# University of WaterlooDepartment of PsychologyPsych 261Physiological PsychologyFall 2020online

## Instructor and T.A. Information

Instructor: Roxane Itier, Ph.D

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*Please indicate Psych 261 in the title of any e-mail to the instructor or TAs.*

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## Course Description

This course is an introduction to the physiology of the brain and to the scientific study of how the brain
is involved in perception, cognition, emotion and behaviour. Although the focus will be primarily on the
human brain, various animal models and analogs will also be discussed. Topics that will be covered
include the history of physiological psychology, research methods, neural function, neuroanatomy,
psychopharmacology, the senses (e.g., vision), memory, emotion, sleep, attention, consciousness and
mental disorders (e.g., mood disorders). The studies discussed will include both classic work as well as
current cutting-edge research.

The main content of the course will be delivered online via the LEARN portal. Each week I will post video
lectures and the corresponding PowerPoint slides on the course Learn page. The content will be
typically uploaded on Mondays and Wednesdays. In addition, you will be responsible for reading specific
sections of the assigned textbook. It is very important that you both view the lectures and study the
textbook. Although there will be some overlap between the video lectures and the textbook readings,
there will be material that does not overlap. You are responsible for all of the material covered in the
video lectures and in the assigned readings.

## Course Goals and Learning Outcomes

This course will progress from basic physiological mechanisms to integrated behavioural functions and human cognition.

Upon completion of this course, students should be able to:

1. Have a general understanding of the cellular and molecular complexity of the nervous system
2. Acquire basic knowledge in neuroanatomy and how it relates to behaviour
3. Be able to relate specific deseases and malfunctions to brain-related issues
4. Have a general understanding of the various research directions that can be taken to study the brain and behaviour relationship including the various neuroimaging techniques available
5. Acquire basic knowledge and understanding of the great human cognitive functions and how they are linked to the brain

## Required Text

* Kalat, J. W. (2019). Biological Psychology, 13th Edition. Cengage Learning, Inc.

## Course Requirements and Assessment

Here is the breakdown of the assessments and the dates they will be administered on.

| Assessment  | Date of Evaluation (if known) | Weighting |
| --- | --- | --- |
| Test 1 | October 2-3 | 24% |
| Test 2 | October 30-31 | 24% |
| Test 3 | November 20-21 | 24% |
| Test 4 | December 6-7 | 24% |
| Participation in SONA Experiments | Throughout the term | 4% |
|  |  |  |
| Total |  | 100% |

Tests: The course is divided into four sections with an online test at the end of each section. The
purpose of the tests is to assess your understanding of the material in the course. The tests will not be
cumulative. The tests will be based on the material presented in the textbook and in the video lectures.
The tests will be multiple choice questions and they will be administered through LEARN. Occasionally, there might be diagrams to labell. A week before each test, clear instructions will be outlined on LEARN regarding the course content that will be tested, the exact day and time for the test etc. The tests will be open for 48h.

Participation in SONA Experiments: You will be able to earn 4% towards your final grade
by participating in online studies conducted by students and faculty in the Department of Psychology. Please refer to the attached guidelines for participation in psychology research for more details.

## Course Outline

Below is a tentative reading schedule. I would like to emphasize that this is only a tentative schedule
and topics and readings may change as a result of class interest as well as delays due to the occurrence
of unexpected events. I will announce any changes that might arise on LEARN, so make sure that you
check LEARN on a regular basis.

| **Week** | **Date** | **Topic** | **Readings Due** |
| --- | --- | --- | --- |
| 1 | September 8-11 | Introduction/ History  | Introduction |
| 2 | September 14-18 | Neurons/ Glia/ The Action Potential | Modules 1.1, 1.2 |
| 3 | September 21-25 | The Synapse/ Drugs & Toxins | Modules 2.1, 2.2 |
| 4 | September 28 -October 2 | Neuroanatomy/ Test 1 (October 2-3) | Modules 3.1 |
| 5 | October 5-9 | Neuroanatomy/ Methods | Module 3.2, 3.3 |
| **6** | **October 12-16** | **READING WEEK** |  |
| 7 | October 19-23 | Methods / Neurodevelopment | Modules 3.3, 4.2 |
| 8 | October 26-30 | Plasticity/ Test 2 (October 30-31) | Module 4.3 |
| 9 | November 2-6 | Vision | Modules 5.1, 5.2, 5.3 |
| 10 | November 9-13 | Audition/ Touch, Temperature, Pain | Module 6.1, 6.2 |
| 11 | November 16-20 | Sleep/ Test 3 (November 20-21) | Modules, 8.1, 8.2 |
| 12 | November 23-27 | Emotion/ Mood Disorders | Modules 11.1, 11.2, 14.2 |
| 13 | November 30 – December 4 | Memory and Learning  | Modules 12.1, 12.2, 12.3 |
| 14 | December 7-11 | Test 4 (December 6-7) |  |

## Missed Test

If a student misses a test, the student will receive a score of 0% on the test unless the student provides a
valid Verification of Ilness Form (VIF) or provides the instructor with a valid reason for missing the test
well in advance of the test date (at least two days in advance).

### Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. Check the [Office of Academic Integrity webpage](https://uwaterloo.ca/academic-integrity/) for more information.

### Discipline

A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for their actions. Check [the Office of Academic Integrity](https://uwaterloo.ca/academic-integrity/) for more information. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to [Policy 71 - Student Discipline](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71). For typical penalties check [Guidelines for the Assessment of Penalties](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/guidelines/guidelines-assessment-penalties).

### Concerns about a Course Policy or Decision

Informal Stage. We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Richard Eibach) is available for consultation and to mediate a resolution between the student and instructor: Email: reibach@uwaterloo.ca; Ph 519-888-4567 ext. 38790

### Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70), Section 4. When in doubt, please be certain to contact Richard Eibach, the Associate Chair for Undergraduate Affairs who will provide further assistance; reibach@uwaterloo.ca.

### Appeals

A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes they have a ground for an appeal should refer to [Policy 72 - Student Appeals](https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-72).

### Note for Students with Disabilities

The [AccessAbility Services](https://uwaterloo.ca/disability-services/) office, located on the first floor of the Needles Hall extension (NH 1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

### Cross-listed Course (if applicable)

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

### Accommodation for course requirements for Psychology courses.

 *Policies of the Psychology department pertaining to course requirements are available on the* [*department website*](https://uwaterloo.ca/psychology/current-psychology-undergraduate-students/policies)*.*

# Chosen/Preferred First Name

Do you want professors and interviewers to call you by a different first name? Take a minute now to verify or tell us your chosen/preferred first name by logging into [WatIAM](https://idm.uwaterloo.ca/watiam/).

Why? Starting in winter 2020, your chosen/preferred first name listed in WatIAM will be used broadly across campus (e.g., LEARN, Quest, WaterlooWorks, WatCard, etc). Note: Your legal first name will always be used on certain official documents. For more details, visit [Updating Personal Information](https://uwaterloo.ca/the-centre/updating-personal-information).

**Important notes**

* If you included a preferred name on your OUAC application, it will be used as your chosen/preferred name unless you make a change now.
* If you don’t provide a chosen/preferred name, your legal first name will continue to be used.

# Mental Health Support

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health support if they are needed.

**On Campus**

***Due to COVID-19 and campus closures, services are available only online or by phone.***

* Counselling Services:  counselling.services@uwaterloo.ca / 519-888-4567 ext. 32655
* [MATES](https://wusa.ca/services/uw-mates):  one-to-one peer support program offered by the Waterloo Undergraduate Student Association (WUSA) and Counselling Services

**Off campus, 24/7**

* [Good2Talk](https://good2talk.ca/):  Free confidential help line for post-secondary students. Phone: 1-866-925-5454
* Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-4300 ext. 6880
* [Here 24/7](https://here247.ca/): Mental Health and Crisis Service Team. Phone: 1-844-437-3247
* [OK2BME](https://ok2bme.ca/): set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo.  Phone: 519-884-0000 extension 213

Full details can be found online on the Faculty of Arts [website](https://uwaterloo.ca/arts/get-mental-health-support-when-you-need-it)

Download [UWaterloo and regional mental health resources (PDF)](https://uwaterloo.ca/arts/sites/ca.arts/files/uploads/files/counselling_services_overview_002.pdf)

Download the [WatSafe app](https://uwaterloo.ca/watsafe/) to your phone to quickly access mental health support information.

# Territorial Acknowledgement

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes ten kilometres on each side of the Grand River.

For more information about the purpose of territorial acknowledgements, please see the [CAUT Guide to Acknowledging Traditional Territory](https://www.caut.ca/content/guide-acknowledging-first-peoples-traditional-territory).

