CGSC 3908B*:* Honours Seminar in Cognitive Science
Course Outline
Fall/Winter 2019-2020

Class Information
Time: Tuesdays 8:35am-11:25am; Labs: Thursdays 2:35pm-5:25pm
Location: Lectures and Labs both in Dunton Tower 2203
Course prerequisites: Third year standing, CGSC2001 and CGSC2002, and enrolment in B.Cog.Sc. Honours with a CGPA in the major requirements of 8.0.

Instructor Information
Instructor: Dr. Rebecca Merkley
Office: DT 2202
Phone: 613-520-2600 ext 6134
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Office Hours: 12:30pm-2:30pm on Wednesdays or by appointment

Teaching Assistant(s)
Name: Heather Douglas
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Course Description
The main goal of this course is to prepare you to conduct research for your honours thesis. The specific skills you will acquire or practice include:
1. Identifying relevant literature through the use of PsychINFO/PsychArticles, Web of Science, and other resources.
2. Critical analysis of research papers.
3. Designing research, with an emphasis on operationalizing hypotheses and creating stimuli and manipulations to test those hypotheses.
4. Implementation of research studies including ethics applications, collecting and analyzing data.
5. Introduction to statistical software.
6. Writing APA-style research papers.
7. The development of expertise in cognitive science.

Readings
The readings will be selected journal articles and book chapters. These will all be available through CU Learn and/or the library website. The readings are organized by week.
Recommended
- Strunk, W. Jr. & White, E. B. (1999). *The Elements of Style, 4th Edition* by W. Strunk Jr. & E. B. White, Allyn & Bacon. This handy little book will help you become a better writer.

Course Web Page (cuLearn)
The course website is located at: https://carleton.ca/culearn/

On this site you will find the course outline, schedule, grading rubrics, assigned readings, and useful links. We will use the discussion forums to post questions on assigned readings.

Evaluation

Item	Due dates	Weight of Grade
1. Class Attendance and Participation	ongoing	20%
2. Reflection papers (3 x 5%)	Feb – Mar	15%
3. Discussion Lead (once)	Feb – Mar	10%
4. Intro & Method (Draft)	March 3	10%
5. Methods & Results (Revised)	March 24	10%
6. Poster Presentation (group mark)	April 7	10%
7. Research Paper (Final version)	April 25	25%

Participation and Attendance:
Each weekly class includes one or two assigned readings for discussions. Student will be in charge of leading a discussion of papers. You are expected to attend class every scheduled day and to read all assigned papers. Please inform me ahead of time if you will be absent (via email). If you miss more than one class, I will need documentation (i.e., illness) to indicate why you were missing.

This course meets twice a week. Classes, with discussion, will be held on Mondays and labs will be held on Fridays. The Monday meetings will typically start with a brief introductory lecture on various domains of cognitive science research and experimental methods. It will be followed by a discussion of assigned readings. These classes will allow you to develop a deeper understanding of current theory and research in cognitive science and will provide some of the background you will need to formulate research questions for the research projects.

To facilitate in-class discussions, there are five formal requirements. Meeting these requirements will account for a significant portion of your final grade.

1. **Read** assigned articles before coming to class.
2. Submit **discussion questions** (via CULearn) **by noon on Monday**.
3. Attend and **actively participate** in every class.
4. Write three **reflection papers** (see below) per term based on the assigned readings.
5. **Lead** a class discussion once during the term.

You may use a 'no questions asked' 3-day grace period for no more than one assignment. Once that has been used, late assignments without documentation will be docked 10% and late submissions will only be accepted up to one week following the deadline.

Discussion Participation
All students are expected to actively participate in class discussions. By **5pm Sunday**, you must submit one question per paper to the 'Discussion Board' forum for the assigned week on CULearn. Following your submission, you are encouraged to read what other students have posted.

After each seminar class, your class participation will be assessed on a four-point scale: *4 – Class engagement was sustained (4 or more substantive contributions to discussion); 3 – Class engagement was adequate (3-2 substantive contributions to discussion); 2 – Class engagement was minimal (1 substantive contribution to discussion); 1 – Submitted questions but did not participate in discussion; 0 - No evidence that you read the articles/Absent.* Your final class participation grade will be based in large part on an average of these scores. Grades are assigned weekly to provide timely feedback; one or two poor marks will not significantly damage a final participation grade. The one absence rule means that I will drop the lowest of the 8 weekly participation marks. Students missing class for a legitimate reason should still submit to the Discussion Board.

Leading Discussions

Students will lead one seminar discussion. The Discussion Leaders will have 15 minutes for their presentation and 10 minutes for discussion. When presenting a paper, the Discussion Leader should introduce a research question raised in the assigned paper, describe examined hypotheses, describe methodology, cover key findings, discuss theoretical and practical implications. They are also required to introduce new, related ideas by presenting at least one article that was not assigned for reading. You may draw on articles that are cited by or cite the assigned reading.

