

**PSYCH 2E03: Sensory Processes
Course Syllabus**

**If you require this information in an alternate/accessible format, please contact Dr. Piskuric at (905) 525-9140 ext. 21331.*

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Email	piskurn@mcmaster.ca (For security reasons, please send emails from your McMaster address. Include PSYCH 2E03 in the subject heading.)
Office hours	Mondays 3:30 – 5:00 PM → Sign-up 24 hr in advance using http://doodle.com/nikolpiskuric
Course Website	Avenue to Learn (avenue.mcmaster.ca) Please check this site regularly for notifications and updates.

Teaching Assistants

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Please email the TAs using your McMaster email, and use the term “PSYCH 2E03” in the subject heading. Emails that do not conform to these guidelines *may not be answered*.

Course Description

This course will provide an introduction to the 5 special senses: vision, audition, touch, taste and smell. The major focus will be on understanding the mechanisms by which external stimuli are sensed by receptor cells, and the neural pathways involved in sensory processing (subcortical and cortical). We will also discuss psychophysical measures of perception, and sensory problems that arise due to disease.

Intended Learning Outcomes

By the end of this course, you should be able to:

1. Compare and contrast the transduction mechanisms of the 5 main sensory modalities.
2. Describe the organization of each sensory system from sensory receptor to cortex.
3. Describe common themes in sensory processing.
4. Describe the psychophysical methods used to measure sensory perception.
5. Work effectively and cooperatively within a team, to
 - a. Delegate group tasks fairly and equitably.
 - b. Solve a problem about sensory processing at the cellular, subcortical, and cortical levels.

Course Format

This course consists of 3 50-minute lectures per week.

Monday, Wednesday 2:30 – 3:20 JHE/376

Friday 4:30 – 5:20 JHE/376

Prerequisites

PSYCH 1X03, 1XX3 with a grade of at least C+ in each, and one of BIOLOGY 1A03, 1M03, 1P03 or Grade 12 Biology U; or ISCI 1A24; or registration in Arts & Science, the B.H.Sc. (Honours), the Honours Music (Music Cognition) or any Honours Cognitive Science of Language program.

Antirequisites

PNB 2XA3

Textbook

Chaudhuri, A. (2011) *Fundamentals of Sensory Perception*. Oxford University Press Canada

You can purchase hardcover copies of the text at the *Campus Store*, or you can purchase a 180-day eBook rental through CourseSmart at www.coursesmart.com. Lectures will, for the most part, be derived from this textbook; you are required to read the associated chapters pertaining to lecture material (see Course Schedule below).

iClickers

Classroom response systems will be used in lectures. Students should purchase an iClicker at the *Campus Store* and register it using their MacID (*not* student #). iClicker questions will be used as lecture feedback for the Instructor and also as assessments; grades will be distributed as indicated below. **Note that the use of another student's iClicker constitutes academic dishonesty and will result in an iClicker grade of "0"**.

% of lectures participated	0	<20	20-40	40-60	60-80	80-100
Grade	0	1	2	3	4	5

Course Assessment (%)

Assignments (3)	12	4% each
Group PBL project	18	See <i>Avenue</i> for details
iClicker	5	
Test 1	15	Mon., Oct. 5 th (mc) and Wed. Oct. 7 th (short answer)
Test 2	15	Mon., Nov. 9 th (mc) and Wed. Nov. 11 th (short answer)
Final Exam	35	Cumulative (mc) *possibly 1 or 2 short answer, TBD

Assignments

There will be 3 assignments in total. Assignments will include multiple choice, true/false, and short answer problems related to class material, which you should consider as practice for the tests/exam. You are permitted to discuss the problems with your peers, though each student must complete and submit their own assignment. *It is in your best interest to attempt the problem questions yourself.* Assignments must be submitted in the appropriate Dropbox in *Avenue* by 11:59 PM on the assigned due date (see Course Schedule); late assignments will receive a grade of "0", *without exception*. The weight of a missed assignment (e.g., MSAF) will be redistributed between the other two assignments.

