



**Huron University College
Department of Psychology**

**Psychology 3222G 550 – Introduction to Neuroimaging Research in Psychology
Winter 2023**

1.0. BASIC COURSE INFORMATION

- 1.1 Course Number:**
Psychology 3222G
- 1.2 Course Name:**
Introduction to Neuroimaging Research in Psychology
- 1.3 Scheduled class times and location:**
Mondays 8:30-11:30am HC-V207
- 1.4 Pre/Anti-requisite information:**
Prerequisite(s): Psychology 2221A/B or Psychology 2220A/B, AND registration in the third or fourth year of Honors Specialization, Major in Psychology, or permission of the Department.
Extra Information: 0.5 course.
- 1.5 Instructor Name:**
Dr. Derek Quinlan
- 1.6 Instructor contact information:**
Room: HC-V209
Email: dquinla4@uwo.ca
- 1.7 Office hours:**
Thursdays 8:30 am HC-V209

2.0. CALENDAR DESCRIPTION

A research-oriented course that focuses on the experiments and methodological techniques in neuroimaging that lead to our current understandings of the structure and function of the mammalian brain.

3 lecture/seminar hours; 0.5 course

Note 1: Unless you have either the prerequisites for this course or written special permission to enroll, 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.

3.0 COURSE OBJECTIVES

By the end of this course, students should have:

- a broader understanding of concepts in neuroimaging research
- a working knowledge of the research paradigms and methodology used in neuroimaging research

3.1 DESCRIPTION OF CLASS METHODS

This course will be predominately lecture-based, but will also include in-class demonstrations and experiments that will investigate various methods employed in neuroimaging research (E.g. EEG, fMRI, fNIRS, etc.). There will be three 'lecture' hours per week which will be used for both lectures and experiments/demos/tutorials. Exams will assess students' basic conceptual and functional knowledge of both lecture and reading materials, as well as the methodological paradigms and findings resulting from the experiments/demos. A writing assignment will also be utilized to assess students' understanding of the materials/methods explored.

4.0 REQUIRED TEXTS

Introduction to Human Neuroimaging
by Hans Op de Beeck and Chie Nakatani
Cambridge University Press (May 16, 2019)

Assigned readings from the required text will be assigned on a week-to-week basis. Additional readings will be made available on the course website as needed. All readings, along with lecture materials (including experiments/demos/tutorials) will be covered in the exams. **Please note that most of the material for this course will come from lectures, therefore regularclass attendance is highly recommended.**

5.0 METHOD OF EVALUATION/ASSESSMENT

5.1. Summary of Dates and Weights

1. Exams: There will be two in-person exams, a midterm worth 30% and a final second exam worth 40% of the final course grade. The first exam will cover all materials related to the first five lectures (Jan. 9 – Feb. 6), while the final exam will be non-cumulative, covering only the material from the last 6 lectures of the course (Feb. 27 – Apr. 10). These exams will be a combination of multiple-choice questions, short-answer questions (i.e. diagram, fill-in-the-blank, and/or 2-3 sentence response), and 1-page essay-style questions.

2. Paper: There will be one review paper (in APA format) worth 30% of the final grade and will be due March 27th. This paper will review the most recent research findings in areas of study within Psychology that utilized neuroimaging techniques. Topics for this review paper will be made available mid-January.

5.2. Exams

There are two in-person exams, which when combined, determine 70% of the final grade in the course. The first exam will be written in-person during the regularly schedule lecture time on February 13th and students will have 2 hours and 50 minutes to complete the exam once begun. Similarly, the final exam will be written during the final exam period in April on an exam date set by the Registrar's Office. Students will have 3 hours to complete the final exam once begun.

Exams are non-cumulative and each exam covers approximately one half of the course material.

Exams will be composed of multiple-choice questions, short-answer questions (i.e. diagram, fill-in-the-blank, and/or 2-3 sentence response), and 1-page essay-style questions based on the assigned readings and lectures/demonstrations/experiments.

Following the failure of a student to write the midterm exam, and acting on advice from the Academic Advising Office to provide relief (based on medical and/or non-medical grounds), we will calculate the student's final grade based on their performance on the final exam and the written assignment. Students that do not write the midterm exam and do not receive accommodation from the Academic Advising office will receive a midterm exam grade of zero. In the event that a student fails to write the final exam during the final exam period, and again acting on advice from the Academic Advising Office to provide relief (based on medical and/or non-medical grounds), we will permit that student to write a make-up for the final exam only. Failure to attain academic accommodation will lead to the grade being recorded as zero. The make-up final exam will follow a similar format to that of the regularly scheduled final exam and will be written on a day and time mutually agreed upon by the student and professor. Documentation for missed exams/assignments must be submitted to the Academic Advising Office in a timely manner.

Exam grades will be posted in the gradebook of the OWL website. Students may review their exam in the presence of their instructor during office hours, but the Department will retain all tests.