The presentation of a paper will be followed by its discussion. The Discussion Leader will use the discussion questions that students submitted to cuLearn to stimulate debate, and to coordinate the involvement of all students in active engagement with the major issues raised by assigned readings.

Written Assignments

All written work will be evaluated for content, style, grammar, spelling, and clarity -- and Strunk & White will be helpful in this regard. Furthermore, APA format (i.e., the format for much of the work published in cognitive science journals, as specified by the American Psychological Association) will be required and assessed. Further details will be provided on specific guidelines for presentation and writing. All assignments and papers should be typed and double-spaced with 1 inch (2.54 cm) margins. Pages should be numbered consecutively, starting with the title page. Do not include extra white space between sections. If you want to start a new page, use a hard page break.

All written assignments will be submitted via cuLearn. Marked papers with feedback will be returned to you via email. A grading rubric for all assignments will be available at the course webpage and will be discussed in class.

Reflection Papers

The reflection papers will allow you to practice writing and to organize your thoughts before our class discussions. Reflection papers should summarize one of the papers read for class and explore *one or two main points* in depth. For example, you could question a finding, method, or interpretation, offer an extension or application of an idea, or speculate about the function of a phenomenon. You are encouraged to integrate your personal experience and expertise or consult other sources (appropriately referenced). Please note that you cannot write your reflection paper on the paper you've led the discussion on. Use these papers to explore a reflection, reaction, question, etc. stimulated by the assigned readings. The grading rubric is available via cuLearn.

You are to submit Reflection Paper 1 by the end of week 6. Reflection Paper 2 is to be submitted by the end of week 9 and Reflection Paper 3 by the last day of class. Reflection Papers should be no more than 2 pages and should follow APA style. The reflection papers are due via cuLearn.

Research Project

You will be required to execute and write-up a research project. A list of potential experiments will be provided. You will form small groups of between 3-4 people and choose a project. Groups will implement the experiment and collect the data together and prepare a methods section, however, **each student will hand in a separate paper at the end of the term**. Various aspects of methodology, design, ethics, data collection, and writing will be discussed in the labs and class so that everyone is prepared to complete the project.

1. The group will need to prepare an informed consent and debriefing form that must be approved by the professor before data can be collected.
2. The group will prepare the experiment and administer it to other classmates, friends, etc.
3. The group will enter the data, as directed in the data entry lab.
4. Each individual will participate in the data analysis lab, and analyze their data (descriptive and inferential statistics).
5. Each individual will prepare an APA-style method and results section.
6. Each group will present their findings in the form of a poster presentation, similar to those you would see at academic conferences. The 'poster production' lab will provide all the information students need to prepare a poster.
7. The final paper, complete and in APA format, is due by submitting it through CU Learn on the last day of final exams.

Seminar Schedule

All readings will be made available on cuLearn so please be sure to check cuLearn every week before class.

Week (Date)	Topics
1 (Jan 7)	Intro
2 (Jan 14)	Research Ideas and Hypotheses; Dissecting Journal Articles
3 (Jan 21)	Interdisciplinary Research; Reviewing Literature
4 (Jan 28)	Research Design & Pre-Registration
5 (Feb 4)	Attention; Variables and Measures
6 (Feb 11)	Word and Category Learning
7 (Feb 18)	READING WEEK
8 (Feb 25)	Memory; Sampling
9 (Mar 3)	Data Analysis
10 (Mar 10)	Brain Training
11 (Mar 17)	Numerical Cognition
12 (Mar 24)	Reasoning
13 (Mar 31)	Individual Differences
14 (Apr 7)	Poster Presentations

This schedule is to be regarded as tentative.

Lab Schedule
Laboratory sessions are compulsory and will be held during the Friday time slot. The teaching assistant will conduct the labs. A schedule for lab activities will be provided but may be modified or updated during the course.

Students are required to complete the TCP 2 On line Ethics Tutorial. Ethics will be discussed in the first lab. As noted, please use your Carleton Email when you are completing the tutorial. When you have finished it, provide a copy of the completion certificate to the TA.
http://www.pre.ethics.gc.ca/eng/education/tutorial-didacticiel/

Week (Date)	Topics
1 (Jan 9)	Ethics
2 (Jan 16)	Experimental Design
3 (Jan 23)	APA Style / Experimental Design
4 (Jan 30)	Writing an Introduction and Methods
5 (Feb 6)	Data Collection Lab
6 (Feb 13)	Data Collection Lab
7 (Feb 20)	Reading Week
8 (Feb 27)	Data Collection
9 (Mar 5)	Data Analysis
10 (Mar 12)	Data Analysis
11 (Mar 19)	Writing Results and Discussion
12 (Mar 26)	Poster Preparation
13 (Apr 1)	Poster Preparation and Writing

Additional Information

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 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, here:
https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/

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: 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 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/

For a list of dates and deadlines, including holidays and exam dates, please visit:
https://carleton.ca/registrar/registration/dates-and-deadlines/