

CGSC 3201: Cognitive Processes Syllabus

Basics

Summer 2024, May 6th to June 18th

Time: Monday & Wednesday, 2:35 - 3:55pm

Location: Online

Course title: **Cognitive Processes**

Department: Department of Cognitive Science (2202a Dunton Tower)

Course number: CGSC 3201

Course Prerequisites: Third Year standing and CGSC 2001 OR PSYC 2700

Instructor's name; **Zachary Savelson**

Email: zachsavelson@cmail.carleton.ca

Please use the Brightspace discussion board for questions. If you do not want other students to see the question, email me or our TA privately.

Office hours: By appointment

Teaching Assistants

XXX-TBD

Brightspace

The course website is located at brightspace.carleton.ca.

On this site you will find the course outline, schedule, several discussion forums, updates, course feedback tools, and a variety of useful links. It is going to be a dynamic space with many opportunities for you to make a meaningful contribution to the course and connect with your peers. The discussion forums represent an excellent place in which to ask questions of your colleagues, share your thoughts on the material, post interesting and relevant links, arrange study groups, etc. The site also includes the PowerPoint presentation slides for each class. While these slides are meant to assist your efforts in the course, they are only a starting point for what we talk about in class. Material will be covered in class that is not included on these slides. In other words, the slides should not be regarded as a substitute for class attendance.

Course description

An examination of research findings on cognitive processes. Topics include attention, speech perception, memory, intelligence, reasoning, learning, working memory, reading, and mathematics.

Texts

All readings for this course will be available through Brightspace and there is no textbook.

Evaluation, Marks, Grades

Your final grade will be a combination of marks from the assignments listed below. The letter grade conversions are shown below.

A+ = 90-100	B = 73-76	C - = 60-62
A = 85-89	B - = 70-72	D+ = 57-59
A - = 80-84	C+ = 67-69	D = 53-56
B+ = 77-79	C = 63-66	D - = 50-52

Assessment

Your grade will be broken up into 4 different components: participation, a 30-45-minute presentation, a midterm paper (~1000 words) and a final exam. A detailed description of each assessment is below:

Presentation: For one class, you will present one of the articles for that class (25-30-minute power point going over the main ideas of the reading as well as a critique of the article [either by you or based on something else you've read]). At the end of your presentation, you must include 2-3 open-ended discussion questions to spur our discussion on the topic (see critical reading checklist at the end of the syllabus for some potential questions). You will then lead the Q/A period after your presentation. I will create an Excel spreadsheet with all the readings where you can sign your name up to do whichever one you want. I will also post a detailed rubric on Brightspace that will tell you exactly what I want from the presentation.

Participation: At the end of every presentation, 2-3 open-ended discussion questions will be posed. After both presentations for that day, you will be broken up into groups (using breakout rooms) and will have to choose 1 question from each presentation to respond to as a group. Participation will be based (principally) on you doing these responses. To be clear, if you must miss a class and can't do a response for that day, you're not going to lose out on marks automatically. If you do most/all responses over the course of the semester, you show up to class, and you speak every so often (I know it's hard for everyone to get a chance to speak), you're getting full marks for this!

Midterm Paper: This paper will be a ~1000- 1500-word APA-formatted grant proposal. The goal of this assignment is to create and format a theoretical experiment to answer a question we've touched on in this class. While there will be a detailed rubric posted, the components of the proposal are as follows: a brief literature review and a statement on how your proposed research fills a gap, a set of empirically testable research questions, a brief overview of the proposed methods for testing your hypotheses (including a high-level description of your procedure, and the measures you aim to use) and finally, a section detailing a proposed analysis plan and predictions about your hypotheses.

Final Exam: This will be an online quiz done through Brightspace. It will cover content from the whole course- there will be ~4-6 questions per topic (2-3 questions focusing on each paper we read). The questions will not just be memorization, they will test your understanding of the theory(ies) discussed in the papers, as well as their arguments, methods, and limitations. A careful reading and understanding of the papers as well as reviewing the presentation slides is the best way to study. *I recommend highlighting anything you find pertinent in papers*!