Statement Regarding Grades in Psychology at Huron University College

Students at Huron University College should consider a grade in the range from 75-79 to be evidence of satisfactory performance in a 3000-level Psychology course. Grades in the A (80-90%) range will only be awarded for performance that is demonstrably superior to the third or fourth-year standard associated with the Major or Minor modules. A grade of A+ (90-100%) will only be awarded rarely and only for work that is exceptional.

7.0 Psychology 3222G – Tentative Schedule – Winter 2023

Jan.	9	Syllabus & Introduction Lecture
	16	Behavioural & Cognitive Neuroscience
	23	Invasive Techniques
	30	Muscle/Physiological
Feb.	6	Electroencephalography
	13	Midterm Exam
	20	Reading Week
	27	Anatomy
Mar.	6	Functional Magnetic Resonance Imaging
	13	Functional Magnetic Resonance Imaging
	20	Functional Near-Infrared Spectroscopy
	27	Positron Emission Tomography & PAPER DUE
Apr.	3	Magnetoencephalography & Others
	10	Review
	13 - 30	Exam Days

Statement Regarding Academic Accommodation in Psychology at Huron University College

In the Department of Psychology at Huron, courses are structured to allow students as much flexibility as possible. In the event of an acute medical illness or other personal emergency, students must request academic consideration as per Western Academic Senate Policy. The instructor must indicate on the course outline how accommodations are granted and arranged.

Student requests for academic consideration/accommodation for missed work must be submitted in a timely manner, typically no more than 48 hours after the missed evaluation. Requests submitted more than 48 hours after the missed evaluation will normally require a formal recommendation from an Academic Advisor.

For missed coursework worth less than 10% of the overall grade in a course, students should contact the instructor in writing as soon as possible to arrange for accommodation. In cases where accommodation is granted, the instructor will inform the student in writing what accommodation will be granted (e.g. makeup test, reweighting missed evaluation, accept late assignment).

For missed coursework worth 10% or more of the overall grade in a course, students must contact their home faculty Academic Advising office with appropriate documentation (at Huron, this is Huron's Academic Advising Office; if you are a student at a different campus, contact your academic advisor at your home campus).

In the Department of Psychology, if accommodation is granted, students will typically be granted an extension of 48 hours for written essays and reports from the time when accommodation is granted in writing, unless otherwise discussed with the course instructor. The typical accommodation for missed tests will be reweighting of the course grade, unless otherwise discussed with the course instructor. Instructors may request further documentation to approve accommodations.

Students should refer to the following for more information regarding academic consideration and accommodation:

Western Senate Policy regarding Accommodation for Medical Illness

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

Huron Academic Advising

<https://huronatwestern.ca/student-life/student-services/academic-advising/faq/>



8.0 Appendix to Course Outlines: Academic Policies & Regulations Fall/Winter 2022-2023

Huron will continue to follow the guidance of public health and government officials. It is anticipated that there will be no disruptions to in-person instruction. This is subject to change.

Student Code of Conduct

Membership in the community of Huron University College and Western University implies acceptance by every student of the principle of respect for the rights, responsibilities, dignity and well-being of others and a readiness to support an environment conducive to the intellectual and personal growth of all who study, work and live within it. Upon registration, students assume the responsibilities that such registration entails. While in the physical or online classroom, students are expected to behave in a manner that supports the learning environment of others. Please review the Student Code of Conduct at:

<https://huronatwestern.ca/sites/default/files/Res%20Life/Student%20Code%20of%20Conduct%20-%20Revised%20September%202019.pdf>.

Prerequisite and Antirequisite Information

Students are responsible for ensuring that they have successfully completed all course prerequisites and that they have not completed any course antirequisites. Unless you have either the requisites for this course or written special permission from your Dean to enroll 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.

Attendance Regulations for Examinations

A student is entitled to be examined in courses in which registration is maintained, subject to the following limitations:

- 1) A student may be debarred from writing the final examination for failure to maintain satisfactory academic standing throughout the year.
- 2) 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. The Dean of the Faculty offering the course will communicate that decision to the Dean of the Faculty of registration.

Review the policy on Attendance Regulations for Examinations here: [Academic Calendar - Western University \(uwo.ca\)](#)

Statement on Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website: [Academic Calendar - Western University \(uwo.ca\)](#). The appeals process is also outlined in this

policy as well as more generally at the following website:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/appealsundergrad.pdf.

Turnitin.com

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. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Statement on Use of Electronic Devices

It is not appropriate to use electronic devices (such as, but not limited to, laptops, tablets, cell phones) in the classroom for non-classroom activities. Such activity is disruptive and distracting to other students and to the instructor, and can inhibit learning. Students are expected to respect the classroom environment and to refrain from inappropriate use of technology and other electronic devices in class.

Statement on Use of Personal Response Systems (“Clickers”)

Personal Response Systems (“clickers”) may be used in some classes. If clickers are to be used in a class, it is the responsibility of the student to ensure that the device is activated and functional. Students must see their instructor if they have any concerns about whether the clicker is malfunctioning. Students must use only their own clicker. If clicker records are used to compute a portion of the course grade:

- the use of somebody else’s clicker in class constitutes a scholastic offence
- the possession of a clicker belonging to another student will be interpreted as an attempt to commit a scholastic offence.

