

Course Schedule

Important: **ALL TIMES EASTERN** - Please see the [University Policies](#) section of your Course Outline for details.

Your instructor will use the **Announcements** widget to post important information pertaining to the course. You are expected to read the announcements on a regular basis. To ensure you are viewing the complete list of announcements, you may need to click **Show All Announcements**.

Week	Readings	Activities and Assessments	Due Date	Weight (%)
Week 1: Introduction and History	Kalat, J. W. (2019). Introduction: Overview and Major Issues (pp. 3-16).			
Week 2: Neurons, Glia, and the Action Potential	Kalat, J. W. (2019). Module 1.1: The Cells of the Nervous System (pp. 17-27); Module 1.2: The Nerve Impulse (pp. 28-40).			
Week 3: The Synapse, Drugs, and Toxins	Kalat, J. W. (2019). Module 2.1: The Concept of the Synapse (pp. 41-49); Module 2.2: Chemical Events at the Synapse (pp. 50-66).			
Week 4: Neuroanatomy Part 1	Kalat, J. W. (2019). Module 3.1: Structure of the Vertebrate Nervous System (pp. 67-72, 79-80).	Test 1	Friday, January 28, 2022 at 12:00 PM (NOON)	25%
Week 5: Neuroanatomy Part 2 and Methods Part 1	Kalat, J. W. (2019). Module 3.1: Structure of the Vertebrate Nervous System (pp. 72-79); Module 3.2: The Cerebral Cortex (pp. 82-90)			
Week 6: Methods Part 2 and Neurodevelopment	Kalat, J. W. (2019). Module 3.3: Research Methods (pp. 91-102); Module 4.2: Development of the Brain (pp. 117-135).			
Week 7: Plasticity	Kalat, J. W. (2019). Module 4.3: Plasticity after Brain Damage (pp. 136-146).	Test 2	Friday, February 18, 2022 at 12:00 PM (NOON)	25%
Reading Week (Saturday, February 19, 2022 to Sunday, February 27, 2022)				
Week 8: Vision	Kalat, J. W. (2019). Module 5.1: Visual Coding (pp. 147-161); Module 5.2: How the Brain Processes Visual Information (pp. 162-176).			
Week 9: Audition and Temperature, Touch, and Pain	Kalat, J. W. (2019). Module 5.3: Parallel Processing in the Visual Cortex (pp. 177-186); Module 6.1: Audition (pp. 187-198); Module 6.2: The Mechanical Senses (pp. 199-210).			
Week 10: Sleep	Kalat, J. W. (2019). Module 8.1: Rhythms of Waking and Sleeping (pp. 257-267); Module 8.2: Stages of Sleep and Brain Mechanisms (pp. 268-279).	Test 3	Friday, March 18, 2022 at 12:00	25%

PM (NOON)

[Week 11: Emotion and Mood Disorders](#) Kalat, J. W. (2019). **Module 11.1:** What is Emotion (pp. 351-361); **Module 11.2:** Attack and Escape Behavior (pp. 362-375); **Module 14.2:** Mood Disorders (pp. 468-479).

[Week 12: Memory and Learning](#) Kalat, J. W. (2019). **Module 12.1:** Learning, Memory and Memory Loss (pp. 383-394); **Module 12.2:** The Hippocampus and the Striatum (pp. 395-404); **Module 12.3:** Storing Information in the Nervous System (pp. 405-413).

[Bonus Participation and Research Experience](#)

Tuesday, April 5, 2022 at 12:00 PM (NOON) **2%**

[Test 4](#)

Tuesday, April 5, 2022 at 12:00 PM (NOON) **25%**

There is no final examination for this course

Contact Information

Announcements

Your instructor uses the **Announcements** widget on the **Course Home** page during the term to communicate new or changing information regarding due dates, instructor absence, etc., as needed.

You are expected to read the announcements on a regular basis.

To ensure you are viewing the complete list of announcements, you may need to click **Show All Announcements**.

