



**DEPARTMENT OF ARTS AND EDUCATION**

**COURSE OUTLINE – FALL 2021**

**PY3752 (A2): Brain and Behaviour – 3 (3-0-0) 45 Hours for 15 Weeks**

**INSTRUCTOR:** Dr. Ali M. AL-Asadi      **PHONE:** 780-539-2061  
**OFFICE:** C-311B      **E-MAIL:** [aalasadi@gprc.ab.ca](mailto:aalasadi@gprc.ab.ca)  
**OFFICE HOURS:** By appointments

**CALENDAR DESCRIPTION:** This course is an introduction to the neural basis of sensation, movement, learning, memory, motivation and cognition as studied in humans and other animals.

**PREREQUISITE(S)/COREQUISITE:** PY2230 or permission of the instructor

**REQUIRED TEXT/RESOURCE MATERIALS:**

- John Pinel, J. P. J. & Barnes, S. J. (2018). Biopsychology (10<sup>th</sup> edition or later). Pearson Education Canada Inc., Toronto, Ontario, Canada.

**DELIVERY MODE:** Lectures, Discussions, & Video Conference

**COURSE OBJECTIVES:** Students will be taught neuroanatomy, nerve conduction, synaptic transmission and basic research methods in the field of biological psychology. The central nervous system's role in processes such as vision, motor control, learning, memory, sexuality, sleeping, emotion and psychiatric disorders will also be explored. Other topics that will be addressed are the development of the nervous system, the effects of brain damage, and the laterality of the brain.

**LEARNING OUTCOMES:** As a result of taking this course, students will know fundamental neuroanatomy, nerve signalling and basic research methods in neuroscience. They will also be able to identify the key brain structures involved in processes such as vision, motor control, learning, memory, sexuality, sleep, emotions and psychiatric disorders. Students will also gain an appreciation of the complexity of brain development, the brain's ability for neuroplastic reorganization, and the brain's fundamental lateralization of function.

## TRANSFERABILITY:

This course is considered a University Transferable Course; however, the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities.

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide at <http://transferalberta.alberta.ca/transfer-alberta-search/#/audienceTypeStep>

**\*\* Grade of D or D+ may not be accepted for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

## EVALUATIONS:

Exam #1 (Chapters 1, 3, 4, 5)	20-30%
Exam #2 (Chapters 6, 8, 9, 10, 11)	20-30%
Exam #3 (Chapters 13, 14, 16, 17, 18)	30%
Assignment**	10-30%
Total	100%

\* Remember, all exams may include questions from lectures that may not be covered by your textbook.

All exams must be written in-class. Under special circumstances, an exam may be written remotely with an approved invigilator.

\*\* The assignment can be a short essay for 10%, a long essay for 30%, a report on proper volunteer work (related to the content of this course) in the community for 20%. The exams mark will be adjusted accordingly. The assignment can also be a project including a concise informational booklet to educate the general public on a particular brain disorder or a PowerPoint presentation with animation about a topic of interest. Other proposals will be considered.

## GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100		C+	2.3	66-69
A	4.0	90-94		C	2.0	63-65
A-	3.7	85-89		C-	1.7	60-62
B+	3.3	80-84		D+	1.3	55-59

B	3.0	75-79	D	1.0	50-54
B-	2.7	70-74	F	0.0	00-49

**COURSE SCHEDULE/TENTATIVE TIMELINE:**

Week 1-5	Chapters 1, 3, 4, 5: What is biopsychology, Anatomy of the nervous system, Neural conduction and synaptic transmission, Research methods in biopsychology)	<b>Exam 1 (20-30%)</b>
Week 6-10	Chapters 6, 8, 9, 10, 11: Visual system, Sensorimotor system, Development of the nervous system, Brain damage and neuroplasticity, Learning, memory and amnesia)	<b>Exam 2 (20-30%)</b>
Week 10-15	Chapters 13, 14, 16, 17, 18: Hormones and sex, Sleep and circadian rhythms, Lateralization, language and split-brain, Biopsychology of emotion, stress and health, Biopsychology of psychiatric disorders)  <b>Final Exam</b>	<b>Final Exam (30%) is Scheduled by the Registrar Office</b>

**STUDENT RESPONSIBILITIES:**

The assigned readings and exercises for each class should be completed before attending that class, except for the first class. As this course depends heavily on discussion and, at times, practice exercises and illustrations, attendance at all sessions is required and is critical to the student's success in the course. In case of illness or emergency, notify the instructor as soon as possible. If you find yourself having difficulty in this course, please contact the instructor immediately for assistance. If you simply want more discussion with the instructor about any aspect of the course, please visit my office during office hours or at a more convenient pre-arranged time.

If a student foresees that he/she will be unable to write a test or exam at a scheduled time due to illness or emergency, he/she should notify the instructor immediately, preferably one day in advance. A message may be left on the instructor's voice mail (780-539-2061) or e-mail ([aalasadi@gprc.ab.ca](mailto:aalasadi@gprc.ab.ca)) together with a phone number where the student may be reached to arrange for an alternative date to write the test, if feasible. Failure to notify the instructor will result in a grade of zero for the test that was missed unless proof is presented that the student was physically or mentally unable to do so due to a sudden illness or emergency or to unavoidable circumstances beyond the student's control.

It is expected that all students will display a professional attitude and behaviour in the classroom. This includes reliability, respect for and cooperation with your fellow students and the instructor, attention to fellow student questions and instructor's response, determination to achieve first-class work while meeting deadlines, and constructive response to criticism.

## STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated, and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the section on Plagiarism and Cheating in the College policy titled Student Misconduct: Academic and Non-Academic at (<https://www.gprc.ab.ca/about/administration/policies/fetch.php?ID=68>).

Instructors reserve the right to use electronic plagiarism detection services on written assignments. **Instructors also reserve the right to ban the use of any form of electronics (cell phones, Blackberries, iPods, tablets, scanning pens, electronic dictionaries, etc.) during class and exams.**

\*\*Note: all Academic and Administrative policies are available at <https://www.gprc.ab.ca/about/administration/policies/>

### **Additional Information**

1. The format of each exam will be discussed in class.
2. Exam grades are final, and there is no substitute work for your poor exam grade.
3. The nature and topics of your written paper will be discussed in class
4. It is your responsibility to read each and every chapter and assigned reading (if any) and attend all lectures.
5. Lectures will not always cover material in your chapters. Lectures may cover topics and include materials that are not covered by your textbook. It is, therefore, imperative that you attend every class as your exams may include materials from the lectures that are not covered by your textbook.
6. It is expected that students will display a professional attitude and behaviour. These attitudes and behaviours are many and will be discussed in class. Any violation or misconduct may result in dismissal from the class.
7. Talk to me if you have concerns or you are experiencing difficulties that may have a negative impact on your academic performance.