



UNIVERSITY OF CALGARY
 FACULTY OF SCIENCE
 NEUROSCIENCE PROGRAM
 COURSE OUTLINE

1. **Course:** NEUR 201, Introduction to Neuroscience -- Fall 2018

Instructor Name	Email	Phone	Office	Hours
<i>L01:</i> (TR 15:30 - 16:45 in MS 211)				
Richard Wilson	wilsonr@ucalgary.ca	(403) 831-7773	Heritage Medical Research Building (Foothills Campus)	After lectures on Tuesday and Thursday, or by arrangement as required.

Room SB 146 : Tuesday / Thursday at 15:30 - 16:45

Course Site:

D2L: NEUR 201 L01-(Fall 2018)-Introduction to Neuroscience

Neuroscience Program:

Office: EEEL 445
 Phone: 403 220-8600
 Email: bscneuro@ucalgary.ca

Note:

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

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:

Component(s)	Weighting %	Date
Student presentations: Debate	20%	23/10-1/11
Student presentations: Biography	20%	20/11-22/11
Written assignment	50%	29/11
Class participation	10%	6/7-6/12

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 %

This course has a non-registrar scheduled final component.

4. Missed Components of Term Work:

The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself/themself with these regulations. See also [Section E.3](#) of the University Calendar.

5. Scheduled out-of-class activities:

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

Dec 6th Visit to the Wilson Lab (Rm 2066, Health Science Building)

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.

7. Examination Policy:

No aids are allowed on tests or examinations.

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.

1. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **15 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 immediately submit the Reappraisal of Graded Term work form to the department in which the course is offered. The department will arrange for a re-assessment of the work if, and only if, the student has sufficient academic grounds. See sections [I.1](#) and [I.2](#) of the University Calendar
2. **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 Center:** The Students Union Wellness Centre provides health and wellness support for students including information and counselling on physical health, mental health and nutrition. For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The University of Calgary is committed to fostering a safe, productive learning environment. The Sexual Violence Policy (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>) is a fundamental element in creating and sustaining a safer campus environment for all community members. We understand that sexual violence can undermine students' academic success and we encourage students who have experienced some form of sexual misconduct to talk to someone about their experience, so they can get the support they need. 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 (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208).
- d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. **These are only examples.**
- e. **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- f. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Program Director of the Neuroscience Program, Dr. Willem Wildering by email wilderin@ucalgary.ca or phone 403 220-5283. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.
- g. **Safewalk:** Campus Security will escort individuals day or night (See the [Campus Safewalk](#) website). Call [403-220-5333](tel:403-220-5333) for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- h. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). 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.

- i. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](#) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](#) Email: sciencerep@su.ucalgary.ca. Student Ombudsman, Email: suvpaca@ucalgary.ca.
- j. **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class unless specifically permitted by the instructor. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.
- k. **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.

Please note that content is subject to change, please watch D2L for updates/changes.

Block week	Tues. Aug. 28	Block week-- no class			
	Thurs. Aug. 30	Block week-- no class			
Week 1	Tues. Sept. 4	No classes			
	Thurs. Sept. 6	Introduction to the neuroscience program		BSc Neuroscience teaching team	
Week 2	Tues. Sept. 11	How to succeed as a Neuroscience Undergraduate		Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Sept. 13	What is neuroscience?		Richard Wilson <wilsonr@ucalgary.ca>	
Week 3	Tues. Sept. 18	How do neurons work? Part 1	Morphology and Passive electrical properties	Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Sept. 20	How do neurons work? Part 2	Active electrical properties	Richard Wilson <wilsonr@ucalgary.ca>	
Week 4	Tues. Sept. 25	Neuroscience techniques--single cells		Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Sept. 27	How do neurons communicate?	Synapses	Richard Wilson <wilsonr@ucalgary.ca>	
Week 5	Tues. Oct. 2	Neuroscience techniques--networks		Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Oct. 4	Anatomy of a nervous system	Invertebrates and vertebrates	Richard Wilson <wilsonr@ucalgary.ca>	
Week 6	Tues. Oct. 9	Autonomic systems	Regulating the body's internal state	Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Oct. 11	Motor systems	Controlling physical interactions with the world	Richard Wilson <wilsonr@ucalgary.ca>	
Week 7	Tues. Oct. 16	Sensory systems	Experiencing the world	Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Oct. 18	Learning, memory and consciousness	Neuroscience secrets to doing well in exams	Richard Wilson <wilsonr@ucalgary.ca>	
Week 8	Tues. Oct. 23	Student presentations: Debate 1		Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Oct. 25	Student presentations: Debate 2		Richard Wilson <wilsonr@ucalgary.ca>	
Week 9	Tues. Oct. 30	Student presentations: Debate 3		Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Nov. 1	Student presentations: Debate 4		Richard Wilson <wilsonr@ucalgary.ca>	
Week 10	Tues. Nov. 6	Building a brain	Development / neurogenesis / cell death	Sarah McFarlane <smcfarla@ucalgary.ca>	CONFIRMED

	Thurs. Nov. 8	Challenges in treating the injured brain, a clinical neuroscientist's perspective.	Paolo Frederico <pfederic@ucalgary.ca>	CONFIRMED
Week 11	Tues. Nov. 13	Reading Week--no class		
	Thurs. Nov. 15	Reading Week--no class		
Week 12	Tues. Nov. 20	Student presentations: Biograpgy of famous neuroscientists	Richard Wilson <wilsonr@ucalgary.ca>	
	Thurs. Nov 22	Student presentations: Biography of HBI neuroscientists	Richard Wilson <wilsonr@ucalgary.ca>	
Week 13	Tues. Nov. 27	Challenges in understanding the pyschotic brain, a neuroscience practisioner's perspective.	Maryana Duchcherer <maryana@ualberta.ca>	CONFIRMED
	Thurs. Nov. 29	Challenges in understanding network function, a fundamental neuroscientist's perspective. Assignment due (email to wilsonr@ucalgary.ca by noon with UCID# and name in subject line).	Richard Wilson <wilsonr@ucalgary.ca>	
Week 14	Tues. Dec. 4	Neuroscience research in the Hotchkiss Brain Institute	Richard Frayne <rfrayne@ucalgary.ca>	TENTATIVE
	Thurs. Dec. 6	Visit to the Wilson Lab (Rm 2066, Health Science Building)	Richard Wilson <wilsonr@ucalgary.ca>	
Week 15	Tues. Dec. 11	Exam week - No class		
	Thurs. Dec. 13	Exam week - No class		

Department Approval: Electronically Approved **Date:** 2018-09-06 12:36

Associate Dean's Approval for out of regular class-time activity: Electronically Approved **Date:** 2018-09-06 21:25

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.