

Course ID:	Course Title:	Fall 2021
BIO 270	Introduction to Neuroscience	Prerequisite:
		Credits: 3

Class Information		Instructor Information		Important Dates	
Delivery:	Online	Instructor:	Dr. Neil Soggie, PhD	First Day of Classes:	September 8, 2021
Days:	Tues/Thurs	Email:	Neil.Soggie@ambrose.edu	Last Day to Add/Drop:	September 19, 2021
Time:	8:15-9:30 AM	Phone:	N/A	Last Day to Withdraw:	November 22, 2021
Room:	Via Moodle course site	Office:	Virtual meeting by appointment	Last Day to Apply for Extension:	November 23, 2021
Lab/Tutorial:		Office Hours:	Email to schedule a virtual meeting	Last Day of Classes:	December 13, 2021
Final Exam:	No final exam in this course				

Important Dates and Information

For a list of all important dates and information regarding participating in classes at Ambrose University, please refer to the Academic Calendar at <https://ambrose.edu/academic-calendar> .

Course Description

An introduction to the study of neuroscience and neuropsychology. Attention is given to the foundational issues of studying neurochemistry and experimental techniques related to the structure and function of the nervous system and brain.

Expected Learning Outcomes

By the end of this course, students will be able to:

1. Describe psychological methods and epistemological challenges related to the study of neuropsychology and neuroscience.
2. Describe how (1) relates to what we know about how neurochemistry and neuroanatomy relate to behaviour.
3. Present and defend their academic position in written and verbal formats through written assignments and online class discussion.

Textbooks

Martin, R. (et al) (2021). *From Neuron to Brain* 6/e. Oxford University Press
ISBN-13: 9781605354392

Course Schedule

Date	Theme	Tuesday	Thursday
Week 1 – Sept. 9	Introduction / Orientation		Sept. 9 – Introduction to Course Expectations To do: Expectations Quiz
Week 2 – Sept 14 & 16	Introduction to the Nervous System. Read Text Units 1-3	Lecture – History of Neuroscience & Gross Organization of Central Nervous System (CNS)	Lecture – CNS and Lobes To do: Week 2 Quiz Due: Personal Education Plan
Week 3 – Sept 21 & 23	Cortex and CNS Organization. Read Text Units 4-8	Lecture – Cortex areas (Sensory/ Motor) and Development	Lecture – CNS Cellular Organization To do: Week 3 Quiz
Week 4 – Sept 28 & 30	Neurons and Neurotransmitters Read Text Units 9-14	Lecture – Neurons and Neurotransmitters	Complete the September Monthly Summary Test on Moodle
Week 5 – Oct 5 & 7	Visual and Auditory Systems Read Text Units 21, 22, 24,	Lecture – Visual Systems	Lecture – Auditory Systems To do: Week 5 Quiz
Week 6 – Oct 12 & 14	Somatosensory Systems and experiences of Agnosia Read Text Units 23, 25	Lecture – Somatosensory Systems	Lecture – Agnosia To do: Week 6 Quiz
Week 7 – Oct 19 & 21	Motor Control & Language Read Text Units 19,20, 26	Lecture – Motor Control	Lecture – Motor Control Disease and Language To do: Week 7 Quiz
Week 8 – Oct 26 & 28	Limbic System and Plasticity Read Text Units 15, 16	Lecture – Limbic System and Emotions	Complete the October Monthly Summary Test on Moodle
Week 9 – Nov 2 & 4	The Reward System	Lecture – The Reward System and Addictions	Meet virtually with your Gurukul Groups to plan and organize presentations
Week 10 – Nov 9 & 11	No classes		
Week 11 – Nov 16 & 18	Nervous System Infections	Group 1 Bacterial Infections (Meningitis) Group 2 Bacterial Infections (Abscesses)	Group 3 Autoimmune diseases of CNS Group 4 Viral infections or Parasites and the CNS
Week 12 – Nov 23 & 25	Neurodegeneration	Group 5 – Acute Brain Damage/TBI Group 6 - Strokes	Group 7 – Demyelination/ Multiple Sclerosis Group 8 – Chronic Neurodegenerative Disease
Week 13 – Nov 30 & Dec. 2	Research Techniques	Group 9 – Electrophysiology research Group 10 – Genetic Research	Complete the November Monthly Summary Test on Moodle
Week 14 – Dec. 7 & 9	Make-Up and Review	Lecture: Neurological Exam Submit Research Paper	Complete the Final Summary Test on Moodle

Requirements:

