How many senses are there? The traditional answer, originally proposed by Aristotle, states that there are five senses—vision, audition, touch, smell and taste. In contrast, the main thesis of this course proposes that there are many more than five senses. In fact, depending on how one counts, there may be as many as 30-40 unique perceptual experiences. A second thesis proposed in this course concerns the number of sensory modalities involved in any one behaviour. Many behaviours are typically studied from a unisensory system perspective—we ‘see’ objects, and ‘hear’ music. Throughout the course we will explore how many, if not all, behaviours require at least one additional sensory system, if not many more. By the end of the course, the student should be familiar with the multisensory research literature: the main measurement tools, the primary theoretical arguments, and a number of specific empirical examples. In terms of skills, this course focuses on presentation ability—both oral and written.

The knowledge requirements will be evaluated through one in-term take-home exam and one final exam, which will include both a take-home portion and an registrar scheduled portion. The goal of these two examinations is not to evaluate what you do or do not know, but rather how well you can present the information that you do know. The skills will be evaluated through the term project, which has both a written and an oral component. In addition, editing and evaluation skills will be taught and exercised. Finally, fluency with the primary empirical literature will be developed through weekly ‘cue card’ summary assignments.

Required Text:
The main readings will come in the form of draft chapters posted to the course website. More details concerning this will follow in lecture. You will also be required to read one original empirical article each week. Finally, you will need to read and understand articles related to your Term Project. All assignments and submissions must conform to APA format.
Evaluation Breakdown and Schedule:

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Date</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam (take home)</td>
<td>Tuesday October 19</td>
<td>15%</td>
</tr>
<tr>
<td>Term Project</td>
<td>Final Submission Due Monday November 29</td>
<td>40%</td>
</tr>
<tr>
<td>Cumulative Final Exam (3 hour)</td>
<td>Registrar Scheduled + take home portion</td>
<td>30%</td>
</tr>
<tr>
<td>Cue Card Assignments</td>
<td>Every Week starting Tuesday September 21</td>
<td>8%</td>
</tr>
<tr>
<td>Tutorial Based Assignments</td>
<td>Schedule to be announced in tutorial</td>
<td>7%</td>
</tr>
</tbody>
</table>

Term Project

Throughout the term you will work on a project that explains, demonstrates or otherwise highlights a multisensory phenomenon or concept. The topic can be chosen from any media available. Virtually anything can serve as the example (e.g., a standard published experiment, a music video, a clip from Star Trek, a neurological case study, a bit of written text, or even a simple experience). The only requirement is that you must be physically, psychologically, and legally able to present your example in front of the entire class in 5 minutes. In exploring your topic, you will make the argument that a multisensory phenomenon is actually present in your example, provide some evidence from within the example or from secondary sources, and assess the validity of the argument. You will be evaluated, at every stage on the clarity of your argument, the validity of the argument, and the presentation of your argument. The goal here is to find examples where, at first blush, it appears as though only one sense is contributing to behaviour, but in actuality, information is integrated from multiple sources.

There are two evaluated components to the project: One written and one oral. The written component will be in the form of a short essay (8-10 pages double spaced). Four separate drafts of the written project are due throughout the term:

- September 27: Outline of the project (4 copies)
- October 18: First draft of the article (4 copies)
- November 8: Second Draft (4 copies)
- November 29: Final Submission (see below)

In addition to completing your own project, you will be required to edit and evaluate 3 other students' projects. You will provide feedback on their outline and their first two drafts. Your comments and evaluation are due 7 days after the papers are submitted (i.e., the Monday of the following week). The value of your comments will be assessed by both the receiving student and the instructors. A graduate student TA will also provide feedback on all submissions. The final submission will be evaluated by Dr. Shore.
The oral component will consist of a 5 minute presentation that describes the example, articulates your argument that it does indeed represent a multisensory concept, and presents your evidence. This oral presentation will be evaluated by all of the students in the class, the graduate student instructors, and Dr. Shore. All of these people will provide some form of written comments and a score sheet with specific grades. These presentations will be scheduled between November 12 and November 30.

For the final submission, you will be responsible for collating the feedback and evaluations from the class and preparing a short written report. The report will consist of an executive summary, a transcript of the class’s comments, a representation of the quantitative data from the class, a self-evaluation, and a short assessment of what you will work on to improve for your next presentation. The entire report will be evaluated for written and graphical presentation.

The final submission will consist of: (1) The executive summary including your self-assessment and evaluation, and your evaluation of the feedback provided by other students and TAs (no more than 1 page single spaced); (2) The final draft of your manuscript, (3) all commented drafts (5 outlines, 5 first drafts, 5 second drafts), (4) all of the feedback, evaluations, and assessments provided on your oral presentation. All components should be bound and easily evaluated. Additionally, you MUST provide an extra copy of your executive summary and the final manuscript.

