COURSE SYLLABUS

COURSE TITLE: PSYC-215: Biological Psychology

CLASS SECTION: 001

TERM: Winter 2023

COURSE CREDITS: 3

DELIVERY METHOD(S): Face to face and online D2L

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.
Learn more about Camosun's Territorial Acknowledgement.

For COVID-19 information please visit https://legacy.camosun.ca/covid19/index.html.

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.

INSTRUCTOR DETAILS

NAME: Dr. Michael Pollock

EMAIL: If you need to contact me about an urgent personal matter, you can email me at pollockm@camosun.ca. Otherwise, for help with course-related material outside of class time, please come see me during my office hours.

OFFICE: Fisher 308B

HOURS: Mondays at 11:30-1:20 and Wednesdays & Thursdays at 11:30-12:20

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

CALENDAR DESCRIPTION

This course introduces basic topics and methods of modern biopsychology. Topics include: neuro-anatomy, testing and experimental methods, neural conduction, brain damage, perception, sexual behaviour, drug addiction, and memory. Students access study guides and exercises on the internet.

PREREQUISITE(S):

One of:

- C in PSYC 110
- C in any 100-level BIOL course
- C in any 100-level CHEM course

CO-REQUISITE(S):

Not Applicable

EXCLUSION(S):

Not Applicable

COURSE LEARNING OUTCOMES / OBJECTIVES

Upon completion of this course a student will be able to:

1. Summarize the history of biopsychology, and the relationship of biopsychological theories and methods to the broader field of psychology.
2. Compare the most important research methods used in biopsychology.
3. Discuss the basic concepts, supporting the evidence for the interaction of evolution, genetics and experience in the development of behaviour.
4. Label and summarize the basic structures and functions of the human nervous system.
5. Explain the processes involved in neural conduction and synaptic transmission.
6. Label images of the human visual system and explain basic visual processes in the central nervous system.
7. Discuss the mechanisms of perception, consciousness, awareness and attention.
8. Describe the functioning of the human sensorimotor system.
9. Summarize the processes involved in the development of the human nervous system and the ways in which the human brain attempts to cope with brain damage with an emphasis on neuroplasticity.
10. Discuss human learning, memory and amnesia as they relate to the human brain.
11. Summarize human sexual development, human sexual dimorphism and the effects of hormones on human development and behaviour.
12. Describe a model of drug addiction and a general model of the effects of various drugs on the neuronal function.
13. Discuss various disorders of cognition and emotion with regard to the human brain.
14. Summarize the effects of stress and emotions on human neurophysiology.
15. Discuss the neurophysiology of schizophrenia, depression and anxiety and attempts to treat these disorders.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Pinel, J.P.J. & Barnes, S.J. (2018). *Biopsychology*. (10th ed.). Toronto: Pearson.

- Note: the Camosun College Bookstore lists on its website (https://www.camosuncollegebookstore.ca/) only a digital option for getting this textbook.

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

DATE	CLASS	READINGS DUE	TOPIC/ACTIVITY	QUIZ/EXAM/ ASSIGNMENT DUE
2023-01-09	Lecture		Introduction	
2023-01-12	Lab		Group Formation	
2023-01-16	Lecture	Ch. 1: Biopsychology as a Neuroscience; Ch. 5.1: Methods of Visualizing or Stimulating the Living Human Brain	Lecture #1.Biopsyc & its Methods	Quiz #1 due day before
2023-01-19	Lab		QuizGame #1	Stage #1
2023-01-23	Lecture	Ch. 2.3: Fundamental Genetics; Ch. 2.5: Genetics of Human Psychological Differences	Lecture #2.Behavioral Genetics	Quiz #2 due day before
2023-01-26	Lab		QuizGame #2	Stage #2
2023-01-30	Lecture	Ch. 3.2: Cells of the Nervous System; Ch. 4.1-3: Neural Conduction	Lecture #3.Electrophysiology	Quiz #3 due day before
2023-02-02	Lab		QuizGame #3	Stage #3
2023-02-06	Lecture		Midterm Review #1	
2023-02-09	Lab			Midterm Exam #1 in-class
2023-02-13	Lecture	Ch. 4.4-6: Synaptic Transmission; Ch. 15.3: Five Commonly Used Drugs; Ch. 18.1-2: Antipsychotic and Antidepressant Drugs	Lecture #4.Neurochemistry & Neuropharmacology	Quiz #4 due day before
2023-02-16	Lab		QuizGame #4	Stage #4
2023-02-20	Lecture		COLLEGE CLOSED	Family Day
2023-02-23	Lab		COLLEGE CLOSED	Reading Break
2023-02-27	Lecture	Ch. 3.1: General Layout of the Nervous System; Ch. 3.3: Neuroanatomical Techniques and Directions; Ch. 3.4: Anatomy of the Central Nervous System; Ch. 7.1: Sensory System Organization; Ch. 7.3: Somatosensory System; Ch. 8.2: Sensorimotor Association Cortex; Ch. 8.4: Primary Motor Cortex; Ch. 9.2: Postnatal Cerebral Development; Ch. 14.5: Four Areas of the Brain Involved in Sleep; Ch. 15.5: Early Biopsychological Theories of Addiction; Ch. 17.1-4: Biopsychology of Emotion	Lectures #5&6.PNS & Brain	Quizzes #5&6 due day before
2023-03-02	Lab		QuizGames #5&6	Stage #5
2023-03-06	Lecture		Midterm Review #2	
2023-03-09	Lab			Midterm Exam #2 in-class
2023-03-13	Lecture	Ch. 16: Lateralization, Language, and the Split Brain; Ch. 17.4: Lateralization of Emotion	Lecture #7.Lateralization	Quiz #7 due day before
2023-03-16	Lab		QuizGame #7	Stage #6

