be posted at an appropriate time during the course.


Assignment #1 is due on: 23rd October 2007
To be submitted to: (Will be announced)


Assignment #2 is due on: 23rd November 2007
To be submitted to: (Will be announced)

NOTE:

a. Students are required to study the article and address a few questions pertaining to it in the form of home-assignments. The questions will be provided.

b. Both the assignments together, will be worth 20% of the final grade.

c. The assignments must be submitted to the allotted TA prior to the specified dates. A penalty of 10% /day will be applied for delayed submission. By 3rd 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.

d. The assignments must be typed, with double-line spacing. Emailing of assignments is not permitted.

e. Language will not be an issue in the marking. Point-form of answers would do.
**Evaluations**

1. **First midterm examination:** The midterm examinations will be worth 20% of the final grade. Only material covered in class in all the lectures prior to 1st midterm examination will be on 1st midterm examination. Besides **multiple choice questions** there will be a few **short answer** type questions comprising of definitions and some important concepts discussed in class.

2. **Second midterm examination:** The midterm examinations will be worth 20% of the final grade. Only material covered in class in all the lectures after the 1st midterm examination and prior to 2nd midterm examination will be tested. Besides **multiple choice questions** there will be a few **short answer** type questions comprising of definitions and some important concepts discussed in class.

3. **Final examination:** It will be worth 40% of final grade. It will test the material covered in the entire course with a greater emphasis on what is covered after the 2nd midterm examination. This will be entirely based on **multiple-choice questions** *(there will not be short-answers on the final examination)*. Dates for the midterm examinations are indicated in the List of Lectures below. Date for the final examination will be determined by the Registrar’s Office.

4. **Assignments:** There will be **TWO** home assignments, **together** worth 20% of the final grade. They will be based on two journal articles listed below. **They have to be submitted to the TAs by the absolute deadline indicated above as well as in the table of schedule provided below.**

   **NOTE:** A penalty of 10% /day will be applied for delayed submission. By 3rd 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.

**Remarking of Assignments or Short Answers:** Requests for remarking of an Assignment or a Short Answer is only considered after a student provides a written request giving the reasons for the request to either, Dr. Ullal or the concerned TA.
**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:** Both 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:**

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Schedule of lecture topics and reading

NOTE

1. First midterm examination will cover all material taught in class from first day of class till the last lecture (inclusive) before the 1st midterm examination.

2. Second midterm examination will cover all material taught after the 1st midterm examination till the last lecture (inclusive) before the 2nd midterm.

3. Final examination is cumulative of entire material taught in the course.

4. The topics listed below will follow the dates against them approximately.

• 7th September: Course Outline
• 11th –14th September: Introduction to the study of sensory and perceptual processes. Chapter 1
• 18th September: Organization of the Sensory system (partly Chapter 2)
• 20th September: Investigating the Sensory function (partly Chapter 1)
• 28th -September –4th October: The Lateral Geniculate Nucleus and Striate Cortex--anatomy, physiology, and perceptual processing of the central visual system. Chapter 3
• 5th –9th October: Higher Level Visual Processing -- parallel processing streams and specialized neural processing of visual stimuli. Chapter 4.
• 11th October: 1st Midterm examination 8:30 am to 9:30 am
• 12th –16th October: Colour vision- Physiological and psychophysical studies Chapter 7. (Introducing the paper for Assignment #1)
• 18th October: Perceiving Objects-extraction and recognition of features and objects in the visual environment. Chapter 5
• 19th October: Visual Attention. Chapter 6
• 23rd October: Perceiving Depth and Size -- various cues to depth and the underlying physiological mechanisms. Chapter 8

Assignment #1 is due on 23rd October
• 25th October: Perceiving Movement -- eye movements, vestibular system; the detection and discrimination of objects moving in the environment. Chapter 9
• 26th October: Physiological link between sensory inputs and motor functions Chapter 10
• 30th October-2nd November: Auditory system -- sound; structure of the ear and arrangement of the central auditory pathways. Chapter 11
• 6th November: Sound Localization and the Auditory scene. Chapter 12
• 8th November: Speech Perception. Chapter 13
• 9th November: Vestibular system and sense of posture (Not in text)
• 13th November: 2nd Midterm examination 8:30 am to 9:30 am
• 15th –16th November: The Chemical Senses -The anatomy, physiology, and psychophysics of the sensations of taste and smell. Chapter 15

(Introducing the paper for Assignment #2)
• 20th – 22nd November: The Cutaneous Senses-- the receptors, neural pathways, thresholds, and adaptation of the sensations of touch. Chapter 14
• 23rd November: Pain sensation. Chapter 14

Assignment #2 is due on 23rd November

• 27th November: Catch-up topics
• 29th and 30th November: Review of all material

ACADEMIC INTEGRITY LANGUAGE FOR COURSE OUTLINES

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.