**Grade Breakdown for the term project:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Written Submission</td>
<td>50%</td>
</tr>
<tr>
<td>Final Oral Presentation</td>
<td>20%</td>
</tr>
<tr>
<td>Response to feedback on drafts</td>
<td>20%</td>
</tr>
<tr>
<td>Feedback given to other students</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Cue Card Assignments:**

Each Friday between September 21 and November 30, each student will read at least one empirical article and prepare a 5” x 7” cue card that contains the question, hypothesis, method, results and conclusion. The card should be titled with a complete APA citation to the article. A hand-drawn graph would also be appropriate. The article must be an empirical article dealing with a multisensory topic. It may come from the reference sections of the chapters or from the lecture material. Preferably, it should contain only one or two experiments. You will bring your cue card to the class on the Tuesday of the week. Time permitting, you will be required to give a 2-3 minute summary of the article. You will be graded on all aspects of the card and your presentation. There are 11 assignments; your best 8 will count.

**Tutorial Based Assignments:**

The tutorial section focuses exclusively on how to write a well-formatted essay and how to make clear oral presentations. Each week you will be given a small assignment to aid in the process of putting together your final term project. The number and nature of the assignments will be discussed in the first tutorial. Overall, this component of the course will be worth 7% of your grade. While the relative value is small, the potential to improve your final project is immense.
Grading Policy:
The instructors reserve the right to adjust final marks up or down, on an individual basis, in the light of special circumstances and/or the individual’s total performance in the course. Students will be assigned a grade from the McMaster University Grading Scale between 0 and 12 based on an overall assessment by the professor on the work submitted. It is expected that to pass the course, the student will achieve a passing grade on both the Final Exam and the Term Project. All written work will be evaluated on grammar/spelling, clarity of writing, presentation, and organization.

Academic Integrity:
Attention is drawn to Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate Office. Any student who infringes one of these resolutions will be treated according to the published policy. Any instance of Plagiarism will be dealt with in the most severe terms allowable by the Senate Policy on such matters. For example, there may be some of you that choose accidentally, or on purpose, to do very similar topics (e.g., visual contributions to speech, haptic influences on flavour, olfactory effects on mate selection). I will be reading every written presentation and any indication that identical work (images, words, figures, etc.) has been submitted by more than one student will be investigated. It is required that you reference all primary sources using APA format. It is also acceptable to acknowledge contributions from other class members in terms of feedback provided, ideas discussed, or even for moral support. You can do this through an acknowledgments section in your article, or through the reference section using the (personal communication) citation. It is perfectly acceptable and encouraged to discuss your project with other students, just be sure that what you are submitting is your own work. You are required to complete the attached Student Statement on Academic Integrity and bring this to class on Tuesday September 14th. If you have any questions regarding this statement, please bring them to the attention of the course instructors.

Missed Work Policy:
All written work must be submitted in class at the beginning of lecture or tutorial on the date due. All late work will be assigned a grade of zero. The final assignment is due at the beginning of Tutorial on Monday November 29th.

All documentation concerning missed work must be submitted through the office of the Associate Dean of your faculty/programme within one week of the original due date of the missed work. After that time, students must appeal to have an exemption. It is also your responsibility to speak with your professor as soon as possible. Senate regulations for petitions for special consideration have always required that: "40. The student shall make a prompt and timely request for special consideration." No requests for exemption will be accepted after one month. In the case of a missed midterm, a make-up date will be determined for each student. The format of the make-up exam will be determined by the professor depending on the number of students affected. An oral exam is a distinct possibility.

Communication policy:
E-mail communications must originate from your designated McMaster e-mail account. Should we need to communicate with you about individual matters, the e-mail will be sent to your mcmaster.ca account. You should monitor this account regularly. E-mail sent from third-party providers (yahoo, hotmail, co-
geco, sympatico, etc.) will not be received. We have this policy for three reasons: 1. reduce the amount of incoming spam to our accounts; 2. ensure that we know with whom we are communicating; 3. teach the professional use of e-mail. Please note that instructors cannot return long distance telephone calls.

In this course we will be using Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

Students should also be aware that they will be providing feedback and evaluations of other students. In doing this, your identity will necessarily be communicated to the other student. Be honest in your assessment of their material and provide constructive comments. Do not inflate the grades as the instructors will consider this inappropriate and it will give the submitting student a false sense of accomplishment. We will talk, during lectures, on how to edit and evaluate a piece of written work and you will be given clear guidelines on how to conduct your assessment. Any concerns or questions regarding this process should be addressed to the instructors of the course as soon as possible.

**Changes in course requirements:**
The instructor reserves the right to modify any aspect of the course as needed. For example, snow days, work stoppage, or other unforeseen events may cause some assignments to be cancelled or due dates rearranged. Any change in the course requirements will be e-mailed to your mcmaster.ca account and will be announced in class.
Student Statement on Academic Integrity

You must return this form to the Instructor of the Course at the beginning of the class on Tuesday September 14th.

Student Name: ______________________ Student Number: ___________________________

All students at McMaster University 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.

By signing below, you are stating that:

1. I have read the course syllabus and understand all of the requirements for this course as laid out in that document.

2. I am aware of the Academic Integrity Policy of the University and I understand that I must submit my own work, which properly cites all primary sources.

3. I understand that the punishment for violations of the senate Academic Integrity Policy may include, among other things, a zero on the relevant assignment/test, a note on my transcript, an F on my transcript for this course, and/or Expulsion from the University.

In signing these forms you indicate that you understand the policy indicated above and have adhered to its requirements. Any cases of plagiarism or cheating will be treated with the seriousness they deserve. If you have any questions about infringement of the policy, you should contact one of the Instructors of the course.

Signed by the student: ______________________ Date: ______________________