Group PBL Project

In groups of 4 (randomly assigned in *Avenue*), students will work on creating a solution to a series of problems related to a dysfunction or unique property of sensory processing. The project has staggered deadlines and multiple components; see *Avenue* for detailed instructions.

Tests

There will be 2 tests written during class time. Each test will take place over 2 class periods; the first half will be multiple-choice and the second half will be written answer. This format is intended to target multiple levels of knowledge comprehension and to address different learning styles. It will also provide students with more time per question and increase the number of total marks available, decreasing the weight of each individual question. You are encouraged to reflect on your performance on part 1 of test to help you re-focus your studying for part 2.

There are no make-up tests in this course. For students who miss one test and have the appropriate documentation, the weight of the test will be redistributed to the final exam. For students who miss *both* tests, 15% will be redistributed to the exam and Test 2 will be replaced

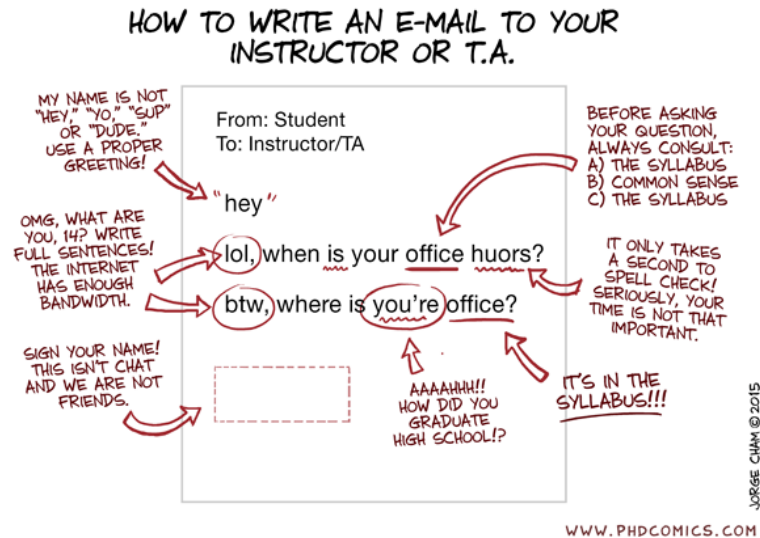
by a 1-hour, cumulative oral examination with the Instructor, scheduled within 2 weeks of Test 2. *Note that students cannot pass this course without completing at least one test, written or oral.*

Midterm Review Policy

You may view your midterm exam during scheduled exam review office hours only. You will be asked to show your McMaster student ID. A copy of the answer key will be available at this time.

Seeking Help

Please ask the course Instructor or TAs for help at any time if you need it. As a learner, it is your responsibility to recognize when you need help and then ask for it.



Student Services

Several services are available on campus to assist students. You are encouraged to visit the **Student Wellness Centre** (<http://wellness.mcmaster.ca>) for mental and/or physical health related issues, the **Student Accessibility Centre** (<http://sas.mcmaster.ca>) for academic or disability-related needs, and the **Student Success Centre** (<http://studentsuccess.mcmaster.ca>) for academic counseling, tutoring, and other academic and career support.

Missed Work Policy

For absences from classes lasting up to 3 days due to a medical or personal reason: Using the *McMaster Student Absence Form (MSAF)* on-line self-reporting tool, undergraduate students may report absences lasting up to 3 days and may also request relief for missed academic work worth less than 25% of the final grade. The submission of medical documentation is normally not required. Students may use this tool to submit a maximum of one request for relief of missed academic work per term. Students must **immediately (within 2 days of the missed work)** follow up with their course instructors regarding the nature of the relief. Failure to do so may negate the opportunity for relief. **The MSAF tool cannot be used to apply for relief for any final examination or its equivalent.**

Students who (1) are absent for more than 3 days, (2) wish to submit more than one request for relief of missed academic work per term, (3) are absent for reasons other than a medical situation, or (4) missed work worth 25% or more of their grade, cannot use the MSAF tool to request relief. They MUST report to their Faculty Office to discuss their situation and may be required to provide appropriate supporting documentation. If warranted, students will be approved to use a discretionary version of the MSAF on-line, self-reporting tool.

