



PSYCHOLOGY 2221A (570)
Introduction to the Biological Basis of Behaviour
Fall/Winter 2025-2026

Instructor: Dr. Shelley Cross-Mellor
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Course Information

Calendar Description:

An introduction to the principles of evolutionary biology, genetics, and physiology in relation to behavior. This course is intended as an introduction to the biological basis of behavior for students who do not have a background in biology.

Prerequisite(s): A mark of at least 60% in 1.0 credits of Psychology at the 1000 level.

Antirequisite(s): [Neuroscience 2000](#), [Psychology 2220A/B](#).

Extra Information: 3 lecture hours.

Course Weight: 0.5

Breadth: Category A

Subject Code: PSYCHOL

Notice: Unless you have either the requisites for this course (fulfilment of pre-requisites, no anti-requisite conflicts), or special permission from your Dean to enrol in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.



King's University College

LONDON CANADA

Psych 2221A, Section 570

Introduction to the Biological Basis of Behaviour

Dr. Shelley Cross-Mellor

Fall 2025

COURSE DESCRIPTION

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COURSE INFORMATION

Classes: See Brightspace

Instructor: Dr. Shelley Cross-Mellor

Office: TBD

Email: scrossme@uwo.ca

Office Hours: Before or After Class and by appointment

Course Website Our course website on OWL Brightspace will have lecture outlines, exam information, a copy of the course outline and other course information. You will be able to check your test and exam marks on the course website. Please check this website regularly!

Mode of Instruction: in-person

TEXTBOOK (Required)

Biopsychology by Pinel & Barnes (Pearson) 11th edition, 2021

UWO Bookstore Link (180 day ebook rental - \$66): https://bookstore.uwo.ca/textbook-search?campus=KC&term=W2025A&courses%5B0%5D=570_KC/PSY2221A

- please note the Revel alternative (\$89) – comes with access to the e-text plus the Revel platform which includes the extra resources provided by the publisher (e.g. animations, practice questions). Revel is an optional resource and is not mandatory or used for any evaluation purposes.

- previous editions of the textbook (i.e. 9th or 10th) should be adequate

COURSE OBJECTIVES

- Define and correctly use core biopsychology vocabulary
- Describe how brain activity gives rise to behaviour
- Analyze how behaviour is shaped by ongoing neural activity and prior experience
- Understand and evaluate research methods used to study the biology of behaviour.
- Describe the basic anatomical structures and functional organization of the nervous system
- Explain how different brain regions contribute to sensory processing, motor control, emotion, and cognition
- Identify and prioritize key ideas within biopsychology.
- Integrate concepts across topics (e.g., neuroanatomy, psychopharmacology, behaviour) to explain complex phenomena.
- Identify biological causes, symptoms and common treatments and intervention of major neurological and psychological disorders.

CLASS SCHEDULE (Tentative)

Date	Topic	Reading
Sept. 8	Introduction & What is Biopsychology?	Ch. 1
Sept. 15	The anatomy of the nervous system	Ch. 3
Sept. 22	Neural conduction and synaptic transmission	Ch. 4
Sept. 29	Midterm #1 – in class	Chpts 1, 3 & 4

Oct. 6	Research methods of biopsychology	Ch. 5
Oct. 20	The Visual System & Perception	Ch. 6 & 7
Oct. 27	Learning, memory & amnesia	Ch. 11
Nov. 10	Midterm #2 – in class	Chpts 5, 6, 7, 11
Nov. 17	Neuropsychological Diseases	Ch. 10
Nov. 24	Drug of Abuse and Addiction	Ch. 15
Dec. 1	Emotion, Stress & Health	Ch. 17
Dec. 8	Psychiatric Disorders	Ch. 18

Topics will be covered in the order given above. *Approximate* lecture dates are listed so that you can keep up with the readings. It is best to read the assigned chapter briefly before class, and then return to the text and reread the material more carefully after we have discussed it. In class, I will discuss those parts of the chapter that I feel are the most important, most difficult, or the most interesting and may update and expand upon the topic. Classes will include lectures, video clips, films, demonstrations and activities to help further understand material. You are not responsible for chapters that do not appear on the class schedule.

