

Fall 2022 Course Syllabus  
Sensorimotor Systems (NROC64)

Professor: Mark Morrissey, Ph.D.  
**Tuesdays 7-9pm: SY 110**

Course Email: [NROC64.f2022@gmail.com](mailto:NROC64.f2022@gmail.com)

Office Hours:

- In-person Drop in: Tuesdays 6-630pm in HW507A, beginning Sept 12.
- Remote Bookable: Fridays 12-1pm. One-on-one appointments in 10 minutes time-slots:
  - Must be reserved 24 hours in advance through:
  - <https://calendly.com/morrissey-utsc>

A note on email communication: All questions regarding the course, lectures, readings, exams, etc. must be sent to the course email address: [NROC64.f2022@gmail.com](mailto:NROC64.f2022@gmail.com) . Questions that have already been answered in the course syllabus, in lecture slides, or on Quercus will not receive a response. Students are asked to contact Dr. Morrissey directly for personal or confidential matters only, at [mark.morrissey@mail.utoronto.ca](mailto:mark.morrissey@mail.utoronto.ca)

**\*\* Please note: Course announcements will be made through Quercus. Students are responsible for monitoring the course website regularly for important announcements and updates. Class emails will also be sent through Quercus. Therefore, students are responsible for making sure that their listed email address is correct. \*\***

**REQUIRED TEXTBOOK:** Neurophysiology: A Conceptual Approach, Fifth Edition  
Roger Carpenter

**SUPPLEMENTAL READINGS:** Supplemental readings will be provided for each lecture. Material covered from these readings in lecture will be testable. They will also serve as the basis for the two course papers. See Excel sheet posted on Quercus

**COURSE DESCRIPTION:** A focus on the mechanisms by which the nervous system processes sensory information and controls movement. The topics include sensory transduction and the physiology for sensory systems (visual, somatosensory, auditory, vestibular). Both spinal and central mechanisms of motor control are also covered.

**COURSE OBJECTIVES:**

1. Develop a foundational understanding of sensorimotor systems
2. Strengthened your ability to consume scientific literature
3. Practice the acquisition of scientific knowledge
4. Practiced your ability to understand, critique and communicate original research in psychology and neuroscience
5. Train your ability to effectively communicate scientific knowledge to others

**Prerequisite:**  
(BIOB30H &) NROB60H, exclusion (but not equivalent): PSY290H

**COURSE STRUCTURE** The format of the course will consist primarily of lectures, but will also include video and other methods to help illustrate course material. The material covered in lectures will generally correspond to the material in the textbook, but will often serve to supplement the readings rather than simply duplicate their contents. Therefore, I strongly recommend having completed the relevant readings prior to watching the accompanying online lecture; having done so will make the learning experience more enjoyable and productive. I will also present material that is not included in the readings; therefore, familiarity with both lectures and course readings is necessary to succeed in this course. You will be responsible for all material presented in class and in the required readings.

Quiz 1	5%	Week 5
Mid-term Exam	30%	TBA
Paper #1	10%	Due Nov 1
Quiz 2	5%	Week 9
Paper #2	15%	Nov 22
Quiz 3	5%	Week 12
Final Exam	30%	Dec Exam period

#### QUIZZES, TERM TEST AND FINAL EXAM

mTuner quizzes (5% each): Students will be required to complete three closed-book online quizzes during the semester. These quizzes will be taken online with mTuner. mTuner allows for enhanced online multiple-choice tests specifically designed to help promote students' learning and understanding of the course material. The quizzes are designed to help students keep up with the course material and be prepared for the mid-term and the final exam. No extensions will be granted for completing the quizzes. All quizzes are **closed-book**. Specific details about the mTuner quizzes will be provided on Quercus.

- Quiz 1: Will take place during week 5 (Thursday 10am-Friday 10pm) and will cover material from weeks 1-3.
- Quiz 2: Will take place during week 9 (Thursday 10am-Friday 10pm) and will cover material from Weeks 4-7.
- Quiz 3: Will take place during week 12 (Thursday 10am-Friday 10pm) and will cover material from Weeks 8-11.

Mid-term examination (30%): The mid-term exam will cover all required readings and lecture material covered before the mid-term. The exam will consist of multiple-choice questions, will not exceed two hours and **closed-book**. The exam will be scheduled by the registrar.

Final examination (35%): The final exam will be 'soft' cumulative. It will cover all course material however **an emphasis will be placed on material covered after the mid-term**. The exam will consist of multiple-choice questions, will not exceed two hours, and be closed-book. The final exam will be scheduled during the University examination period.

Papers: The purpose of the two papers is help you practice and develop several key skills 1) reading & understanding primary research papers 2) knowledge translation 3) clear writing and scientific communication.

The idea behind the readings and the papers is that you have a chance to practice reading scientific articles. Being able to do so is an absolute must in many professional areas, inside and outside the university. Because this is a skill there is no other way to learn it but to practice.