For absences from classes lasting more than 3 days, for work worth 25% or more, or for the reporting of more than one request for relief per term:

If the reason was medical, the approved McMaster University Medical Form covering the relevant dates must be submitted. The student must be seen by a doctor at the earliest possible date, **normally on or before the date of the missed work** and the doctor must verify the duration of the illness. Relief will not be considered for minor illnesses. If the reason is non-medical, appropriate documentation with verifiable origin covering the relevant dates must be submitted, normally within five working days. In some circumstances, students may be advised to submit a *Petition for Special Consideration (Form A)* seeking relief for missed academic work. In deciding whether or not to grant a petition, adequacy of the supporting documentation, including the timing in relation to the due date of the missed work and the degree of the student's incapacitation, may be taken into account. If the petition is approved the Faculty Office will notify the instructor(s) recommending relief. The student must contact the instructor promptly to discuss the appropriate relief. Failure to do so may negate the opportunity for relief. It is the prerogative of the instructor of the course to determine the appropriate relief for missed term work in his/her course.

Academic Dishonesty

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means, and can result in serious consequences for a student such as the grade of zero on an exam or assignment, loss of course credit with a notation on the student's transcript that reads "*Grade of F assigned for academic dishonesty*", and/or suspension or expulsion from McMaster University. It is your responsibility to understand what constitutes academic dishonesty. For example, plagiarism, improper collaboration, copying and/or use of unauthorized aids in tests and examinations (i.e. cheating) are just a few forms of academic dishonesty. For more information on academic integrity and the various kinds of academic dishonesty, please refer to McMaster's Academic Integrity Policy located at <http://www.mcmaster.ca/academicintegrity>.

Grades

Grades obtained in PSYCH 2E03 will be converted according to the following scheme.

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

Notice of changes to course structure

The university reserves 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.

The professor reserves the right to change any and all course requirements if the need should arise. Any change in the course requirements will be posted on the webpage, and the details will be announced in class. Any concerns about announced changes should be addressed with the professor as soon as the changes are announced.

Course Schedule

Lec	Wk	Date	Topic	Text chapter	Due dates (by 11:59 PM)
1	1	9/9	Intro – What are sensation and perception?		
2		9/11	Organization of the nervous system	2	
3	2	9/14	Electrical activity in neurons	2	
4		9/16	Principles of perceptual measurement	1	
5		9/18	Principles of perceptual measurement	1	Choose topic
6	3	9/21	Touch – Transduction	3	
7		9/23	Touch – Processing	3	
8		9/25	Touch – Tactile perception	3	
9	4	9/28	Touch – Proprioception & Pain	3	Assignment 1
10		9/30	Taste – Transduction and processing	4	
11		10/2	Smell – Transduction and processing	4	Group Contract
12	5	10/5	Test 1 – mc		
13		10/7	Test 1 – written		
14		10/9	No class		
	6	10/12	Reading week – no class		
15	7	10/19	Smell - Transduction and processing	4	
16		10/21	Audition – Physics of Sound	5	
17		10/23	Audition – The ear; transduction	5	
18	8	10/26	Audition – Processing	5	
19		10/28	Audition – Hearing Dysfunctions, Perception	5, 6	
20		10/30	Audition – Perception	6	Assignment 2
21	9	11/2	Audition – Speech and language	7	
22		11/4	Audition – Speech and language	7	
23		11/6	Audition – Speech and language	7	
24	10	11/9	Test 2 – mc		
25		11/11	Test 2 - written		
26		11/13	No class		PBL Draft
27	11	11/16	Vision – Light, optics, and the eye	8	
28		11/18	Vision – Light, optics, and the eye	8	
29		11/20	Vision – Visual transduction	9	
30	12	11/23	Vision – The retina	9	Assignment 3
31		11/25	Vision – Perceptual aspects of retinal function	9	
32		11/27	Vision – The retinal projection to the brain	10	
33	13	11/30	Vision – The visual cortex	10	PBL Final
34		12/2	Vision – Higher cortical functions/perception	10	
35		12/4	Vision – Intro to colour vision & depth	11,12 (ref)	
36	14				