EVALUATION & EXAM SCHEDULE

Test 1 – 25% (Chapters 1, 3, 4) – Monday September 29, 11:30am-1:30pm, in class

Test 2 – 30% (Chapters 5, 6, 7, 11) – Monday November 10, 11:30am-1:30pm, in class *

Test 3 – 35% (Chapters 10, 15, 17, 18) – TBD by Registrar's Office, December 11-22 *

Infographic – 10% - due Friday December 5 at 11:59pm to Brightspace

* these test will require supporting documentation if missed; self-attestation cannot be used.

The non-cumulative tests and exam will be composed of multiple choice, and have a mixture of fill in the blanks, label the diagram and/or short answer questions.

Test 1 is scheduled for September 29 in class. Questions will be based on material from Chapters 1, 3, and 4 and the corresponding lectures. Test 1 contributes 25% of your course grade.

Test 2 is scheduled for November 10 in class. Questions will be based on material from Chapters 5, 6, 7 and 11 and the corresponding lectures. Test 2 contributes 30% of your course grade.

Test 3 will be held during the December examination period (December 11-22) and will be scheduled by the Registrar's Office. The Final Exam will be based on Chapters 10, 15, 17 and 18 and the corresponding lectures. The Final exam contributes 35% of your course grade.

The exams are closed book and no aids are allowed. There will be no re-grading of short answer type questions answered in pencil. Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. **Therefore, it is in your interest to avoid sitting near anyone you studied course material with.**

Infographic Assignment (due 11:59pm Friday December 5, 2025) – details regarding this assignment will be posted on OWL. This assignment will involve synthesis of course material presented to date. You will submit your assignment as PDF document to OWL Brightspace. Your infographic assignment has a no-questions-asked 48hr grace period. This means that you can submit this assignment up to 11:59pm on Sunday December 7, 2025 without penalty. As such, requests for academic for the Infographic will be denied.

Please note that grades **cannot** be adjusted on the basis of need. Your mark in the course will be the mark that you earn. Tests cannot be re-written to obtain a higher mark and there are no extra credit assignments available to raise exam grades.

CLASSROOM ETIQUETTE

In order to make the most of this learning experience for yourself and your fellow students, PLEASE

- Do not use computers in class *for any reason*, except to take notes.
- Do not send or read texts/use your phone during class time.
- Make sure cell phones are silenced.
- Refrain from speaking to a neighbour during class time (unless invited to do so by the instructor), especially if someone (either the instructor or a fellow class member) is speaking to the class.

These activities can be very distracting to your fellow students and to the instructor.

Please Note the Following Grading Guidelines:

A+	90–100	One could scarcely expect better from a student at this level
A	80–89	Superior work which is clearly above average
B	70–79	Good work, meeting all requirements, and eminently satisfactory
C	60–69	Competent work, meeting requirements
D	50–59	Fair work, minimally acceptable
F	below 50	Fail

Makeup Exams:

Students will be allowed to write makeup tests **only** under special circumstance that have been substantiated with proper documentation. **Please note that documentation must be submitted to (and approved by) the Academic Dean's office.** Additional information regarding appropriate documentation and procedures can be found below. A student who

misses a test for any other reason (or who is unable to substantiate a claim) will be assigned a grade of zero for the test. In fairness to all students, **no exceptions** to this policy will be allowed. **Please note the format of make-up tests may be of a different format than the original test (often times essay style).**

Make Up for Test 1 will be Friday October 10 at 2:30pm

Make Up for Test 2 will be Friday November 21 at 2:30pm

Make Up for Test 3 TBA by Registrar's Office in early January

ACADEMIC INTEGRITY

Within this course, use of artificial intelligence (AI) tools such as Chat GPT is not permitted for written work submitted for evaluation. Unauthorized use of AI will be subject to academic discipline.

All required papers are subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>). Please note that Turnitin analysis now includes AI detection.

COPYRIGHT

PowerPoint lecture slides and notes, lists of readings, in-class activities, assignment guidelines, and any other components of the course materials are the intellectual property of the instructor. Unauthorized reproduction through tape-recording, video-recording, photographing, sharing on any social media site, or posting on course-sharing websites is an infringement of copyright and is prohibited. Such action may also be considered a Scholastic Offence, which may lead to sanctions. Further information on Scholastic Offences is available at:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Department of Psychology Policies Related to AI Tools

1. Policy on the Use of Generative AI Tools

The Department of Psychology expects that students will submit work that is truly their own, completed without external assistance (human or artificial).

