DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

COURSE OUTLINE – FALL 2025

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

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land, and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:	Dr. Ali M. AL-Asadi	**PHONE:**	780-539-2061
OFFICE:	C-311B	**E-MAIL:**	aalasadi@nwpolytech.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: PY1040 and PY1050 or permission of the instructor

REQUIRED TEXT/RESOURCE MATERIALS:

- Pinel, J. P. J., & Barnes, S. J. (2018). Biopsychology (10th edition or later). Pearson Education Canada Inc., Toronto, Ontario, Canada.
- Collection of reading materials, articles, and other resources based on Open-Sourced texts will be posted to this course's D2L site at: https://myclass.nwpolytech.ca/d2l/home

DELIVERY MODE: On-Campus. Also, recorded lectures are posted to myClass for your convenience.

LEARNING OUTCOMES: As a result of taking this course, students will be able to:

- Articulate our current knowledge and understanding of neuroanatomy, nerve signalling, neuroregeneration and neurodegeneration, and basic research methods in neuroscience.
- Identify the key brain structures involved in processes such as vision, motor control, learning, memory, sexuality, sleep, emotions and psychiatric disorders.
- Explain and discuss the complexity of brain development, the brain's ability for neuroplastic reorganization, and the brain's fundamental lateralization of function.
- Explain and discuss the functional and structural damage associated with various brain dysfunctions and disorders.

TRANSFERABILITY:

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

** For courses with alpha (letter) grading, a grade of D or D+ may not be acceptable 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)		30%
Exam #2 (Chapters 6, 8, 9, 10, 11)	30%	
Exam #3 (Chapters 13, 14, 16, 17, 18)	30%	
Attendance and Participation		10%
Assignment**		5-15%

* Remember, all exams may include questions from lectures that your reading materials may not cover.

**This optional assignment is worth 5-15% of your grade. The exam weights will be adjusted accordingly. The assignment may take many forms, such as producing a concise informational booklet to educate the public on a particular brain disorder, a PowerPoint presentation with animation about a topic of interest, a research paper, or a diary report of work experience with an organization that deals with people with Brain dysfunction. Other proposals may be considered if they align with the course's objectives.

GRADING CRITERIA:

Please note that most institutions 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

*Note: This grading criterion is specific to this course and differs from the general criteria.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week 1-5	What is biopsychology Anatomy of the nervous system Neural conduction and synaptic transmission Research methods in biopsychology	**Exam 1 (30%)**
Week 6-10	Visual system Sensorimotor system Development of the nervous system Brain damage and neuroplasticity	**Exam 2 (30%)**

	Learning, memory and amnesia	
Week 10-15	Hormones and sex Sleep and circadian rhythms Lateralization, language and split-brain Biopsychology of emotion, stress and health Biopsychology of psychiatric disorders	**Final Exam (30%)** **The registrar's office schedules the final exam.**

STUDENT RESPONSIBILITIES:

Each class's assigned readings and exercises should be completed before attending that 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 the event of illness or an emergency, please notify the instructor as soon as possible. If you have difficulty in this course, please contact me immediately for assistance. Please let me know if you want to discuss any aspect of the course or your aspirations.

You are accountable for delivered lectures, assigned readings, and any announcements that will be made in class occasionally. If you are unable to attend a particular class, it is your responsibility to find out what was missed. For optimal learning and readiness for class participation, you are expected to attend class regularly (with a minimum of 80% attendance) and read the assigned chapters/topics before class on the dates indicated in the timetable, except for the first session. Past course records show that class attendance is highly correlated with the final grade in the course.

If you anticipate being unable to take a test or exam at the scheduled time due to illness or an emergency, please notify me immediately, preferably at least one day in advance. Please talk to me in person or via e-mail (aalasadi@nwpolytech.ca) to arrange an alternative date to write the test, if feasible. Failure to notify the instructor will result in a grade of zero for the missed tests unless proof is presented that you were physically or mentally unable to do so due to a sudden illness, emergency, or unavoidable circumstances beyond the student's control.

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

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at https://www.nwpolytech.ca/about/polytechnic-leadership/policies-directory.

**Note: all Academic and Administrative policies are available on the same page.

Additional Information

MOST IMPORTANT: 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.**

Cell phones, tablets, notebooks, laptops, and other electronic devices are strictly forbidden in my classes and exams. Also, I use plagiarism and AI detection software for all written assignments and essays.

In Addition:

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 every chapter and assigned reading (if any) and attend all lectures.
5. Lectures will not always cover the reading materials. Lectures may cover topics and include information that is not covered by your reading materials. Therefore, it is imperative that you attend every class, as your exams may include materials from lectures that are not covered in the reading materials.
6. Students are expected to 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 if you are experiencing difficulties that may have a negative impact on your academic performance.

IMPORTANT: Please remember this is a university course, and you are a university student.

Please keep this course information sheet for future reference.