

<p style="text-align: center;">CGSC 3601A: Artificial Intelligence & Cognitive Science Course Outline Spring 2021</p>
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Class Information

Dates: May 6, 2021 to June 18, 2021

Time: Tues & Thurs 14:35 to 15:55

Location: Brightspace (online)

Course prerequisites: 3rd year standing, CGSC 2002 and one of (CGSC 1005 or COMP 1005). Restricted to students enrolled in B. Cog.sc. Honours.

Course website (if applicable): <https://brightspace.carleton.ca/>

Instructor Information

Instructor: Sean Riley

Office: Online via BigBlueButton

Phone: N/A

E-mail: sean.riley@carleton.ca

Office Hours: TBA

Teaching Assistant(s)

Name: TBA

E-mail: TBA

Office hours: TBA

Course Description

This course is intended to give students an introduction to artificial intelligence and its applications to cognitive science. Building on the idea that the mind and brain engage in information processing, this course will explore different means of representing and manipulating information, and how these methods can be helpful in both building intelligent agents and understanding the mind & brain, more broadly. This includes topics such as problem solving and search, supervised learning, natural language processing, and neural networks, among others.

Much of this course will involve hands-on experiences with various AI technologies, including some basic programming. By the end of this course, students will have learned how and when to utilize various AI approaches, the rationale behind their design, and how to evaluate their results.

Readings

There is no textbook for this course. All readings will be provided via Brightspace.

Course Web Page (Brightspace)

The course is provided via <https://brightspace.carleton.ca/>

Here you will find BigBlueButton rooms for labs and lectures, recoded lecture material, and all other course materials pertaining to the course.

This is a blended course, and will contain a mix of asynchronous and synchronous lectures.

Evaluation

Item	Weight of Grade	Due date
Assignment 1*	20%	May 30
Assignment 2*	20%	May 30
Assignment 3	20%	Jun 11
Labs**	10%	Weekly
Final***	30%	Jun 27

* Week 4 is dedicated to completing these assignments

**There are 4 labs, but we will only count the highest 2 towards your grade

***The final will be a take-home exam

Lecture Schedule

Week	Day		Lecture Topics	Labs	Important Dates
1		Thu 6th Online via BBB	Meet & Greet + Software Install	None	Assignments 1 & 2 are made available on May 6th
2	Tue 11th Async Drop-in	Thu 13th Async Drop-in	Search + Expert Systems	Lab 1 Drop-in	Lab 1 due by 11pm EST, May 16th
3	Tue 18th Async Drop-in	Thu 20th Async Drop-in	Supervised Learning + Bayes Nets	Lab 2 Drop-in	Lab 2 due by 11pm EST, May 23rd
4	Tue 25th Drop-in	Thu 27th Drop-in	Assignment Week (dedicated assignment time)	Assignment Lab Drop-in (dedicated assignment time)	Assignments 1 & 2 due by 11pm EST, May 30th
5	Jun 1st Online via BBB	Jun 3rd Async Drop-in	Recap + Natural Language Processing	Lab 3 Drop-in	Lab 3 due by 11pm EST, Jun 6th Assignment 3 is made available on Jun 1st
6	Jun 8th Async Drop-in	Jun 10th Async Drop-in	Neural Networks + Subsymbolic	Lab 4 Drop-in	Lab 4 due by 11pm EST, Jun 13th Assignment 3 due by 11pm EST, Jun 11th
7	Jun 15th Async Drop-in	Jun 17th Online via BBB	Biologically Inspired + Exam Overview	None	

Exam Period	Exam Period	Exam Period	Exam Period	Exam Period	Final Exam is due by 11pm EST, Jun 27th
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In accordance with the Carleton University Undergraduate Calendar, 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

Policy on Late Papers & Assignments:

Barring illness, bereavement, or other approved reasons, late papers and assignments will be penalized at a rate of 10% of the assignment value per day or part day. However, given the struggles imposed by COVID-19, I am happy to provide as much flexibility as reasonably possible, should an issue arise. Therefore, if you are running into trouble with your work, you are **strongly** encouraged to contact me as soon as possible.

Tests & Examinations

All tests and examinations will be completed via cuLearn. Students are allowed to use their course notes, assigned readings, and lecture materials during the tests and exam, but collaboration and outside sources of materials are strictly prohibited, and subject to disciplinary action that could result in a grade of "F" for the course. All tests and examinations will be a combination of multiple choice, true/false, and long/short answer questions. Questions will be based off lecture materials and course readings. Illness and bereavement (supported by appropriate documentation) are the only reasons accepted for missed tests and examinations. If you miss the tests or examinations for one of these reasons, obtain the appropriate documentation and contact me immediately (within 24 hours) to arrange a make-up exam. Make up tests and examinations must be written within 7 days of the original date. In order to participate in a makeup examination, a student must receive written permission from the instructor. If you are unable to write the final exam, please follow the procedures listed in the section, Petitions to Defer: <https://carleton.ca/registrar/petition/>

Academic Regulations, Accommodations, Etc.

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website.

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 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 an accommodation from PMC, meet with me to ensure accommodations arrangements are made. Please consult the PMC website for the deadlines to request accommodations for the formally - scheduled exam (if applicable).

Plagiarism

The University Senate defines plagiarism as “presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.” This can include: (i) 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; (ii) submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else; (iii) using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment; (iv) using another’s data or research findings; (v) failing to acknowledge sources through the use of proper citations when using another’s works and/or failing to use quotation marks; (vi) 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 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.

Important Information:

- Students must always retain a hard copy of all work that is submitted.
 - All final grades are subject to the Dean’s approval.
 - 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/>
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For a list of dates and deadlines, including holidays and exam dates, please visit:

<https://carleton.ca/registrar/registration/dates-and-deadlines/>