

CGSC 3201: Empirical issues in Cognitive Science

Course Outline

Winter 2020

Class Information

Dates: Jan 6, 2020 – Apr 6, 2020

Time: 1:05 pm – 2:25 pm, Monday, Wednesday

Location: DT2203

Instructor Information

Instructor: Robert West

Office: DT2209

Phone: 2258 but please use a Carleton email for all communication

E-mail: robert.west@carleton.ca

Office Hours: Friday 10am to 12pm

Course Description

This course will explore how Cognitive Modelling allows us to organize the empirical findings from Cognitive Science into unified models of the mind that make testable predictions

Readings

No textbook. – Assigned content will be free online resources only

Course Web Page (cuLearn)

- The course website is located at <https://carleton.ca/culearn/>
- All information for the course as well as course content can be accessed here

Evaluation

There will be an online, open book, midterm exam and a take home final consisting of an online, open book exam. There will also be a take home final project. Since there is no textbook, open book refers to notes from the lectures. An outline of all the lecture contents will be made available after each lecture. Only topics listed in the lecture outlines will be tested.

Evaluation	Weight of Grade
Mid-term exam	33%
Final exam	33%
Final project	34%

- All materials from the lectures (excluding videos) and notes are examinable
- All exams are multiple choice – Please note that the questions are designed to test understanding of the course material and not just memorization
- There will be a review class before each exam
- Students can review their exam results during office hours
- Exams are not cumulative

- The project will be a group based model design assignment
- No knowledge of computer programming is needed for the project
- All feedback will be provided through the course web site
- Teaching Assistants will be available for facilitating effective study groups as well as for individual help

Topics Covered

The topics covered and the order of their presentation is listed below

- Foundations
 - What is empirical?
 - what is real?
 - consciousness
 - the hard problem
 - the computer metaphor
 - system levels
 - emergence
 - hierarchy
- Philosophy of Science
 - Popper
 - Kuhn
 - Lakatos
- How do we measure mental events?
 - measurement theory
 - psychophysics
 - psychological constructs
 - neuroscience
- How do we test our theories?
 - correlations
 - experiments
 - neuroscience
- How do we model the brain?
 - statistical models
 - rational models
 - cognitive models
- Boundary conditions
 - Turing machines
 - Evolution
- Architecture Examples
 - ACT-R
 - SOAR
 - SPAUN

***This schedule is to be regarded as tentative**

Learning Support Services

This service is operated by the [Student Academic Success Centre](#) and offers a variety of services designed to support student learning. For example, they offer group study rooms, free drop-in sessions with study skills specialists and writing tutors, free academic skills workshops, networked computers, a tutor referral service, and supportive peer helpers. They are located in the MacOdrum Library. For more information, visit the [LSS Website](#).

Written Assignments: Deadlines and Late Policy

No written assignment is accepted after the established deadlines without penalty. Please note that all the written assignments are due **at 11:30 p.m. not 11:59 p.m.** The penalty is **10% for any part of each day late**. There is **no grace period** (this means that if you are 5 minutes late or 5 hours late, you receive a 10% deduction). If you are running into trouble, it is vital to contact the instructor **prior to** the due date. **In order to be considered official, all extensions must be obtained in writing from the instructor.** A doctor's note or other appropriate documentation must be provided within **three working days** after the due date in order to avoid late penalties.

Missed Midterms

If a midterm is missed an alternative date will be scheduled for an alternative midterm exam

Disruption

Disruptive behaviour is an instructional offence at Carleton University. Talking amongst yourselves or using personal communication devices disrupts other students and is not allowed. Laptop computers may be used only for note taking and mobile phones may not be used. You are expected to arrive on time for lectures and remain for the balance, as late arrivals and early departures disrupt other students.

Regulations and Information Common to Undergraduate Psychology Courses

REQUESTS FOR ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the [Student Guide](#)

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the [Student Guide](#)

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC,

contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the [PMC website](#) for the deadline to request accommodations for the formally-scheduled exam (if applicable).

Survivors of Sexual Violence: As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities : Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

PETITIONS TO DEFER

Students unable to write a final examination because of illness or other circumstances beyond their control may apply within **three working days** to the Registrar's Office for permission to write a deferred examination. The request must be fully supported by the appropriate documentation. Only deferral petitions submitted to the Registrar's Office will be considered. [See Undergraduate Calendar, Article 4.3.](#)

WITHDRAWAL WITHOUT ACADEMIC PENALTY

The last day to withdraw from a Fall course, without academic penalty, is December 6, 2019. The last day to withdraw from a Fall/Winter or Winter course, without academic penalty, is April 7, 2020. Students may withdraw on or before the last day of classes.

WDN: For students who withdraw after the full fee adjustment date in each term (noted in the Academic Year section of the Calendar each term) the term WDN will be a permanent notation that appears on their official transcript.

OFFICIAL FINAL EXAMINATION PERIOD

Fall courses: December 9-21, 2019. Fall/Winter and Winter courses: April 13-25, 2020 (may include evenings & Saturdays or Sundays)

For more information on the important dates and deadlines of the academic year, consult the [Carleton 2019-2020 Calendar](#).

GRADING SYSTEM

The grading system is described in the Undergraduate Calendar section [5.4](#).

PLAGIARISM

- The University Senate defines plagiarism as “*presenting, whether intentional or not, the ideas, expression of ideas or work of others as one’s own.*” This can include:
 - reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source;
 - submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
 - using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment; using another’s data or research findings;
 - failing to acknowledge sources through the use of proper citations when using another’s works and/or failing to use quotation marks;
 - handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs

Plagiarism is a serious offence, which cannot be resolved directly with the course’s instructor. The Associate Deans of the Faculty conduct a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They range from a mark of zero for the plagiarized work to a final grade of "F" for the course, and even suspension from all studies or expulsion from the University.

RESOURCES (613-520-2600, phone ext.)

Department of Psychology (2644)	B550 Loeb
Registrar's Office (3500)	300 Tory
Centre for Student Academic Support (3822)	4 th fl Library
Academic Advising Centre (7850)	302 Tory
Paul Menton Centre (6608)	501 University Centre
Writing Services (3822)	4 th fl Library
Career Services (6611)	401 Tory

ACADEMIC ADVISING

Visit the Psychology Undergraduate Office, B550 Loeb to discuss your program.

Advisors can answer questions concerning:

- Course selection and meeting program requirements
- Your audit and transfer credits
- Gaining access to courses that are closed
- Information concerning prerequisites and preclusions
- Course equivalencies and substitutions
- Information about whether to pursue the (Honours Project Course) or the Thesis stream and CGPA requirements
- Community Practicum Course
- Concentrations
- Exchanges and course selection