The use of generative AI tools (such as ChatGPT) is not permitted for any submitted coursework unless express permission has been granted by your instructor.

Students **should not have AI tools write any part of their assignments or papers, either by copying and pasting or by paraphrasing the output.** Unauthorized use of AI constitutes an academic offence and will be subject to academic discipline.

Additional information: Students can use AI tools to clarify questions they have about course content (e.g., you can ask ChatGPT about a course concept to help with your understanding), but students should be aware that the response may be inaccurate or inconsistent with the course content. Asking your instructor is a more effective strategy. Students should note that information provided by AI tools such as ChatGPT can include mistakes, inaccuracies, biases, and outdated information. Whenever these tools are used, students should cross-verify the information provided to them. This means verifying that the sources used by AI exist and have been accurately summarized, consulting multiple original and reputable up-to-date sources to verify information, and being cautious of bias that could be present in the information provided.

2. Policy on Use of Translation Tools*

The Department of Psychology views the unapproved use of translation or language applications as an academic offence.

Any usage of translation applications or language generation by students to complete specific assigned work for this course **must be approved** by the instructor **prior** to submitting the work **and noted by the student in the submitted work** itself.

Writing text and then feeding it into a computer application to improve or translate your own words, changing a few words, and then submitting this text as if it was your own **constitutes plagiarism.** You must compose text, choose words, construct logic flow, structure sentences and paragraphs to organize, synthesize, interpret information with your own mind. When you borrow language or ideas from another person or from a machine this must be acknowledged with quotation marks and/or citations.

Why do we have this policy?

- Translation is intellectual work and produces intellectual property, thus any text which is translated must cite the translator.
- Psychology endeavors to advance students' linguistic, analytic, and reasoning competencies – this can not happen outside of specific language competencies.
- Earning a university degree signals that an individual has advanced literacy and communicative skill in the language of instruction at the university; this is English at King's University College at Western University. If translation machines are used by students without regulation, we will have no way of certifying whether these competencies exist and fewer mechanism for encouraging students to do the hard work to develop them.

** Based on the policy developed by the Department of Child and Youth Studies*

KING'S UNIVERSITY COLLEGE
GENERAL COURSE POLICIES
2025-2026

1. Academic Accommodations, Consideration for Absences

Academic Accommodation (Accessibility)

Accessibility Services works to ensure that academic programs are accessible to all students, and supports students who may have a condition related to, but not limited to, vision, hearing, mobility, different ways of learning, mental health, chronic illnesses, chronic pain, autism spectrum disorder, ADD/ADHD, and temporary conditions (beyond short-term academic consideration). Accessibility Services provides recommendations for accommodation based on medical documentation or psychological and cognitive assessment. The accommodation policy can be found here [Academic Accommodation for Students with Disabilities](#). Information on Accessibility Services at King's can be found [here](#).

Academic Consideration for Student Absence

If a student is unable to meet a course requirement due to substantial but temporary extenuating circumstances (medical or compassionate), they should follow the procedures below.

In some cases, where instructors have built flexibility into their assessments, this flexibility will already address consideration needs.

Requests for academic consideration should be directed to the Academic Advising Office of your faculty/college of registration. Requests must be made as soon as possible and no later than 48 hours after the missed assessment.

As a rule, documentation is required for academic consideration. For academic consideration requests on medical grounds, the Student Medical Certificate is available at https://www.kings.uwo.ca/kings/assets/File/currentStudents/courses_enrollment/exams_and_tests/S_MC-Feb-2025.pdf.

Students are permitted one academic consideration request without supporting documentation per term per course.

Instructors may designate one assessment per half-course weight as requiring formal supporting documentation. Please refer to the course outline for each course.

For further information, please see:

https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf

Absences from Final Examinations

If you miss the Final Exam, contact the Academic Advising Office of your faculty/college of registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a “Multiple Exam Situation” (e.g., more than 2 exams in 23-hour period, or more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under [Special Examinations](#)).

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give notice in writing to the instructor and Academic Advising Office if a course requirement will be affected by a religious holiday/observance. Notice must be given as early as possible, and no later than two weeks prior to an examination, and one week prior to a midterm test date. It is the responsibility of such students to inform themselves concerning the work done in classes from which they are absent and to take appropriate action.