Academic Consideration for Missed Work

All students pursuing academic consideration, regardless of type, must contact their instructors no less than 24 hours following the end of the period of absence to clarify how they will be expected to fulfill the academic responsibilities missed during their absence. **Students are reminded that they should consider carefully the implications of postponing tests or midterm exams or delaying submission of work, and are encouraged to make appropriate decisions based on their specific circumstances.**

Students who have conditions for which academic accommodation is appropriate, such as disabilities or ongoing or chronic health conditions, should work with Accessible Education Services to determine appropriate forms of accommodation. Further details concerning policies and procedures may be found at: <http://academicsupport.uwo.ca/>.

Policy on Academic Consideration for a Medical/ Non-Medical Absence

- (a) **Consideration on Medical Grounds for assignments worth *less than 10%* of final grade: Consult Instructor Directly and Contact Academic Advising**

When seeking consideration on **medical grounds** for assignments worth *less than 10%* of the final course grade, the student should contact the instructor directly. The student need only share broad outlines of the medical situation. The instructor **may** require the student to submit documentation to the academic advisors, in which case she or he will advise the student and inform the academic advisors to expect documentation. If documentation is requested, the student will need to complete and submit the [Student Medical Certificate](#). The instructor may not collect medical documentation. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation.

b) Medical Grounds for assignments worth 10% or more of final grade: Go Directly to Academic Advising

University Senate policy, which can be found at [Academic Calendar - Western University \(uwo.ca\)](#) requires that all student requests for accommodation on medical grounds for assignments worth 10% or more of the final grade be made directly to the academic advising office of the home faculty (for Huron students, the “home faculty” is Huron), with supporting documentation in the form (minimally) of the Senate-approved Student Medical Certificate found at: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

The documentation is submitted in confidence and will not be shown to instructors. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation. The instructor will not normally deny accommodation where appropriate medical documentation is in place and where the duration it describes aligns with the due date(s) of assignment(s). Before denying a request for accommodation on medical grounds, the instructor will consult with the Dean. The instructor’s decision is appealable to the Dean.

c) Consideration on Non-Medical Grounds: Consult Huron Support Services/Academic Advising, or email hurousss@uwo.ca

Students seeking academic consideration for a **non-medical** absence (e.g. varsity sports, religious, compassionate, or bereavement) will be required to provide appropriate documentation. All consideration requests must include a completed [Consideration Request Form](#). Late penalties may apply at the discretion of the instructor.

Please review the full policy on Academic Consideration for medical and non-medical absence at: [accommodation_medical.pdf \(uwo.ca\)](#). Consult [Huron Academic Advising](#) at hurousss@uwo.ca for any further questions or information.

Support Services

For advice on course selections, degree requirements, and for assistance with requests for medical accommodation, students should email an Academic Advisor in Huron’s Student Support Services at

hurousss@uwo.ca. An outline of the range of services offered is found on the Huron website at: <https://huronatwestern.ca/student-life/student-services/>.

Department Chairs, Program Directors and Coordinators are also able to answer questions about individual programs. Contact information can be found on the Huron website at: <https://huronatwestern.ca/contact/faculty-staff-directory/>.

If you think that you are too far behind to catch up or that your workload is not manageable, you should consult your Academic Advisor. If you are considering reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines. Please refer to the Advising website, <https://huronatwestern.ca/student-life/student-services/academic-advising/> or review the list of official Sessional Dates on the Academic Calendar, available here: <http://www.westerncalendar.uwo.ca/SessionalDates.cfm>.

You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. Note that dropping a course may affect OSAP and/or Scholarship/Bursary eligibility.

Huron Student Support Services: <https://huronatwestern.ca/student-life/student-services/> Office of the Registrar: <https://registrar.uwo.ca/>
Student Quick Reference Guide: <https://huronatwestern.ca/student-life/student-services/#1> Academic Support & Engagement: <http://academicsupport.uwo.ca/>
Huron University College Student Council: <https://huronatwestern.ca/student-life/beyond-classroom/hucsc/>
Western USC: <http://westernusc.ca/your-services/#studentservices>

Wellness and Health Supports at Huron and Western

University students may encounter setbacks from time to time that can impact academic performance. Huron offers a variety of services that are here to support your success and wellbeing. All Huron staff and faculty have received training on responding to disclosures of Gender-Based Sexual Violence (GBSV); students should know that the Community Safety Office is a resource for survivors, providing support and, if desired, guidance while referring them to the further supports that they may require. Please visit <https://huronatwestern.ca/student-life-campus/student-services/wellness-safety> for more information or contact staff directly:

Wellness Services:

huronwellness@huron.uwo.ca

Community Safety Office:

safety@huron.uwo.ca

Additional supports for Health and Wellness may be found and accessed at Western through, <https://www.uwo.ca/health/>.

Western Calendar - Policy Pages -
[Academic Calendar - Western University \(uwo.ca\)](https://www.uwo.ca/academic-calendar/)