Cognition in the Digital Age

PSYC 420 | Winter 2024

Course Information

Drop-in Times / Location: Information available via onQ

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Course Format: On campus, in person

Course Prerequisite: PSYC 221 Cognitive Psychology

Course Credits: 3.0

Course Description:

"I believe in the future of AI changing the world. The question is, who is changing AI?"

– Dr. Fei-Fei Li
Professor of Computer Science at Standford University
Co-Director of the Stanford Human-Centered AI Institute
Co-Founder of AI4ALL

From the initial advent of the internet to the increased availability of smartphones to the recent explosion of artificial intelligence, technology has undoubtedly become embedded into every aspect of our lives. Although these technologies are widely embraced as a means of improving, augmenting, and streamlining day-to-day behaviour, they raise intriguing questions about how our cognitive system resolves information in this new digital age.

This course will draw links between different cognition processes (e.g., attention, memory, decision-making) and various technological innovations (e.g., video games, social media, fake news, AI) to explore the symbiotic relationship that exists between the two. These links will allow us to meaningfully understand how our cognitive processes make sense of the digital age and how the digital age evolves to capitalize on our cognitive capabilities.

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1. Land Acknowledgement

Queen's University currently occupies traditional Anishinaabe and Haudenosaunee territory. We acknowledge this traditional territory to recognize its longer history as one that predates the establishment of the earliest European colonies and recognize its significance for the Indigenous Peoples who lived and continue to live upon it and whose practices and spiritualties are tied to the land and continue to develop in relationship to the territory and its other inhabitants today. Indigenous communities in Kingston / Katarokwi continue to reflect the area's Anishinaabe and Haudenosaunee roots, and there is significant Métis community and First Peoples from other Nations across Turtle Island present here today.

This land acknowledgement has been included in this syllabus not to absolve Queen's University of its prior and current wrongs, but to recognize that colonialism does not exist in the past or in a historical context. It is an ongoing process, and as members of the Queen's community, we have a responsibility to understand the longstanding history that has brought us to reside on this land and to build our mindfulness of our place within that history. As we continue to work towards justice in solidarity with Indigenous Peoples, and all those whose land, labour, and knowledge has been unjustly stolen or marginalized, I invite you to:

- Learn more about the final report of Queen's Truth and Reconciliation Commission Task Force detailing how members of the Queen's community can play an active role in relationship building, changing perspectives and policy, and promoting an awareness of the rights, histories, and contemporary issues of Indigenous Peoples.

- Explore the website Stones Kingston to learn about the various cultural communities that have been a part of the city and have contributed to its history over the years.

2. Statement on Equity, Diversity, & Inclusivity

The values of equity and diversity are vital to and in harmony with Queen's University's educational mission and standards of excellence. It acknowledges that direct, indirect, and systemic discrimination and violence exists within our institutional structures, policies, and practices and in our community. This discrimination and violence can take many forms and works to differentially advantage and disadvantage persons across social identities such as race, ethnicity, disability, gender identity, sexual orientation, faith, and socioeconomic status, among other examples.

In this course, it is my goal to ensure that all students across all backgrounds have an ideal learning experience where they feel heard, valued, respected, and welcome. As such, I will not tolerate discrimination or violence of any kind against any student of the course, and I expect every student to show respect for every other student as well. I firmly believe that we are stronger and better equipped to solve problems when we work on them together, and I aim to promote an anti-discriminatory, anti-racist, and accountable environment during our time together.

3. Course Learning Goals

There are five overarching learning goals for this course:

1. Understand the components of cognitive models & frameworks that link structure and behaviour for processes like attention, memory, and decision-making.
2. Understand the history of digital technologies & software from ARPANET to Generative-AI, and the various platforms that have evolved during this information age.
3. Draw links between cognitive models & frameworks and digital technologies & software to gain a deeper understanding of how human cognition unfolds in the digital world.
4. Recognize the ethical complexities that are borne from the digital age and the role that cognitive scientists can play to account for bias, discrimination, and fairness for individuals, communities, and societies.
5. Build depth in critical reading, thinking, analytical, and writing skills and demonstrate this depth across academic and policy spheres.

4. Course Assessment Methods

To evaluate your progress across the five overarching learning goals, the following assessment methods will be used during the course:

Assessment Methods	% of Grade	Alignment to Course Learning Goal				
		1	2	3	4	5
Weekly Seminar	-	✓	✓	✓	✓	✓
Thought Questions	28%	✓	✓			✓
Group Brainstorms	35%			✓	✓	✓
Policy Brief: Outline	10%	✓	✓	✓		✓
Policy Brief: Final Report	25%	✓	✓	✓	✓	✓
Course Reflection	2%			✓	✓	✓
Feedback Activities	-					

Weekly Seminar

Each week, we will meet for our seminar. Week 1 will provide an overview of the course with detailed explanations of its various components. Weeks 2

and 3 will detail specific aspects of cognition and the digital age that we will use as a foundation for the rest of the course. Weeks 4 to 12 will then focus on a particular cognitive process in the context of the technologies and software that we live with as a way of understanding human cognition in our current digital environment. Week 12 is an open topic and will be decided based on your collective interests.

Each week, readings (e.g., journal articles, tech papers, popular science columns) will be assigned to facilitate your understanding of the topic being discussed. It is highly recommended that you attend seminars having read the assigned readings for that week, and I highly encourage you to not fall behind on the schedule since readings do build upon one another as the course progresses. All readings can be found in the Course Timeline and are accessible via online sources (e.g., Omni, PubMed, author's website). If you have difficulty finding a reading, please reach out to your colleagues on the discussion board via onQ.