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Assessment	Expectations	Date and Value
<p>Course Expectations Quiz</p>	<p>Course Expectations Quiz – It is important to know what to expect and what is expected of you. Review the course outline and all rubrics to ensure you understand the course schedule and expectations. This quiz is on Moodle. After your first attempt you may review your answers. You will have two attempts at this quiz.</p>	<p>Due: Sept 9 (Available on Moodle from Sept 9 – 23 only)</p> <p>Value: 5%</p>
<p>Personal Education Plan</p>	<p>Personal Education Plan – “Failure to plan is a plan for failure” <i>Benjamin Franklin</i>. Create a personal education plan for this course. This will include an assessment of your strengths and weaknesses, opportunities, and threats to your success in this course. It should reflect your interests and include a schedule of when you will complete critical tasks. Please submit in PDF format when possible.</p>	<p>Due: Sept 16 (Submit on Moodle)</p> <p>Value: 5%</p>
<p>Honours Discussions</p>	<p>Honours Discussions – For those that strive for peak excellence. Students will engage in the discussion (through the Moodle course site) of scenarios, review journal articles, and post a response/ evaluation/ critique to at least two peers-posts weekly.</p> <p>Additional details are available in the course guide and assignments rubric document. It is essential to read all details for this assignment.</p> <p>Warning: This is something that not every student will want to engage in. You can still do reasonably well in the course without ever posting a discussion. In fact, if you are not prepared to contribute a higher volume of material and a higher standard of study than the average university student, adhering to all due dates, you will not receive any credit for this assignment. It is your choice whether you want to strive for this top 10% (not extra 10%)</p>	<p>Due the Saturday evening of each week.</p> <p>Value: 10%</p>

Assessment	Expectations	Date and Value
Weekly Quizzes	Weekly Quizzes – It is good to stop and look back at where you have been and look forward to where you are going. Every week you will be tested on the theme of the current week and material from the previous week(s). This will help you avoid memory decay and retain your learning from previous weeks. Each quiz is normally 10 minutes. After your first attempt you may review your answers and make a 2 nd attempt (if you choose). Available on Moodle	Due on Thursdays as per course schedule: Week 2 Quiz – Sept. 16 Week 3 Quiz – Sept. 23 Week 4 Quiz – Oct. 7 Week 5 Quiz – Oct. 14 Week 6 Quiz – Oct. 21 3%x5 = 15%
Monthly Summary Tests	Monthly Summary Tests – Every month we will have a test to evaluate your learning up to that point in the course. Tests may include multiple choice, short answer, essay questions. These tests are available in lieu of online lectures. Review of attempts will only be available after the grace period has expired. * Note there is no grace period for the December Test.	Due on Thursdays as per course schedule: September Test – Sept. 30 – 10% October Test – Oct. 28 – 20% November Test – Dec. 2 – 10% Final Summary Test – Dec. 9 – 5% Value: 45%
Gurukul Group Presentations	Gurukul Group Presentations – In November each Gurukul group will develop and give a presentation/ lecture to the class on an assignment topic. The presentation must be between 30-35 minutes in length. Note: All group members get the same mark for this assignment.	Due as per the course schedule: Value: 10%
Research Paper	Research Paper: Students will write and submit a research paper in APA format on a topic within neuroscience. Be sure to consult the assignment guide for important details	Due on December 7 th Value: 10%

TEACHING PHILOSOPHY:

This course will use an eclectic approach to teaching with traditional lecture style classes and group work. Your instructor believes that to engage the practical aspects of psychology and education, the integrative methods of personal reading, short lectures, and corporate reflection, is superior. Due to the size of the classes this method is refined with an Asian *GURUKUL* method of learning. The term *GURUKUL* means a *teaching family* (Guru = teacher etc.). Each student will be placed in a *GURUKUL Group* that will form a teaching family within the larger class experience.

Attendance:

In the Behavioural Science Department, we believe that learning is an active and interactive process, a joint venture between student and teacher and between student and student (i.e., learning is not just “downloading” information from teacher to student). Therefore, it is expected that professors will come to each class well-read and prepared to engage students on the topic at hand, giving students the utmost attention and respect. In turn, it is expected that students will take an active role in the learning process. Committing to this type of "active learning" significantly increases the learning experience for both student and teacher and reflects the Christian ethos of excellence and respect that lies at the heart of the Ambrose educational experience.

☒ Please note that attendance at class is expected from each student. For each unexcused absence, a Student may lose 1% of course mark.

☒ In the case of illness or other extenuating circumstances, exception will be made only with proof of an official medical document

Grade Summary:

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Percentage	Grade	Interpretation	Grade Points
96-100	A+	Excellent	4.00
90-95	A		4.00
80-89	A-		3.70
76-79	B+	Good	3.30
73-75	B		3.00
70-72	B-		2.70
67-69	C+	Satisfactory	2.30
63-66	C		2.00
59-62	C-		1.70
55-58	D+	Poor	1.30
50-54	D		1.0
0-49	F	Failure	0.00
	P	Pass	No Grade Points

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions.

