

## **Physiology 4710A: Physiology of the Senses**

### **Fall Term 2015**

This course covers the physiology of the senses in the primate, including touch, taste, pain, smell, vision, motion and hearing. Each sensory modality is used to exemplify a particular aspect of sensory processing from stimulus encoding at the periphery to the feature extraction in the sensory cerebral cortex. 2 lecture hours, 0.5 course.

### **Lectures:**

Thursday 12:30-2:20 PM

Medical Sciences Building 384

Also offered online through Distance Studies as 650 Physiology of the Senses

### **Requisites:**

PREREQUISITES: [Physiology 3120](#) and [3140A](#); or [Neuroscience 2000](#), [Physiology 3140A](#) and registration in Year 4 of an Honors Specialization in Neuroscience.

### **Senate regulation regarding the student's responsibility regarding requisites:**

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

*Please contact Dr. Vilis if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.*

## **2. Instructor Information**

Dr. Tutis Vilis -Course Manager

Course Lecturer and Manager - T. Vilis - - Office hours, **best by appointment**, 3:30 to 5 Thursdays in my office at the [Brain and Mind Institute](#), Room 240 Natural Science Building. For appointments Email:[me@tutis.ca](mailto:me@tutis.ca).

Students with OWL issues should contact the Computer Support Centre at 519 661-3800 or fill out the webform:

### 3. Course Syllabus

This course is offered in the fall term. Students who have not taken Physiology 3120 or an equivalent can request special permission by contacting [Tutis Vilis](#).

Topics covered are:

September 10	Session 1	The Eye
September 17	Session 2	Primary Visual Cortex
September 24	Session 3	Visual Perception of Objects
October 1	Session 4	Visual Perception of Motion
October 8	Session 5	Association Cortex
October 15	Session 6	Streams for Visually Guided Action
October 22	Session 7	Touch, Pain, Taste and Smell
October 24	9am UCC	Midterm
November 5	Session 8	Muscle Sense
November 12	Session 9	Hearing
November 19	Session 10	Balance
November 26	Session 11	Eye Movements

2. Each session consists of:

- **Lectures are held in MSB 384 from 12:30 to 2:30 pm every Thursday.** These present new material which forms the basic conceptual building blocks of each topic.
- Each week a **series of problems** are **assigned** based on the material covered. These problems allow you to review and extend the basic conceptual building blocks. It is very important that you use these problems to perfect your problem-solving skills. **Students that have done poorly** in previous years have admitted that they mindlessly click the mouse to find the correct answers and then memorize them. I promise you that you **will need your problem-solving skills** in the midterm and a final exam. Your memory will be of little help. In the problems you will learn that
  - there is more than one right answer
  - but **some right answers are better than others**
  - which is better can vary depending on circumstances
  - The question of [why manhole covers are typically round](#) was made famous by Microsoft and is a good example problem-solving.

- see video of [Dan Pink on the surprising science of motivation](#) and **why studying for marks might not be the right strategy.**
- You can go over ***your solutions*** during a **problem solving tutorial** with your tutor, **Brian Robertson**, (Email [.brober4@uwo.ca](mailto:brober4@uwo.ca)) and Nole Hiebert (Email: [nole.hiebert@gmail.com](mailto:nole.hiebert@gmail.com)) on **Tuesdays or Wednesdays Natural Sciences Centre, Rm 7, 4:30 to 5:30** . But try all the problems on your own first before coming to the tutorials.. Make sure that you understand the reasons for why one answer was more correct and the others less correct or wrong. The first tutorials are on **September 15 and 16**
- A weekly OWL Quiz consisting of 3 to 5 multiple choice questions **which must be completed in 15 min any time between 5:30pm to midnight every Wednesday**. The first quiz is on **Wednesday September 16**.

3. All the course materials are posted on this [web site](#).

This material consists of:

1. The animated Flash presentation of each session (without voice),
2. Videos of previous week's lectures, posted the day after the lecture,
3. A PDF file that can be used to obtain a printed version of each session. An updated version of the PDF is posted on the night before the lecture,
4. Practice problems and answers as well as related experiments,
5. Links to other interesting related Web site.

**The testable material is all that is in the PDF's and the Practice problems. Links material is FYI and not testable.**

### **Evaluation:**

The evaluation consists of:

- Final examination 50% - 3 hrs, about 60 multiple choice questions.
- Mid term test 30% - 1.5 hrs, about 30 multiple choice questions. The midterm covers lectures 1 through 6.
- Weekly OWL Quiz 20% - multiple choice questions.

## 5. Additional Information/Statements

### Statement on Academic Offences

“Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website:

[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf)

“All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com> ).”

### Absence from course commitments

#### A. Absence for medical illness:

Information about “Accommodation for Medical Illness – Undergraduates:

POLICY ON ACCOMMODATION FOR MEDICAL ILLNESS -  
UNDERGRADUATE

STUDENTS” can be found in the Academic Handbook at

[http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf)

Students must familiarize themselves with the Policy on Accommodation for Medical Illness: <https://studentservices.uwo.ca/secure/index.cfm>

### Statement from the Dean’s Office, Faculty of Science

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the

accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see:

<http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services.

The form can be found at:

[https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf)

The Policy on Accommodation for Medical Illness is also available on the BMSUE secure site: <http://www.uwo.ca/bmsc/>

## **B. Absence for non-medical reasons:**

The student must discuss the nature of the non-medical reasons with Dr. Babwah. If the reason is of a private nature, the student will be referred to the Dean's Office and Dr. Babwah will act accordingly based on the Dean's advice. If documentation is required, such documentation must be submitted by the student directly to the appropriate Faculty Dean's Office and **not** to the instructor. It will subsequently be the Dean's Office that will determine if accommodation is warranted.

## **C. Special Examinations**

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents.

A Special Examination must be written at the University or an Affiliated University College no later than 30 days after the end of the examination period involved. To accommodate unusual circumstances, a date later than this may be arranged at the time permission is first given by the Dean of the Faculty. The Dean will consult with the instructor and Department Chair and, if a later date is arranged, will communicate this to Registrarial Services. If a student fails to write a scheduled Special Examination, permission to write another Special Examination will be granted only with the permission of the Dean in exceptional circumstances and with appropriate

supporting documents. In such a case, the date of this Special Examination normally will be the scheduled date for the final exam the next time the course is offered.

**Support Services:**

Registrarial Services: <http://www.registrar.uwo.ca>

Academic Counselling (Science and Basic Medical Sciences): <http://www.uwo.ca/sci/counselling/>

USC Student Support Services: <http://westernusc.ca/services/>

Student Development Services: <http://www.sds.uwo.ca>

Student Health Services: <http://www.shs.uwo.ca/>

Students that are in emotion/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of option about how to obtain help.