2023-03-20	Lecture	Ch. 6.3: From Retina to Primary Visual Cortex; Ch. 6.4: Seeing Edges; Ch. 6.6: Cortical Mechanisms of Vision and Conscious Awareness; Ch. 7.3: Somatosensory System; Ch. 7.5: Selective Attention; Ch. 11.6: Inferotemporal Cortex	Lecture #8.Perception	Quiz #8 due day before
2023-03-23	Lab		QuizGame #8	Stage #7
2023-03-27	Lecture	Ch. 8.1-5: Sensorimotor System; Ch. 8.8: Central Sensorimotor Programs and Learning; Ch. 18.5: Tourette's Disorder	Lecture #9.Action	Quiz #9 due day before
2023-03-30	Lab		QuizGame #9	Stage #8
2023-04-03	Lecture	Ch. 11: Learning, Memory, and Amnesia	Lecture #10.Memory	Quiz #10 due day before
2023-04-06	Lab		QuizGame #10	Stage #9
2023-04-10	Lecture		COLLEGE CLOSED	Easter Monday
2023-04-13	Lab		Final Review	
TBA				Final Exam in-class

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines scan be reviewed on the CAL exams page. http://camosun.ca/services/accessible-learning/exams.html

EVALUATION OF LEARNING

COMPONENT	WEIGHT PER ITEM	NUMBER OF ITEMS	TOTAL WEIGHT
Quizzes	0.5%	10	5%
QuizGames	0.5%	10	5%
Midterm Exams	25%	2	50%
Final Exam	31%	1	31%
Research Assignments	1%	9	9%
		TOTAL	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the Grade Review and Appeals policy for more information.
http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf

COURSE GUIDELINES & EXPECTATIONS

Neuroscience is a relatively new field of study, but could its findings eventually provide an explanation for all of our behavior by reducing our thoughts and feelings down to the workings of the brain? This course familiarizes students with the current major findings and limitations associated with biopsychology - the study of how biological knowledge can be applied to psychological topics. In the process of trying to understand the biological mechanisms of the mind, topics will range from the microscopic (e.g., genetics, the electrophysiology of neurons, and neurochemistry) to the macroscopic (e.g., functional neuroanatomy and how the different parts of the nervous system interact). In addition to studying the concepts associated with

these topics, students will have the opportunity to engage in their own independent research as part of their course assignment. This course is a must for anyone interested in understanding the biological underpinnings of our minds and the first-hand experience you will gain in conducting biopsychological research will provide you with the skills to critically evaluate research claims for their practical usefulness in your personal and professional life.

ASSIGNED READINGS

All of the assigned readings for this course are from the course textbook. The Course Schedule above lists the specific chapters and subsections of the textbook that you are to read each week. You should complete these assigned readings prior to class so that you can fully contribute to discussions of the material. Concept notes, available in D2L Content, list the names of the concepts and their associated points (taken from the assigned readings) that you will need to know for quizzes and exams. However, it is recommended that you read all of the information in the assigned readings and not just rely upon these concept notes since the organization, figures, and additional information contained within the course textbook will help improve your overall understanding of the concepts.

QUIZZES

To help ensure you are familiar enough with the concepts from the assigned readings to be able to engage in in-depth discussions of them in class, before each lecture day you should complete in D2L the quiz for that lecture. All quizzes will cover solely the material from the assigned readings that the concept notes contain. Each quiz will contain 20 questions about randomly chosen concept points on a given lecture topic. Each question on the quizzes will describe one of the concept points and ask for the name of that concept. The format of the quizzes will be matching-type questions, with each question listing alphabetically as answer options the names of all the concepts from the relevant lecture and the student will be instructed to match the given concept description with its concept name. Half of the quiz questions will be *knowledge-type questions* which use for descriptions of the concepts the same wording as the points in the concept notes, while the other half of quiz questions will be *understanding-type questions* which reword these points usually in the form of a real-life scenario. You can access each quiz through D2L Quizzes and take it an unlimited number of times up until its deadline (see the Course Schedule above), with only the highest score you achieve recorded as your mark for that quiz. In addition to being worth marks, the quizzes will also help prepare you for exams since they cover the same content from the concept notes, although they use different scenarios for the understanding-type questions.