Grade breakdown in detail:

ITEM	DUE DATE	% OF FINAL GRADE
Participation	N/A	15
Presentation	TBD- see schedule	20
Midterm Paper	May 24 th	25
Final Exam	Open- June 18-27 th	40

Deferral- Midterm paper

I understand that life has a way of getting away from us sometimes. To make you all a bit less stressed, you will be able to defer your Midterm Paper 2 days if you ask in advance for extra time. This means that you need to inform me of your request for a deferral **BEFORE 10PM on the 24th**. If you have a valid reason for deferring (medical illness, funeral, etc.) your request will be granted, no questions asked. I do not need doctors' notes. There will be a form on Brightspace to fill out and send to me.

Reviewing Your Assignments

I will add detailed comments to your midterm papers. For your presentations, I will be giving you back a filled-out rubric along with detailed comments. If you ever want a more in-depth look at how your paper/ presentation was graded, feel free to make an appointment with me and I will walk you through how the assignment was graded. If you feel like you would like your assignment re-graded, please be aware that my policy is as follows: I will regrade your assignment if you ask for it. However, whatever grade you get (higher, the same, OR LOWER) will be final with NO EXCEPTIONS!

What Happens When (Schedule)

CLASS	LECTURE NAME	READINGS
May 6 th	Introduction	N/A
May 8 th	Learning	How do students feel and collaborate during programming activities in the productive failure paradigm? // Are Specific Learning Disorders Truly Specific? And are they disorders?
May 13 th	Memory and how it can be falsified	Attending to behaviorally relevant moments enhances incidental relational memory // False Memories of Political Events
May 15 th	Emotions	What are emotions and how can they be measured? // Confusion can be Beneficial for Learning
May 20 th	NO CLASS-VICTORIA DAY	NO CLASS-VICTORIA DAY
May 22 nd	Decision-Making	Risky choice framing and rational decision-making // Forced choices reveal a trade-off between cognitive effort and physical pain
May 24 th	MIDTERM PAPER DUE!	N/A
May 27 th	Attention and how to improve it	Age Differences in Reaction time and Attention in a National Telephone Sample of Adults: Education, Sex, and Task Complexity Matter // Increasing Speed of Processing With Action Video Games
May 29 th	Computer Brains	Minds, Brains and Programs // Computing Machines and Intelligence
June 3 rd	Perception	Competition for neuronal resources: How hallucinations make themselves heard // Sensory perception in Autism
June 5 th	Consciousness, Agency and Experience	Epiphenomenal Qualia // A Cognitive Account of Agentive Awareness
June 10 th	Cognitive Development	How the Timing and Quality of Early Experiences Influence the Development of Brain Architecture // Bootstrapping in a language of thought: A formal model of numerical concept learning
June 12 th	Logic and Biases	(Ideo)Logical reasoning- Ideology impairs logical reasoning // Judgment under uncertainty: Heuristics and Biases
June 18 th	FINAL EXAM	N/A

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Plagiarism

The University Academic Integrity Policy defines plagiarism as “*presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.*” This includes 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. Examples of sources from which the ideas, expressions of ideas or works of others may be drawn from include but are not limited to: books, articles, papers, literary compositions and phrases, performance compositions, chemical compounds, artworks, laboratory reports, research results, calculations and the results of calculations, diagrams, constructions, computer reports, computer code/software, material on the internet and/or conversations.

Examples of plagiarism include, but are not limited to:

- any submission prepared in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, paraphrased material, algorithms, formulae, scientific or mathematical concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another’s data or research findings without appropriate acknowledgement;
- submitting a computer program developed in whole or in part by someone else, with or without modifications, as one’s own; and
- failing to acknowledge sources through the use of proper citations when using another’s work and/or failing to use quotations marks.

Plagiarism is a serious offence that cannot be resolved directly by the course’s instructor. The Associate Dean of the Faculty conducts 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 can include a final grade of “F” for the course.