Discussions

A [General Discussion](#) topic has been made available to allow students to communicate with peers in the course and have their questions answered by the instructor, TAs, and/or their peers.

Please do not email the instructor with content-related or general assignment-related questions (i.e., are not of a personal or private nature), but rather post your question in this discussion topic so other students can benefit from your question and the answers from the instructor, TAs, and your peers.

IMPORTANT: DO NOT post questions to any Course Discussion boards during the time window in which the Tests are open (see **Course Schedule**). Questions posted during this window will not be answered. Any questions that contain questions or information related to questions on the test will be deleted and the instructor will follow up with the student that posted.

Contact Us

Who and Why

Contact Details

Instructor and TA

- Course-related questions (e.g., course content, deadlines, assignments, etc.)
- Questions of a personal nature

Questions can be directed to your instructor.

Instructor: Kristin Wilson
kristin.wilson@uwaterloo.ca

Please **only email the instructor regarding personal or private questions and information**. All questions about assessments or course content should be directed to the class **Discussions**.

Your instructor checks email frequently and will make every effort to reply to your personal and private email within 24–48 hours, Monday to Friday.

learnhelp@uwaterloo.ca

Technical Support, Centre for Extended Learning

- Technical problems with Waterloo LEARN

Include your full name, WatIAM user ID, student number, and course name and number.

Technical support is available during regular business hours, Monday to Friday, 8:30 AM to 4:30 PM (Eastern Time).

[IST Knowledge Base: For Students](#)

Learner Support Services,
Centre for Extended Learning

- General inquiries
- Examination information

[Student Resources](#)

extendedlearning@uwaterloo.ca

Include your full name, WatIAM user ID, student number, and course name and number.

Course Description and Learning Outcomes

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 you will view video lectures read 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.

Learning Outcomes

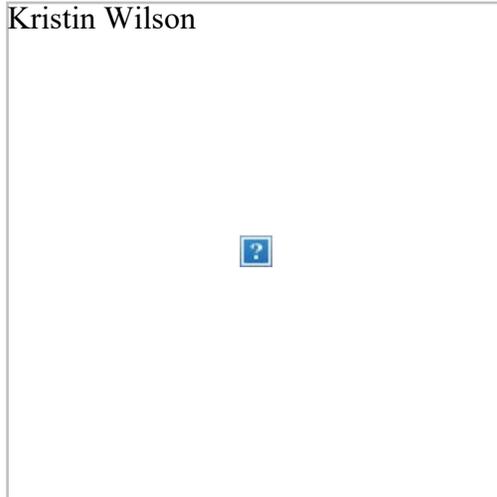
This course will do the following:

- Expose you to various historical perspectives on physiological psychology;
- Familiarise you with the theoretical and philosophical underpinnings of physiological psychology;
- Introduce you to the methods used to explore the brain and the links between mind and brain;
- Teach you about the physiological mechanisms underlying human sensory and perceptual systems; and
- Provide you with insights into the basic physiological and mechanisms involved in behaviour, cognition, emotion and consciousness.

About the Instructor

Instructor — Dr. Kristin Wilson

Research



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I completed my Ph.D. in Cognitive Neuroscience at the University of Toronto, with research focused on how visual attention and short-term memory varies between individuals and relates to higher level constructs, such as the Big Five personality traits. My research incorporated, behavioural, survey, and electrophysiological data to better understand how visual processing and attentional scope/focus varies with Conscientiousness and Openness in particular. After my Ph.D. I wanted to study attention and memory ‘in the wild’ and outside the lab. I joined the labs of Prof. Evan Risko’s Cognition and Natural Behaviour lab and Prof. Dan Smilek’s Vision and Attention lab as a post-doctoral fellow here at UWaterloo. During this time, I studied attention, mind wandering, and memory in online learning environments. Today, I teach psychology and work as an Online Learning Consultant at the Centre for Extended Learning at UWaterloo, where I help use principles of cognition to guide the design of online courses at UWaterloo and continue to conduct a type of applied researcher - user experience (UX) research.