2. Support Services

Accessibility, Counselling and Student Development at King’s University College:
<https://www.kings.uwo.ca/current-students/student-services/>

Students experiencing emotional or mental health distress can access services at King’s University College: <http://www.kings.uwo.ca/current-students/campus-services/student-support-services/personal-counselling/>

Good2talk is a good online and phone 24/7 resource for students and is available in English, Mandarin, and French: <https://good2talk.ca>, 1-866-925-5454

MentalHealth@Western provides a complete list of options about how to obtain help:
https://www.uwo.ca/health/mental_wellbeing/

Academic Support Services at King’s University College:
<https://www.kings.uwo.ca/current-students/academic-resources/>

GBSV Support:

King’s is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information

about support services for survivors, including emergency contacts at: <https://www.kings.uwo.ca/about-kings/safe-campus/gender-and-sexual-violence/>

You can reach someone supports at Kings by emailing Care@kings.uwo.ca or calling 519-930-4640 to reach a social worker who can offer help.

You can also reach Western's Gender-Based Violence & Survivor Support Case Manager by [email](#) or by calling 519-661-3568.

Further supports can be found on this website: <https://www.kings.uwo.ca/about-kings/safe-campus/gender-and-sexual-violence/>

See also https://www.uwo.ca/health/student_support/survivor_support/get-help.html

University Students' Council offers many valuable support services for students, including the health insurance plan: <http://westernusc.ca/services/>

3. Statement on Use of Electronic Devices

Use of Electronic Devices: Unless explicitly stated otherwise, you are not allowed to have a cell phone, or any other electronic device, with you during tests or examinations. Unauthorized possession of such a device during a test or examination constitutes an academic offence.

Use of Laptops, Tablets, and Smartphones in the Classroom: King's University College at Western University acknowledges the integration of new technologies and learning methods into the curriculum. The use of electronic devices such as laptop computers, tablets, or smartphones can contribute to student engagement and effective learning. At the same time, King's recognizes that instructors and students share jointly the responsibility to establish and maintain a respectful classroom environment conducive to learning.

The use of electronic devices by students during lectures, seminars, labs, etc., shall be for matters related to the course at hand only. Students found to be using electronic devices for purposes not directly related to the class may be subject to sanctions under the Student Code of Conduct; see <https://www.kings.uwo.ca/current-students/student-affairs/code-of-student-conduct1/>

Inappropriate use of electronics (e.g., laptops, tablets, smartphones) during lectures, seminars, labs, etc., creates a significant disruption. As a consequence, instructors may choose to limit the use of electronic devices in these settings. In addition, in order to provide a safe classroom environment, students attending in-person class sessions are strongly advised to operate laptops with batteries rather than power cords.

4. Statement on Academic Offences

King's is committed to academic integrity. Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, is posted at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

It is expected that students will submit work that is truly their own, completed without external assistance (human or artificial) except as explicitly permitted by the course instructor. Check with you instructor on what tools, including generative AI (ChatGPT, translation tools, grammar-checking tools) are permitted in the course. Because a tool is permitted in one course, that does not mean it is permitted in other courses.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system; see <https://elearningtoolkit.uwo.ca/tools/Originality Reports - TurnItIn.html>.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

5. Copyright of Course Material

Lectures and course materials, including PowerPoint presentations, tests, outlines, and similar materials are protected by copyright. Faculty members are the exclusive owner of copyright in those materials they create. Students may take notes and make copies for their own use. Students may not allow others to reproduce or distribute lecture notes and course materials publicly (whether or not a fee is charged) without the express written consent of a faculty member. Unauthorized sharing of class content is subject to academic discipline.

Similarly, students own copyright in their own original papers and exam essays. If a faculty member wishes to post a student's answers or papers on the course website, they should ask for the student's written permission.

6. Use of Recordings

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation and/or the participant has the prior written permission of the instructor. Unauthorized recording and/or sharing of class content is subject to academic discipline.

7. Policy on Attendance

Any student who, in the opinion of the instructor, is absent too frequently from class or laboratory periods in any course, will be reported to the Dean of the Faculty offering the course, after due warning has been given. On the recommendation of the department concerned, and with the permission of the Dean of that Faculty, the student will be debarred from taking the regular examination in the course.