### **Paper #1 (10%): ELI5 (Explain like I'm Five)**

The purpose of this paper is to practice and develop your knowledge translation skills. Choose ONE paper from the supplemental reading list and write a 1-PAGE summary of the study. Your audience is someone without a strong science or psychology background. Translate the paper into a clear summary that communicates the purpose, background, what was done, what they found and what it means. There is a strict 1-page (1.5 spacing) limit for this paper.

### **Paper #2 (15%): Lit Review**

The purpose of this paper is to demonstrate your ability to read and understand a scientific paper and translate the paper into a 2-PAGE summary. The style of this paper is more of a literature review, and the audience is someone with a solid science and psychology background. Translate the paper into a clear summary that covers the purpose, the hypothesis, the method, results and discussion. Your summary should also include a critical view of the paper (what does it mean, why is it important, what are strength and what are weaknesses). There is a strict 2-page (1.5 spacing) limit for this paper.

*Late submissions* will be assessed late penalties according to the following schedule. 2.5% per day for the first two days. 5% per day for each following day.

Papers will be submitted online through the Quercus Assignments page and will be passed through plagiarism detection.

**Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).**

### **Help with Writing**

If you would like help with academic writing, the following resources are available to you:

- The Centre for Teaching and Learning (AC312) Writing Centre offers students oneto-one appointments and supplementary materials to help improve upon their writing skills. <http://ctl.utsc.utoronto.ca/home/> <http://ctl.utsc.utoronto.ca/twc/>
- The English Language Development Centre offers support and specialized writing programs for students who do not speak English as their primary language. <http://ctl.utsc.utoronto.ca/eld/>
- Advice on academic writing <http://www.writing.utoronto.ca/advice>

### **Literature Searches**

Students can use the following resources when conducting literature searches to find relevant articles for their presentation and final essay:

The UTSC Library (AC235)  
<http://www.library.utoronto.ca/utsc/>  
 PubMed  
<http://www.ncbi.nlm.nih.gov/pubmed>  
 PsychINFO  
<http://www.apa.org/pubs/databases/psycinfo/index.aspx>  
 Google Scholar  
<http://scholar.google.ca/>

<b>Lecture Date</b>	<b>Lecture Topic</b>	<b>Readings</b>
Week 1 (Sep 6)	Introduction	Chapter 1 (& Appendix)
Week 2 (Sep 13)	Vision1	Chapter 7
Week 3 (Sep 21)	Vision 2	Chapter 7
Week 4 (Sep 27)	Skin & Proprioception	Chapter 4,5
Week 5 (Oct 4)	Hearing, Smell & Taste	Chapter 6,8
Reading week Oct 8- 14		
Week 6 (Oct 18)	Tentative: In-class term test	
Week 7 (Oct 25)	Motor Systems	Chapter 9
Week 8 (Nov 1)	Local Motor Control	Chapter 10

Week 9 (Nov 8)	Posture	Chapter 11
Week 10 (Nov 15)	Higher Motor Functions	Chapter 12
Week 11 (Nov 22)	Pointing, reaching and grasping	Chapter 12

Week 12 (Nov 29)	Behavioural Control	Chapters 13-14
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\*Please note that this outline is subject to change depending on the needs of the class (we may need additional time to cover a topic). Any changes to the syllabus will be announced ahead of time. However, the test dates will be fixed.

## Disability-Related Accommodations

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office (<http://www.utsc.utoronto.ca/ability/>) as soon as possible.

AccessAbility Services staff (located in Rm AA142, Arts and Administration Building) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. Please contact 416-287-7560 (tel/TTY) or email [ability.utsc@utoronto.ca](mailto:ability.utsc@utoronto.ca) for more information.

The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

## University's Plagiarism Detection Tool

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation website (<https://uoft.me/pdt-faq>).

## Department of Psychology Missed Term Work Policy

For missed term work (assignments and term tests) due to illness, emergency, or other mitigating circumstances, please follow the procedures outlined below.

Note:

- The following reasons are not considered sufficient for missed term work: travel for leisure, weddings, personal commitments, work commitments, human error.
- [Missed Final Exams](#) are handled by the Registrar's Office and should be declared on eService.
- Instructors cannot accept term work any later than five business days after the last day of class. Beyond this date, accommodations are only possible via the Registrar's Office [petition process](#).

The email address to submit missed term work accommodation requests in **NORC64** is:

**[NROC64.f2022@gmail.com](mailto:NROC64.f2022@gmail.com)**

### **ILLNESS OR EMERGENCY accommodations:**

For missed work due to ILLNESS OR EMERGENCY, complete the following process:

1. Complete the [Request for Missed Term Work Accommodations Form](#).
2. Declare your absence on [ACORN](#) (Profile & Settings > Absence Declaration)
3. Email **both** of the following items to the course email **WITHIN 2 BUSINESS DAYS** of the missed work:
  - the [Request for Missed Term Work Accommodations Form](#)
  - \*AND\***
  - a screenshot of your Self-Declared Absence on ACORN

*Note:*

- *If you are unable to submit your request within 2 business days, you must still email your instructor within the 2 business day window to explain the nature of the delay. Exceptions to the 2 business day deadline will only be made under exceptional circumstances.*
- *If your absence is declared on ACORN, we do not require any additional supporting documentation (e.g. medical notes) to support your missed term work accommodation request.*

### **ACADEMIC CONFLICT accommodations:**

For missed term work due to an ACADEMIC CONFLICT (e.g. two midterms at the same time):

1. Complete the [Request for Missed Term Work Accommodations Form](#).
2. Take screenshots of your course Quercus pages that demonstrate the conflict.

