CGSC 3704A: DIGH 3704A Cognitive Science and Digital Humanities Course Outline

Fall 2023

Class Information

Dates: Sep 06, 2023 - Dec 8, 2023 Time: Wednesday 2:35 to 5:25 pm

Course prerequisites: CGSC 1001; CGSC 2001 or DIGH 2001; and third-year standing.

Course website (if applicable):

Instructor Information

Instructor: Ahmad Sohrabi

Office: DT2224

Phone: 613-520-2600

E-mail: ahmad.sohrabi@carleton.ca

Office Hours: Thursdays 14:00-15:00 or by appointment.

Teaching Assistant(s)

Name: Kenda Parsons

E-mail: kenda.parsons@carleton.ca

Office hours: By appointment

Please refer to the Academic Year included in the online <u>Undergraduate</u> calendar to review all statutory holidays, important university dates and other university holidays prior to creating your course outline.

Course Description

In this course we explore the state of the art in digital humanities areas by picking those that are highly relevant to cognitive science. We will be utilizing most important online tools and resources that enhance our understanding of cognition and human actions on modern digital media, with a special focus on open access experimental and cognitive modelling playgrounds.

Readings

The first chapter of the book "The Digital Humanities Coursebook" is required and is available online for free on Taylor & Francis website. Other required reading materials will be made accessible on Brightspace.

Course Web Page (Brightspace)

The course website is located at https://carleton.ca/brightspace/ where you will find the course outline, schedule, several discussion forums, self-assessment devices, updates, course feedback tools, marking rubrics, and a variety of learning exercises and useful links. It includes discussions on weekly topics, links, and embedded contents to be announced each Monday. Recommended books (with fully or partially free access) and free videos and tutorials will be introduced as well. The recommended books and videos can be used for the course activities but will not be directly included in the exams (see below).

Evaluation

Exams will be multiple-choice, from the abovementioned chapter, lecture notes, online and offline presentations, including web activities, our Brightspace discussions about web tools and videos (not the video contents). The exams are not cumulative. The topics and methods for the Assignments and Projects will be provided on time. The assignments will be weekly web-based activities (minimum codings) which can be extended for the two main projects in the form of integrated web materials (upon introducing in the class you will be able to prepare various online contents such as texts, images, and multimedia files with your own digital materials) and submit it through Brightspace (further details will be provided). If a midterm or other main evaluation units are missed, the Department does not support the reweighting of exams (e.g., offering an exam that is worth 100% of the final grade)

| Item | Weight of Grade | Due date |
|--|-----------------|-------------------|
| Weekly Offline and Online Assignments | 30% | Mondays each week |
| Mid-term Exam | 10% | October 11 |
| Final Exam | 25% | Final Exam - TBA |
| Project 1 Writing and other web contents | 15% | November 3 |
| Project 2 - Writing and other web contents | 20% | December 8 |

Lecture Schedule

- 1: Introduction: Digital World as Auxiliaries for Mind (Sep 6th)
 - o Cognitive Science: Biosphere, Infosphere, and Cogsphere
 - o Digital Humanities: Caves, Canvases, and Clouds
 - o Introducing Materials and Activities: Bonus Action
- 2: Mind and Digital Devices (Sep 13th)
 - Cognitive Science: Inputs, Processes, and Outputs
 - o Digital Humanities: MMI, HCI, and BCI
 - Cognitive Science and Digital Humanities in Action I
- **3:** Perception and Action in the Digitalized World (Sep 20th)
 - Cognitive Science: Multi-modal Sensation and Perception
 - o Digital Humanities: Acting on Texts, Images, and Multimedia
 - o Cognitive Science and Digital Humanities in Action II
- **4:** Social Cognition in the Digital Age (Sep 27th)
 - o Cognitive Science: Reward, IQ and EQ in the Virtual Decision Making
 - o Digital Humanities: Digital Social Interfaces and Games
 - o Cognitive Science and Digital Humanities in Action III
- **5:** Digital Knowledge Representation and Memory (Sep 27th) (Oct 4th)
 - o Cognitive Science: Information Encoding, Decoding, and Sharing
 - o Digital Humanities: Hierarchical and Multi-modal Memories
 - Cognitive Science and Digital Humanities in Action IV
- **6:** Digital Information for Exploring and Solving Problems (Oct 11th)

- Cognitive Science: Accessing Digital Information
- o Digital Humanities: Finding and Selecting Relevant Information
- Cognitive Science and Digital Humanities in Action V

7: Digital Realization of the Cognitive Architecture (Oct 18th, precedes Fall Break)

- o Cognitive Science: Adaptation, Imitation, and Conditioning
- o Digital Humanities: Unsupervised, Supervised, and Reinforcement Learning
- Cognitive Science and Digital Humanities in Action VI

8: Communication and Social Interaction in the Digital Humanities (Nov 1st, follows Fall Break)

- o Cognitive Science: Input and Output Modes and Mechanisms
- o Digital Humanities: Offline and Online Interactions
- o Cognitive Science and Digital Humanities in Action VII

9: Cognitive Science Experimentation in the Digital Millenia (Nov 8th)

- o Cognitive Science: Cognitive Experimentations and Interventions
- o Digital Humanities: Digital Cognitive Measurement and Enhancement Tools
- o Cognitive Science and Digital Humanities in Action IIX

10: Cognitive Science Modelling Digital Tools (Nov 15th)

- o Cognitive Science: From Single Neuron to Multi-Agent Models
- o Digital Humanities: Local and Cloud Tools
- Cognitive Science and Digital Humanities in Action IX

11: Digital Data Analysis and Sharing in Cognitive Science (Nov 22nd)

- o Cognitive Science: Cognitive Science Research Data
- o Digital Humanities: Free and Commercial Research Tools
- o Cognitive Science and Digital Humanities in Action X

12: General AI Tools and Issues (Nov 29th)

- o Cognitive Science: Special and General Cognitive Domains
- o Digital Humanities: Special and General Machine Learning
- Cognitive Science and Digital Humanities in Action XI

13: Digital Humanities and Social Media Effects (Dec 6th)

- o Cognitive Science: Human Actions and Reactions on Social Media
- o Digital Humanities: Social Media Posts, Messages, and News
- Cognitive Science and Digital Humanities in Action XII

Policy on Late Assignments

- Indicate late penalties. For example:
 - Late assignments will be penalized at a rate of 10% of the assignment value per day or part day. In the interest of being fair to all students, there will be no grace period. Therefore, a document submitted 1 minute after the deadline will be considered late. Therefore, it is strongly recommended that you upload and submit the document prior to the last few minutes before the deadline. A doctor's note or other medical documentation must be provided within two working days after the due date in order to avoid late penalties. In order to be considered official, all extensions must be obtained in writing from the instructor. If you are running into trouble, it is vital to approach me as soon as possible.

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

Academic Accommodation

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

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, including the uncited use of generative AI tools (e.g., ChatGPT);
- 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.

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 <u>click</u> <u>here</u>.

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, please request your accommodations for this

course through the <u>Ventus Student Portal</u> 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*). Requests made within two weeks will be reviewed on a case-by-case basis. For final exams, the deadlines to request accommodations are published in the <u>University Academic Calendars</u>. 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
- 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/
- -November 15, 2023: Last day for academic withdrawal from full fall and late fall classes
- -March 15, 2024: Last day for academic withdrawal from full winter, late winter and fall/winter courses.

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