# Academic freedom at the University of Waterloo

[Policy 33, Ethical Behaviour](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-33) states, as one of its general principles (Section 1), “The University supports academic freedom for all members of the University community. Academic freedom carries with it the duty to use that freedom in a manner consistent with the scholarly obligation to base teaching and research on an honest and ethical quest for knowledge. In the context of this policy, 'academic freedom' refers to academic activities, including teaching and scholarship, as is articulated in the principles set out in the Memorandum of Agreement between the FAUW and the University of Waterloo, 1998 (Article 6). The academic environment which fosters free debate may from time to time include the presentation or discussion of unpopular opinions or controversial material. Such material shall be dealt with as openly, respectfully and sensitively as possible.” This definition is repeated in Policies 70 and 71, and in the Memorandum of Agreement, Section 6

**Sona Participation and Research Experience Marks
Information and Guidelines**

Experiential learning is considered an integral part of the undergraduate program in Psychology. Research participation is one example of this, article review is another. A number of undergraduate courses have been expanded to include opportunities for Psychology students to earn grades while gaining research experience.

Since experiential learning is highly valued in the Department of Psychology, **students may earn up to 4% of their final mark in this course through research experience** (i.e., course work will make up 96% of the final mark and research experience will make up the other 4% for a maximum grade of 100%). **Be sure to review the guidelines referred to later in this document.**

The two options for earning research experience grades; participation in research through online and remotely operated (replacing in-lab) studies, and article review; are described below. Students may complete any combination of these options to earn research experience grades.

**Option 1: Participation in Psychology Research**

Research participation is coordinated by the Research Experiences Group (REG). Psychology students may volunteer as research participants in remotely operated (replaces in-lab) and/or online (web-based) studies conducted by students and faculty in the Department of Psychology. Participation enables students to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience. Please be assured that all Psychology studies have been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee.

***How to earn extra marks for your Psychology course(s) this term by participating in studies ...***

* You will earn "credits" which will be converted to "marks" (1 credit = 1%)
* You can schedule your remotely operated (replacing in-lab) and ONLINE studies using the "Sona" website.
* **FOR THE FALL 2020 TERM ALL OF YOUR CREDITS** can be earned through ONLINE AND REMOTELY/ ONLINE OPERATED (replacing in-lab) studies.

***Educational focus of participation in research***

To maximize the educational benefits of participating in research, students will receive feedback information following their participation in each study detailing the following elements:

* Purpose or objectives of the study
* Dependent and independent variables
* Expected results
* References for at least two related research articles
* Provisions to ensure confidentiality of data
* Contact information of the researcher should the student have further questions about the study
* Contact information for the Director of the Office of Research Ethics should the student wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which s/he participated.

Participation in remotely operated (replaces in-lab) studies has increment values of 0.5 participation credits (grade percentage points) for each 30-minutes of participation. Participation in ONLINE studies is worth .25 credits for each 15-minutes of participation. Researchers will record student’s participation and at the end of the term the REG Coordinator will provide the course instructor with a credit report of the total credits earned by each student.

***How to participate?***

**Study scheduling, participation and grade assignment is managed using the SONA online system. All students enrolled in this course have been set up with a SONA account.  You must get started early in the term.**

**For instructions on how to log in to your SONA account and for a list of important dates and deadlines please, as soon as possible, go to:**

[Participating/SONA information: How to log in to Sona and sign up for studies](https://uwaterloo.ca/research-experiences-group/welcome-research-experiences-group-and-sona/sona-information)

*\*\*\* Please do not ask the Course Instructor or REG Coordinator for information unless you have first thoroughly read the information provided on this website.\*\*\**

More information about the REG program in general is available at:
[Sona Information on the REG Participants website](https://uwaterloo.ca/research-experiences-group/welcome-research-experiences-group-and-sona/sona-information) or you can check the [Sona FAQ on the REG website homepage](https://uwaterloo.ca/research-experiences-group/sites/ca.research-experiences-group/files/uploads/files/sona_faq_for_fall_2019.pdf) for additional information.

**Option 2: Article Review as an alternative to participation in research**

Students are not required to participate in research, and not all students wish to do so. As an alternative, students may opt to gain research experience by writing short reviews (1½ to 2 pages) of research articles relevant to the course. The course instructor will specify a suitable source of articles for this course (i.e., scientific journals, newspapers, magazines, other printed media). *You must contact your TA to get approval for the article you have chosen before writing the review.* Each review article counts as one percentage point. To receive credit, you must follow specific guidelines. The article review must:

* **Be submitted before the** [last day of lectures](http://www.quest.uwaterloo.ca/undergraduate/dates.html)**. Late submissions will NOT be accepted under ANY circumstances.**
* Be typed
* Fully identify the title, author(s), source and date of the article. A copy of the article must be attached.
* Identify the psychological concepts in the article and indicate the pages in the textbook that are applicable. Critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-effect relations, errors in reasoning, etc. Provide examples whenever possible.
* Clearly evaluate the application or treatment of those concepts in the article.
* Keep a copy of your review in the unlikely event we misplace the original.