CGSC 5100 (CRN: 30786)
Issues in Cognitive Science
Fall 2018

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Institute of Cognitive Science
Carleton University

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1 General Information

1.1 Class Time and Location

Mondays 11:35-2:25, DT 2203

1.2 Instructor's Contact Information

Instructor Ida Toivonen

Email ida.toivonen@carleton.ca

Phone 613-520-2600 x1202

Office 2206 Dunton Tower

1.3 Office Hours

Mondays 2:30-4:30 and by appointment

2 Course Description

In this course, we will read about and discuss a number of topics in various areas of cognitive science. The goal is for the students to become familiar with several topics of inquiry about cognition. Each class will consist of three parts: a lecture (where I will invite discussion and questions), short student presentations, and discussion of a paper.

This is a graduate seminar and not a primarily lecture-based class. The idea is that you will learn not only from the lectures, but also from the readings, your own research and your classmates questions and comments.

3 Readings

3.1 Required readings

Clark, Andy, and David J. Chalmers. 1998. The extended mind. *Analysis* 58: 7-19.

Levelt, Willem. 2015. Sleeping beauties. In Toivonen et al. *Structures in the Mind*. MIT Press.

Maguire, Eleanor A., Helene Intraub, and Sinéad L. Mullally. 2016. Scenes, spaces, and memory traces: What does the hippocampus do? *The Neuroscientist* 22(5): 432-439.

Miller, George A. 1956. The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review* 63: 81–97.

Partee, Barbara H. 1989. Many quantifiers. In *ESCOL 89: Proceedings of the Eastern States Conference on Linguistics,* eds. Joyce Powers and Kenneth de Jong, 383–402. Columbus, OH: Department of Linguistics, Ohio State University. Reprinted in Partee, Barbara H. 2004. *Compositionality in Formal Semantics: Selected Papers by Barbara H. Partee.* Oxford: Blackwell Publishing, 241–258.

Plato. *Theaetetus.*

Russell, Bertrand. 1912. *The Problems of Philosophy.*

Searle, John R. 1980. Minds, brains, and programs. *Behavioral and Brain Sciences* 3: 417–457.

Turing, Alan. 1950. Computing machinery and intelligence. *Mind* 59 (236): 433–460.

Vuoskoski, Jonna K., Marc R. Thompson, Charles Spence, and Eric F. Clarke. 2016. Interaction of sight and sound in the perception and experience of musical performance. *Music Perception* 33 (4):457–471.

3.2 Recommended textbooks

There are several good textbooks in cognitive science. I list a few below. You are not required to consult a textbook for this class, but it might be useful to have access to one, especially if you have not previously taken classes in cognitive science.

Friedenberg, Jay and Gordon Silverman. 2015. *Cognitive Science: An Introduction to the Study of Mind, Third edition.* Sage Publications.

Kolak, Daniel, William Hirstein, and Peter Mandik. 2006. Cognitive Science: An Introduction to mind and brain. Taylor & Francis.

Bermúdez, José Luis. 2014. *Cognitive Science: An Introduction to the Science of the Mind, Second edition.* CUP.

4 Prerequisites

This is a graduate-level course.

5 Evaluation

Participation	15%
Research proposal	10%
Short reaction paper	10%
Presentation	15%
Draft paper	15%
Final paper	35%

The course will use the standard Carleton grading scale:

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	=	0-49									

5.1 Participation (15%)

In-class participation is crucial. Everybody comes to the class with a unique background and you will learn from each other. If you feel very anxious about speaking in class, please let me know and we will

sort something out. There will be a multiple-choice test at the end of the term that will count towards participation.

5.2 Research proposal (10%)

Your research proposal should be one page long (or as specified by OGS, NSERC...). Propose a research project. See advice for OGS/SSHRC/NSERC/CIHR applications (Plan of study, Statement of interest...) Due: Whenever it is useful for you.

5.3 Reaction paper (10%)

This paper should be a reaction paper to one of the readings for this class. Your paper should be 500-1000 words. Due: **October 29**. If you are not sure what a reaction paper is, Google "What is a reaction paper". We will also talk about it in class.

5.4 Presentation (15%)

You will give a brief presentation on a topic of your choice. Your presentation should be no longer than 20 minutes + 10 minutes for questions. Cognitive science encompasses lots of different topics and we cannot cover them all in class. If there is a topic you feel should be covered, you can present that. You can also present the topic of your term paper.

5.5 Draft of your term paper (15%)

Due: **November 22**

5.6 Term paper (35%)

Your paper should be at least eight pages long. It is due at the end of the finals period (December 21). Papers will also be accepted early.
Suggested topics:
(1) Examine a recent journal article that refers to one of the assigned earlier readings from this class (Miller 1956, Partee 1989, Searle 1980, Turing 1950). Discuss the two papers together. How has the field advanced? Which of the original claims have been refuted?
(2) Write a draft of your thesis proposal.
I will post more topic suggestions on cuLearn, but it is really up to you what you write about.

6 CuLearn

This class will make use of cuLearn for slides and handouts. You will also be able to submit assignments there.

7 Student requirements

Students are required to keep copies of any submitted work.
Students must complete the assigned readings before each class.

7.1 Submission Policies

1. You can submit your work either on cuLearn or in class, and you are encouraged to do both.
2. Please keep copies of all the work you submit.

7.2 Missed assignments

All assignments and papers must be submitted by the deadline. If you think you will not be able to submit your assignment in time (because of illness or bereavement), contact me as soon as possible to make alternate arrangements. If any of your work is handed in late, you may receive no credit or reduced credit for it.

7.3 Policy on collaborative work

Students are allowed to discuss their work with other students. However, each student must write up their papers and assignments individually. In other words, you can get together and discuss the issues and share ideas. The work you submit must be your own. Copying is not allowed. Please see section 7.4.

7.4 Statement Regarding Plagiarism

The Senate of the University has labeled plagiarism an instructional offence. For the University's purposes, plagiarism is "presenting, whether intentionally or not, the ideas, expression of ides or work of others as one's own". 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. For more information, please go to the following web page: https://carleton.ca/registrar/academic-integrity/.

8 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:

8.1 Pregnancy obligation

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. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

8.2 Religious obligation

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. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

8.3 Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC 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 your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

8.4 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 is 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

8.5 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

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

9 Course Schedule

Note: This is a preliminary course outline, a revised version will be posted on cuLearn after students have volunteered for presentations.

Sept	10	Introduction, History of Cognitive Science
	17	Epistemology; Plato's *Theaetetus*
	24	Music; Vuoskoski et al. (2016)
Oct	1	Memory; Miller (1956)
	15	Philosophy; Clark & Chalmers (1998)
	29	Psychology; Levelt (2015)
Nov	5	Semantics; Partee (1989[2004])
	12	Computer science & AI; Turing (1950); Searle (1980)
	19	Speech sounds
	26	Neuroscience; Maguire et al. (2016)
Dec	3	Cognitive development
	7	TBA; test