



**Huron University
Department of Psychology**

**Psychology 3222G – Introduction to Neuroimaging Research in Psychology
Summer Day 2021**

1.0. BASIC COURSE INFORMATION

- 1.1 Course Number:**
Psychology 3222G
- 1.2 Course Name:**
Introduction to Neuroimaging Research
- 1.3 Scheduled class times:**
Tuesdays and Thursdays 9:30 am - 12:30 pm
- 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:**
Email: dquinla4@uwo.ca
- 1.7 Office hours:**
Immediately following lecture and by appointment
(via Zoom meeting).

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 held twice per week; 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

4.0 DESCRIPTION OF CLASS METHODS

This course will be predominately lecture-based, but will also include “in-lecture” demonstrations and experiments that will investigate various methods employed in neuroimaging research (E.g. EEG, fMRI, fNIRS, etc.). There will be three ‘lecture’ hours each Tuesday and Thursday to which there is an assigned lecture (See 7.0 Tentative Schedule). ‘Lecture’ hours 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. Writing assignments will also be utilized to assess students’ understanding of the materials/methods explored.

5.0 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 and provided research literature 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 either regular lecture attendance, or viewing of the recorded lectures, is highly recommended.**

6.0 EVALUATION

1. Exams: There will be two online exams, a midterm worth 30% and a second exam worth 40% of the final course grade. The first exam will cover all materials related to the first five lectures (July 6th – 20th), while the second exam will be non-cumulative, covering only the material from the last 6 lectures (July 22nd – August 12th). These exams will be a combination of multiple-choice questions, short-answer questions, 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 August 10th. 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 provided.

6.2. Exams

There are two online exams, which when combined, determine 70% of the final grade in the course. The first exam will be written online during the 72-hour period spanning July 26th – 28th and students will have 2 hours to complete the exam once begun. Similarly, the second exam will be written online during a 72-hour period spanning August 15th – 17th and students will have 2 hours to complete the 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, 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 Counseling 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 Counseling 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 Counseling 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 Counseling Office in a timely manner.

The midterm exam grade will be posted in the gradebook of the OWL website. Students may review their exam via a Zoom meeting with their instructor during a scheduled office hour. The Psychology 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 – Summer Day 2021

July	6th	Syllabus & Introduction Lecture
	8th	Behavioural & Cognitive Neuroscience
	13th	Invasive Techniques
	15th	Muscle/Physiological
	20th	Electroencephalography
	22nd	Anatomy
	26th - 28th	Midterm Exam (Materials July 6th - 20th Only)
	29th	Functional Magnetic Resonance Imaging
August	3rd	Functional Magnetic Resonance Imaging
	5th	Functional Near-Infrared Spectroscopy
	10th	Positron Emission Tomography & PAPER DUE
	12th	Magnetoencephalography & Others
	15th - 17th	FINAL EXAM PERIOD (Materials July 22nd - August 12th)



Appendix to Course Outlines: Academic Policies & Regulations 2021 - 2022

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.

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>.

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:

https://www.uwo.ca/univsec/pdf/academic_policies/exam/attendance.pdf.

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:

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

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, 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

Students who are seeking academic consideration for missed work during the semester may submit a self-reported absence form online provided that the absence is **48 hours or less** and the other conditions specified in the Senate policy at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf are met.

Students whose absences are expected to last **longer than 48 hours**, or where the other conditions detailed in the policy are not met (e.g., work is worth more than 30% of the final grade, the student has already used 2 self-reported absences, the absence is during the final exam period), may receive academic consideration by submitting a Student Medical Certificate (for illness) or other appropriate documentation (for compassionate grounds). The Student Medical Certificate is available online at

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

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, and if the student has exceeded the maximum number of permissible Self-Reported absences, 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) Consideration on Non-Medical Grounds: Consult Huron Support Services/Academic Advising, or email huronsss@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 where the conditions for a Self-Reported Absence have not been met, including where the student has exceeded the maximum number of permissible Self-Reported. 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: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf. Consult [Huron Academic Advising](#) at huronsss@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 huronsss@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>

Learning Development and Success: <https://www.uwo.ca/sdc/learning/>

Accessible Education: <http://academicsupport.uwo.ca/>

Western USC: <http://westernusc.ca/your-services/#studentservices>

Mental Health & Wellness Support 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. 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

Chaplaincy: gthorne@huron.uwo.ca

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