QUIZGAMES

To help you learn the course concepts, I have created some fun computer programs (called "QuizGames") that incorporate a number of learning science principles (e.g., retrieval practice, metacognition, and immediate feedback). The QuizGames are designed to look and act like casino slot machines in order to keep you engaged while studying the concepts. Since you will remember information better if you spread out your studying over time (distributed practice) rather than just cramming right before an exam (massed practice), each week in lab you will be expected to perform QuizGames (available from D2L Content) related to that week's lecture topic (see the Course Schedule above) and then submit your results to D2L Assignments for marks.

EXAMS

Exams will be in-class, closed book, and will follow the same format as the quizzes (as described above), except that they will be longer (~50-100 questions) and cover multiple lecture topics. The content of the questions will cover equally the concepts from each lecture topic that the exam is designed to assess your knowledge/understanding of. You will only be given a single attempt at each exam.

RESEARCH ASSIGNMENTS

To provide an opportunity for you to gain first-hand experience in conducting biopsychological research, with special permission from the instructor you may conduct actual research in which you develop and write in stages throughout the semester a biopsychological research project involving a longitudinal study of yourself and your group members. Instructions, forms, templates, and examples for these assignments are available in D2L Content. Each week, you will work on the project outside of class time and submit your work through D2L Assignments. Since each stage builds on the work of previous stages, you must correctly complete each stage in order to receive marks on subsequent stages, with opportunities given throughout the semester for revisions of previous stages. Groups are encouraged to work ahead on research assignments but must wait for written instructor approval of proposed methods before data collection takes place. Students granted permission to conduct the research assignments, but who fail to show up to lab and earnestly contribute in a timely fashion to their group's research project, may have their permission revoked by the instructor.

DEADLINES

The Course Schedule above lists the specific dates for when the quizzes/exams/assignments are due. There are no make-up exams for this course. Failing to take an exam by its scheduled date will result in a score of zero for that exam. Exceptions may be granted at the discretion of the instructor for demonstrated cases of hardship or extenuating circumstances (e.g., a medical emergency). In contrast to the exams, research assignments may be revised and resubmitted for marks throughout the semester, without late penalties, until the last day of labs has passed. The marks from quizzes and QuizGames not completed by their deadlines, and from research assignments not successfully completed by the last day of labs, will automatically be waived and their weight distributed proportionately to the remaining course items.

SCHOOL OR DEPARTMENTAL INFORMATION

Camosun Psychology Club - During the Winter semester, the Psyc Club will be meeting each Tuesday at 3:00pm in Fisher 200. Everyone interesting in discussing psychological questions/problems is welcome! For further information, please contact Dr. Michael Pollock: pollockm@camosun.ca
Journal of Camosun Psychology Research – Contact your Psychology Instructor to discover how to publish research in it. https://cc.arcabc.ca/islandora/object/cc%3Apsycjournal
American Psychological Association - The hub of our discipline. https://www.apa.org
Canadian Psychological Association - The Canadian hub of our discipline. https://cpa.ca/
Co-operative Education & Career Services - Learn about how to access a co-op experience for your career. https://camosun.ca/services/co-operative-education-and-career-services/contact-co-operative-education-and-career

STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit http://camosun.ca/students/.

Academic Advising	http://camosun.ca/advising
Accessible Learning	http://camosun.ca/accessible-learning
Counselling	http://camosun.ca/counselling
Career Services	http://camosun.ca/coop
Financial Aid and Awards	http://camosun.ca/financialaid
Help Centres (Math/English/Science)	http://camosun.ca/help-centres
Indigenous Student Support	http://camosun.ca/indigenous
International Student Support	http://camosun.ca/international/
Learning Skills	http://camosun.ca/learningskills
Library	http://camosun.ca/services/library/
Office of Student Support	http://camosun.ca/oss
Ombudsperson	http://camosun.ca/ombuds
Registration	http://camosun.ca/registration
Technology Support	http://camosun.ca/its
Writing Centre	http://camosun.ca/writing-centre

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the Centre for Accessible Learning (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started: http://camosun.ca/services/accessible-learning/

Academic Integrity

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit http://camosun.ca/learn/fees/#deadlines.

Grading Policy

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf for further details about grading.

Grade Review and Appeals

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures" (http://camosun.ca/learn/calendar/current/procedures.html) and the Grading Policy at http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please

visit http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf to understand the College's expectations of academic integrity and student behavioural conduct.

Changes to this syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.