3. Email the form and screenshots to the course email **at least two weeks (10 business days) before the date of the activity**, or as soon as possible if it was not possible to identify the conflict earlier. Requests sent after the activity deadline may not be accommodated.

Note:

- Multiple assignments due on the same day are not considered conflicts. Students are expected to manage their time effectively to meet assignment deadlines.
- Back-to-back tests/quizzes are not considered conflicts. Only overlapping activities are conflicts.
- Students are responsible for keeping their course timetables conflict-free. Students who register in two courses with overlapping lecture/tutorial/lab schedules will not be accommodated.

**RELIGIOUS CONFLICT accommodations:**

For missed term work due to a RELIGIOUS CONFLICT:

1. Complete the [Request for Missed Term Work Accommodations Form](#).
2. Email the form to the course email **at least two weeks (10 business days) before the date of the activity**, or as soon as possible if it was not possible to identify the conflict earlier. Requests sent after the activity deadline may not be accommodated.

**ACCESSABILITY SERVICES accommodations:**

For missed **TERM TESTS** due to ACCESSABILITY REASONS:

- **Contact your AccessAbility consultant** and have them email the course email detailing accommodations required.

For missed **ASSIGNMENTS** due to ACCESSABILITY REASONS:

- If your desired accommodation is **within the scope** of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” and you need 3 days):
  1. Complete the [Request for Missed Term Work Accommodations Form](#).
  2. Email the form **\*AND\*** your **Accommodation Letter** to the course email specifying how many days extension you are requesting.
- If your desired accommodation is **outside the scope** of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” but you need more time than that):
  1. **Contact your AccessAbility consultant** and have them email the course email detailing the accommodations required.

**Accommodation Procedure:**

After submitting your documentation, you will receive a response from your instructor or TA. This form does not guarantee that you will be accommodated. The course instructor reserves the right to decide what accommodations (if any) will be made. Failure to adhere to any aspect of this policy may result in a denial of your request. **You are responsible for checking your official U of T email and Quercus course announcements daily**, as accommodations may be time-critical.

For missed assignments, **do not wait for the instructor’s response to resume work on your assignment**. Extensions may be as short as one business day, depending on the nature of the illness/emergency. Complete your assignment as soon as you’re able, and email it to your instructor.

For an **anticipated absence** (e.g. a scheduled surgery or an illness with a prolonged recovery period), if you would like to request accommodations in advance, submit a [Verification of Illness Form](#) completed by your doctor AND the [Request for Missed Term Work Accommodations Form](#) to the course email. Absences can be declared up to 14 days into the future on ACORN.

**Missed Accommodations**

If an accommodation is granted but a continued illness/emergency prevents you from meeting its requirements, you must repeat the missed term work procedure to request additional accommodations. **Please make it clear in your subject line that you are requesting a second accommodation.** E.g. If you are

given an extension but are still sick and need more time, or if you miss a make-up term test, you must submit *another* [Request for Missed Term Work Accommodations Form](http://www.governingcouncil.utoronto.ca/policies/behaveac.htm) and declare your extended absence on ACORN. \*Note: In the case of a missed make-up test, an opportunity to write a second make-up test may not necessarily be provided.

### **Academic Integrity**

The University treats cases of cheating and plagiarism very seriously. The University of Toronto’s Code of Behaviour on Academic Matters (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences in papers and assignments include using someone else’s ideas or words without appropriate acknowledgement, submitting your own work in more than one course without the permission of the instructor, making up sources or facts, obtaining or providing unauthorized assistance on any assignment. On tests and exams cheating includes using or possessing unauthorized aids, looking at someone else’s answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University, including (but not limited to) doctor’s notes.

### **Religious Accommodations**

The University has a commitment concerning accommodation for religious observances. I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. According to University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

### **Masks in the Classroom**

*While the mask mandate has been paused as of 1 July 2022, the use of medical masks continues to be strongly encouraged at U of T Scarborough in indoor settings where physical distancing is not possible. We ask everyone to respect each other’s decisions, comfort levels, and health needs. Masks are available at all building entrances at U of T Scarborough and in all classrooms.*

### **Grade Scale**

NUMERICAL MARKS	LETTER GRADE	GRADE POINT VALUE
90 - 100%	A+	4.0
85 - 89%	A	4.0
80 - 84%	A-	3.7
77 - 79%	B+	3.3
73 - 76%	B	3.0
70 - 72%	B-	2.7
67 - 69%	C+	2.3
63 - 66%	C	2.0
60 - 62%	C-	1.7
57 - 59%	D+	1.3
53 - 56%	D	1.0
50 - 52%	D-	0.7
0 - 49%	F	0.0