Personal

I live in Guelph with my husband, 18-year-old stepdaughter, and Goldendoodle, Kenobi. When not working, I love to spend time outdoors (hiking, kayaking, gardening, biking, etc.) and cooking. I also love practising and sharing mindful movement through yoga. I have been practising yoga for about 20 years and teaching yoga for the past 10 years and love that I still feel like a beginner and there is so much to learn and explore. I am passionate about teaching psychology and looking forward to meeting you all and instructing this course!

About the Course Author

Course Author — Dr. Daniel Smilek

Educational Background

Dr. Daniel Smilek is a Professor of Cognitive Neuroscience in the Department of Psychology at the University of Waterloo. He completed his undergraduate studies at McMaster University (Hamilton, Ontario, Canada), his graduate work at the University of Waterloo (Waterloo, Ontario, Canada), and a postdoctoral fellowship at the University of British Columbia (Vancouver, British Columbia, Canada). He has been a faculty member at the University of Waterloo since 2004.

Current Research

Dr. Smilek's research focuses on elucidating the cognitive and brain mechanisms that underlie human attention, emotion and vision. In his most recent work he and his students explore various states of attention, including attentional failures, mind wandering, media multitasking, and flow. Dr. Smilek and his research team conduct studies in the laboratory but also in real world contexts. Dr. Smilek has co-authored over 150 peer-reviewed scientific papers, some of which have appeared in top journals, including *Nature*, *Psychological Science* and *Psychological Bulletin*. He is also the co-author of a Canadian textbook on Cognition.

Philosophy of Teaching

Dr. Smilek believes that different teaching styles and learning objectives are suitable for different levels of learning. During broad second-year introductory courses, such as this course on Physiological Psychology, learning should focus primarily on absorbing and retaining foundational facts and ideas in the field. Students are always encouraged to engage with the material thoughtfully and critically.

Materials and Resources

Textbook(s)

Required

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

For textbook ordering information, please contact the [W Store | Course Materials + Supplies](#).

For your convenience, you can compile a list of required and optional course materials through [BookLook](#) using your Quest userID and password. If you are having difficulties ordering online and wish to call the Waterloo Bookstore, their phone number is +1 519-888-4673 or toll-free at +1 866-330-7933. Please be aware that textbook orders **CANNOT** be taken over the phone.

Resources

- Library services for [Co-op students on work term and students taking online courses](#)

Grade Breakdown

The following table represents the grade breakdown of this course.

Activities and Assessments	Weight
Test 1	25%
Test 2	25%
Test 3	25%
Test 4	25%
Bonus Participation and Research Experience	2%

Official Grades

Official Grades and Academic Standings are available through [Quest](#).

Course and Department Policies

Course Policies

Missed Tests

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 Illness 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).

Department Policies

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. See the [Office of Academic Integrity webpage](#) for more information.

Discipline

A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. Check [the Office of 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](#). For typical penalties check [Guidelines for the Assessment of Penalties](#).

Concerns about a Course Policy or Decision

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; Phone: 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](#), 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 he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Note for Students with Disabilities

The [AccessAbility 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.

Accommodation for Course Requirements for Psychology Courses

Policies of the Psychology department pertaining to course requirements are available on the department website.

Mental Health Services

Mental Health Services aim is to provide holistic programming and services to help you lead a healthy and balanced life. We strive to provide a secure, supportive environment for students of all orientations and backgrounds. Students suffering from problems with anxiety, depression, problems with sleep, attention, obsessions or compulsions, relationship difficulties, severe winter blues, etc., may make an appointment by phone or in person. Appointments are usually available within two days of initial contact with one of our medical doctors. All contacts are completely confidential.

Contact Health Services

Health Services Building

- Call 519-888-4096 to schedule an appointment
- Call 1-866-797-0000 for free 24/7 advice from a health professional

Contact Counselling Services

Needles Hall Addition, NH 2401

- Call 519-888-4567 x 32655 to schedule an appointment
- counserv@uwaterloo.ca