Exam Scheduling

Students who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the Academic Calendar. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Standards of Behaviour in the Classroom Setting

Learning is an active and interactive process, a joint venture between student and instructor and between student and student. Some topics covered within a class may lead to strong reactions and opinions. It is important that Students understand that they are entitled to hold contradictory beliefs and that they should be encouraged to engage with these topics in a critical manner. Committing to this type of "active learning" significantly increases the learning experience for both teacher and student, and reflects the Christian imperative to pursue truth, which lies at the heart of the Ambrose educational experience. However, active discussion of controversial topics will be undertaken with respect and empathy, which are the foundations of civil discourse in the Classroom Setting. Primary responsibility for managing the classroom rests with the instructor. The instructor may direct a student to leave the class if the student engages in any behaviour that disrupts the classroom setting. If necessary, Ambrose security will be contacted to escort the student from

class. Please refer to your professor regarding their electronic etiquette expectations.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. The academic calendar can be found at <https://ambrose.edu/content/academic-calendar-2>

Privacy

Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Coursework Extensions

Should a request for a time extension on coursework exceed the end of the term, a *Coursework Extension Application* must be completed and submitted to the Office of the Registrar. The extension (if granted) will be recorded on the student record. Extensions are granted at the discretion of the instructor and are normally granted for 30 days beyond the last day of the term.

Normally, Course Extension Applications will be considered only when all of the following conditions are met:

- the quality of prior course work has been satisfactory;
- circumstances beyond your control, such as an extended illness or death of a family member, make it impossible for you to complete the course work on time; and
- you submit *Coursework Extension Application* to the Office of the Registrar on or before the deadline specified in the Academic Schedule.

If granted, time extensions do not excuse you from a final examination where one has been scheduled for the course.

A temporary grade of TX will be assigned until a final grade is submitted in accordance with the new deadline. A final grade of F will apply to:

- all course work submitted after the end of the semester unless a coursework extension has been granted; and all course work submitted after the revised due date provided by an approved extension to coursework.

Academic Success and Supports

Accessibility Services

Academic accommodation is provided to Ambrose students with disabilities in accordance with the Alberta Human Rights Act and the Canadian Charter of Rights and Freedoms. Provision of academic accommodation does not lower the academic standards of the university nor remove the need for evaluation and the need to meet essential learning outcomes. Reasonable

accommodations are tailored to the individual student, are flexible, and are determined by considering the barriers within the unique environment of a postsecondary institution. It can take time to organize academic accommodations and funding for disability-related services. Students with a disability who wish to have an academic accommodation are encouraged to contact Accessibility Services as early as possible to ensure appropriate planning for any needs that may include accommodations. Staff can then meet with students to determine areas to facilitate success, and if accommodations are required, ensure those accommodations are put in place by working with faculty.

Ambrose Writing Services

Ambrose Writing services provides academic support in the four foundational literacy skills—listening, speaking, reading, and writing. It also assists students with critical thinking and the research process. Throughout the academic year, students can meet with a writing tutor for personalized support, or they can attend a variety of workshops offered by Academic Success. These services are free to students enrolled at Ambrose University. Academic Success serves all students in all disciplines and at all levels, from history to biology and from theatre to theology. To learn more, please visit <https://ambrose.edu/writingcentre>

Ambrose Tutoring Services

Ambrose Tutoring Services provides support in specific disciplinary knowledge, especially in high-demand areas such as chemistry, philosophy, math and statistics, and religious studies. These tutors also coach students in general study skills, including listening and note-taking. During the academic year, Ambrose Tutoring Services offers drop-in tutoring for courses with high demand; for other courses, students can book a one-to-one appointment with a tutor in their discipline. These services are free to students enrolled at Ambrose University. To learn more, please visit <https://ambrose.edu/tutoring>.

Mental Health Support

All of us need a support system. We encourage students to build mental health supports and to reach out when help is needed.

- Counselling Services: ambrose.edu/counselling
- Peer Supportive Listening: One-to-one support in Student Life office. Hours posted at ambrose.edu/wellness.
- For immediate crisis support, there are staff on campus who are trained in Suicide Intervention and Mental Health First Aid. See ambrose.edu/crisis support for a list of staff members.

Off Campus:

- Distress Centre - 403-266-4357
- Sheldon Chumir Health Care Centre - 403-955-6200
- Emergency - 911

Sexual Violence Support

All staff, faculty, and Residence student leaders have received *Sexual Violence Response to Disclosure* training. We will support you and help you find the resources you need. There is a website with on and off campus supports – ambrose.edu/sexual-violence-response-and-awareness.