



COURSE OUTLINE

1. **Course:** NEUR 201, Introduction to Neuroscience - Fall 2022

Lecture 01 : TR 15:30 - 16:45 in TI STUDIOC

Instructor	Email	Phone	Office	Hours
Dr Richard Wilson	wilsonr@ucalgary.ca	403 831-7773	HRMB (FOOTHILLS CAMPUS)	After lectures on Tuesday and Thursday, or by arrangement as required.

Should the Covid-19 pandemic deteriorate such that in-person classes poses a significant health risk, all classes will be via Zoom. An email with Zoom link and password will be emailed to registered students at the beginning of term.

Tuesday / Thursday at 15:30 - 16:45

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

ALL CLASSES WILL BE IN PERSON UNTIL FURTHER NOTICE:

Days and Time: Tuesday/Thursday, 3:30-4:45pm

Location: UCalgary, Room TI120

Re-Entry Protocol for Labs and Classrooms:

To limit the spread of COVID-19 on campus, the University of Calgary has implemented safety measures to ensure the campus is a safe and welcoming space for students, faculty and staff. The most current safety information for campus can be found [here](#).

Course Site:

D2L: NEUR 201 L01-(Fall 2021)-Introduction to Neuroscience

Note: Students must use their U of C account for all course correspondence.

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Biology 30 and admission to the Neuroscience program.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Class participation	20%	Ongoing		
Student presentations (Neuroscience Debates)	20%	Oct 25 2022		
Term paper	40%	Nov 25 2022		
Student presentations (HBI Bios)	20%	Nov 29 2022		

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

The University of Calgary offers a [flexible grade option](#), Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and may not be a viable option based on the design of this course.

5. Scheduled Out-of-Class Activities:

There are no scheduled out of class activities for this course.

An optional visit to the Wilson Lab (Rm 2066, Health Science Building) may occur on Dec 6 depending on COVID safety precautions at that time.

6. Course Materials:

Recommended Textbook(s):

- Purves, *Neuroscience*: Sinauer Associates.
- Nicholls, *From Neurons to Brain*: Sinauer Associates.
- Squire, Berg, Bloom et al, *Fundamental Neuroscience*: Elsevier.

A text book is not mandatory for Neuro201; these examples are provided here for students who seek a recommendation.

Powerpoint presentations will be posted to D2L before each lecture.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. **Examination Policy:**

This course has no exam; evaluation is via student presentations, class participation and a term paper.

Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. **Human & Living Organism Studies Statements:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

STUDIES IN THE BSc NEUROSCIENCE PROGRAM MAY INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. Students taking laboratory- and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The program strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered in the program should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

Students are expected to be familiar with [Section SC.4.1](#) of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work [form](#) to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. **Other Important Information For Students:**

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Services:** For more information, see their [website](#) or call [403-210-9355](#).

- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (syva@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed [here](#).
- d. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)
[Student Academic Misconduct Policy](#) and [Procedure](#)
[Faculty of Science Academic Misconduct Process](#)
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

e. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the [Request for Academic Accommodation Form](#) and sending it to Dr. Willem Wildering by email bscndir@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- g. **Student Union Information:** [SU contact](#), Email SU Science Rep: sciencerep1@su.ucalgary.ca, [Student Ombudsman](#)
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Block week	Tues. Aug. 31	Block week-- no class
	Thurs. Sept 2	Block week-- no class

Week 1	Tues. Sept. 7	Introduction to the BSc Neuroscience program		Willem (Wic) Wildering <wilderin@ucalgary.ca>
	Thurs. Sept. 9	How to succeed as a Neuroscience Undergraduate		Richard Wilson <wilsonr@ucalgary.ca>
Week 2	Tues. Sept. 14	What is neuroscience?	Question and answers	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Sept. 16	How do neurons work? Part 1	Morphology	Richard Wilson <wilsonr@ucalgary.ca>
Week 3	Tues. Sept. 21	How do neurons work? Part 2	Passive electrical properties	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Sept. 23	How do neurons work? Part 3	Passive electrical properties	Richard Wilson <wilsonr@ucalgary.ca>
Week 4	Tues. Sept. 28	How do neurons work? Part 4	Active electrical properties	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Sept. 30	Neuroscience techniques--measuring activity of cells		Richard Wilson <wilsonr@ucalgary.ca>
Week 5	Tues. Oct. 5	How do neurons work? Part 5	Electrical transmission and synapses	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Oct. 7	Neuroscience techniques--measuring activity of networks		Richard Wilson <wilsonr@ucalgary.ca>
Week 6	Tues. Oct. 12	Anatomy of a nervous system	Invertebrates and vertebrates	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Oct. 14	Neuroscience techniques--modulating activity of networks		Richard Wilson <wilsonr@ucalgary.ca>
Week 7	Tues. Oct. 19	Autonomic systems	Regulating the body's internal state	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Oct. 21	Motor systems	Controlling physical interactions with the world	Richard Wilson <wilsonr@ucalgary.ca>
Week 8	Tues. Oct. 26	Sensory systems	Experiencing the world	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Oct. 28	Developmental Neuroscience	Building a Brain with the HBI Education Director	Sarah McFarlane <wilsonr@ucalgary.ca>
Week 9	Tues. Nov. 2	Student presentations: Debate 1		Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Nov. 4	Student presentations: Debate 2		Richard Wilson <wilsonr@ucalgary.ca>
Week 10	Tues. Nov. 9	Term Break-- no class		
	Thurs. Nov. 11	Term Break-- no class		
Week 11	Tues. Nov. 16	Learning and memory	Neuroscience secrets to doing well in exams	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Nov 18	Consciousness	Thinking it all through	Richard Wilson <wilsonr@ucalgary.ca>
Week 12	Tues. Nov. 23	Brain injury		Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Nov. 25	Brain diseases		Richard Wilson <wilsonr@ucalgary.ca>
	Sat. Nov 27	Assignment due (email to wilsonr@ucalgary.ca by noon with UCID# and name in subject line).		
Week 13	Tues. Nov. 30	Student presentations: Biography of HBI neuroscientists	By individuals in Teams A to B	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Dec. 2	Student presentations: Biography of HBI neuroscientists	By individuals in Teams C to D	Richard Wilson <wilsonr@ucalgary.ca>
Week 14	Tues. Dec. 7	Career corner	What's it like to do neuroscience research as a career?	Richard Wilson <wilsonr@ucalgary.ca>
	Thurs. Dec. 9	Questions and answers		
Week 15	Tues. Dec. 14	Exam week		No class

Note: this course outline is subject to change. Please check on Desire2Learn for latest updates.

Nov 2- Debate 1: Team Universities (Team A) / big pharma (Team B) are the principle
A and B drivers of drug discovery

Nov 4- Debate 2: Team Sympathetic (Team C) / parasympathetic (Team D) is the
C and D primary driver of chronic disease

Course Outcomes:

- Communicate scientific information orally and visually, effectively utilizing graphical representations.
- Distil salient points from oral/visual scientific presentations and provide constructive feedback to peers.
- Critically engage with lecture material and formulate questions which delve deeper and demonstrate recognition of gaps in knowledge.
- Identify key historical figures and recognize their contributions to neuroscience.
- Compare methodological approaches used in neuroscience and broadly discern the purposes for which they are employed.
- Critically analyze existing literature on a topic in neuroscience and articulate their own opinions through a standard format review paper.
- Interact with scientific experts in their research facilities with the aim of recognizing the aims and techniques of their research.

Electronically Approved - Sep 20 2022 10:32

Department Approval