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Statement on Student Mental Health

As a University student you may experience a range of mental health challenges that significantly impact your academic success and overall well-being. If you need help, please speak to someone. There are numerous resources available both on- and off-campus to support you. Here is a list that may be helpful:

Emergency Resources (on and off campus): <https://carleton.ca/health/emergencies-and-crisis/emergency-numbers/>

Carleton Resources:

- Mental Health and Wellbeing: <https://carleton.ca/wellness/>
- Health & Counselling Services: <https://carleton.ca/health/>
- Paul Menton Centre: <https://carleton.ca/pmc/>
- Academic Advising Centre (AAC): <https://carleton.ca/academicadvising/>
- Centre for Student Academic Support (CSAS): <https://carleton.ca/csas/>
- Equity & Inclusivity Communities: <https://carleton.ca/equity/>

Off Campus Resources:

- Distress Centre of Ottawa and Region: (613) 238-3311 or TEXT: 343-306-5550, <https://www.dcottawa.on.ca/>
- Mental Health Crisis Service: (613) 722-6914, 1-866-996-0991, <http://www.crisisline.ca/>
- Empower Me: 1-844-741-6389, <https://students.carleton.ca/services/empower-me-counselling-services/>
- Good2Talk: 1-866-925-5454, <https://good2talk.ca/>
- The Walk-In Counselling Clinic: <https://walkincounselling.com>

Requests for Academic Accommodations

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 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 accommodation regarding a formally-scheduled final exam, you must complete the Pregnancy Accommodation Form ([click here](#)).

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 [click here](#).

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 where 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: <https://carleton.ca/equity/sexual-assault-support-services>

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 will be provided to students who compete or perform at the national or international level. 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. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

Important Information

- Students must always retain a hard copy of all work that is submitted.
- Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean
- The last day for academic withdrawal for early summer courses is June 1st, 2024.
- For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <http://carleton.ca/ccs/students/>

For a list of dates and deadlines, including holidays and exam dates, please visit: <https://calendar.carleton.ca/academicyear/#summer2024>

Critical Reading Checklist

- What is the author's approach/perspective?
- Is there another theoretical or philosophical approach which might have been taken?
- Who/what is left out of the text?
- Does the author write from an insider's/outsider's perspective? How does this affect what is included/excluded from the text?
- Do you agree with the points the author is making?
- Are the points made by the author supported by evidence?
- Is the evidence anecdotal or is the evidence the result of science study/research?
- Is the evidence referenced? Is it recent?
- Does the writer present opinion as fact?
- Does the writer use valid reasoning?
- Are any assumptions the writer has made clear to the reader?
- Does the writer over-simplify complex ideas?
- Does the writer make unsupported generalizations?
- Does the writer make reasonable inferences?
- Does the writer represent the ideas of others accurately? Fairly?
- Does the writer distort the ideas of others or present them out of context?
- Does the writer use unfair persuasion tactics such as appeals to prejudice or fear?
- Does the writer present a balanced picture of the issue?
- How would you characterize the writer's tone? How does the tone affect your response to the text?
- Does the writer's language, tone, or choice of examples reveal any biases? If so, do the writer's biases reduce his or her credibility?
- Do your reactions reveal biases in your own thinking?
- Does the text challenge your own values, beliefs, and assumptions?
- If the paper contains statistics, graphs, illustrations etc, are these adequately introduced and discussed and do they contribute to the author's argument?

Footnote: The questions on this checklist are adapted from: Kirszner, L.G. & Mandell, S.R. (1992). The Holt Handbook. Sydney: Harcourt Brace College Publishers, pp. 100-117.

The questions below are especially relevant to research articles.

- Are the limitations of the procedures clear?
- Is the methodology valid? (e.g., size of the sample, method of sampling used)
- Are the results consistent with the objectives?
- Are the results variable?
- Are the claims the author makes about his or her own research internally consistent, that is, are the aims, method, results and conclusion of the research logically consistent with each other (i.e. what is argued on the basis of the research is supported by the results; the methodology allows the aims of the research to be achieved)?
- Are the diagrams clear to the reader?

Footnote: These critical questions are adapted from: Author. (1992). Journal of Construction Engineering and Management, 18, 1-2