Your presence and participation in weekly seminars, through active engagement, class discussion, and group brainstorming activities, will contribute to the knowledge and skills you will develop in this course. Although you are expected to attend weekly seminars in person every week, **no marks will be provided for your attendance**. If you miss class, I will assume it is for a good reason. However, do note that the weekly seminars cannot be offered in a hybrid format, so if you do miss class but still want insight into the weekly topic, I recommend identifying other students in the course who can share their notes and thoughts with you.

Thought Questions [28%]

For Weeks 4 to 12, you will be asked to submit one thought question per assigned reading as a way to individually reflect on the topic of the week and to make connections across the course. Thought questions can capture, for example, what you thought about the reading, a theoretical question you had, a critique of the methods / analysis used, a musing about a discussion point, or a possible future study idea. What you choose to focus on is up to you.

Thought questions are meant to be brief (i.e., **2-3 sentences long**). You will submit your thought questions via onQ and they will be **due at 4pm prior to the weekly seminar** in order to facilitate engagement and critical thinking (e.g., thought questions for our Tuesday, January 30th seminar on "Divided attention & Media multitasking" will be due on Friday, January 26th).

There are a total of 9 Thought Question weeks for the course, and only your **best 7 grades out of a possible 9** will be counted towards your final grade in the course.

Group Brainstorms [35%]

For Weeks 4 to 12, you will be randomly paired with other students of the course to engage in a group brainstorming session as a way to collectively answer the question of what should be studied next in the topic of the week. Group brainstorms are meant for you to demonstrate your knowledge of the course, generate new study ideas, think about study feasibility (both in terms of the logistics

and the ethics of data collection and digital privacy), and why your study question is an important and timely one to answer. What you choose to focus on will be up to you and your group.

Once your group has finished brainstorming, you will work together to give a brief presentation of your study proposal (i.e., **5-10 minutes long**) in order to practice your ability to synthesize your thoughts and ideas. After this, we will have a Q&A and discussion of your group's idea to allow you to think critically about your study proposal and what we might be missing from our topic of the week. Group brainstorm sessions will occur **during our weekly scheduled seminar time**. Detailed instructions for group brainstorms will be provided via onQ.

There are a total of 9 Group Brainstorm sessions for the course, and only your **best 7 grades out of a possible 9** will be counted towards your final grade in the course.

Policy Brief: Outline [10%]

Within government, a policy brief is an official document that details an issue impacting society and proposes specific recommendations to address it. These briefs typically serve two goals: to assist policy makers by providing resources that allow them to make informed decisions and to educate the broader public about a topic they may not be familiar with. In this way, policy briefs are similar to short review papers but they have a particular point of view that they argue for.

In this course, you will be asked to apply the knowledge and skills that you have gained in critically assessing cognition in the digital age to write a policy brief. This will involve you proposing why you as a cognitive scientist would or would not regulate a specific digital technology or software. This regulation could be about whether a particular digital technology or software should be banned, available for use, allowed in specific circumstances, or amended for better safeguards. For example, you could write a policy brief about why smartphones should be banned in classrooms, but keep in mind that you must focus your perspective from a cognitive science framework (e.g., "smartphones can result in individuals dividing their attention, of which several studies show XYZ").

On Week 7, you will be asked to submit an outline of your proposed policy brief as a way to reflect on the different components of your final report. The outline will ask you to:

- Identify a specific digital technology or software.
- Outline the cognitive processes that we use to resolve it.
- List the benefits, costs, and ethical considerations of this digital technology or software on how our cognitive processes function.
- Decide whether you would regulate any aspect of it.

Detailed instructions for the outline of your policy brief will be provided via onQ. Feedback will also be provided to help you structure your final paper.

The outline of your policy brief is meant to be a short summary (i.e., **1 page maximum**). You will submit your outline via onQ **before Friday, March 1st at 4pm** in order to give you sufficient time to craft your final report.

Policy Brief: Final Report [25%]

On Week 12, you will be asked to submit your final policy brief as a way to extrapolate your knowledge of the course topics into a policy setting. The final report will ask you to:

- Introduce a specific digital technology or software, detailing its history and evolution.
- Discuss the scientific evidence of how our cognitive processes resolve the use of this digital technology or software.
- Present an argument about the benefits, costs, or ethical considerations of this digital technology or software on how our cognitive processes function.
- Propose recommendations on whether you would regulate any aspect of it.
- Discuss why it is important and timely to do so.

Although it is expected that you would use your work from the outline to craft your final report, you are free to pick a different digital technology or software if you would like. Detailed instructions for your final policy brief will be provided via onQ.

The final policy brief is meant to be a full-sized report (i.e., **10 pages maximum**). You will submit your final report via onQ **before Friday, April 5th at 4pm**. You also have the option to submit your policy brief one week earlier on Friday, March 29th at 4pm if you would like to receive feedback on what you have so far. This feedback can be incorporated into your final policy brief to improve your overall submission.

Course Reflection [2%]

At the end of the course, as you decompress from the semester, it is important to reflect on the knowledge gained, skills developed, and learning processes experienced across our weeks together as a way of understanding your growth as a scholar. I have often found that this long view can help crystallize what stood out most to you in the course and how you might use what you learned in the future.

At the end of Week 12, you will be asked to submit a course reflection on whether your perspective or understanding of cognition in the digital age has been changed, challenged, reinforced, or deepened due to this course. I encourage you to think about whether you encountered any high points or challenging moments, and you can use this as a starting point for your course reflection. There are no right or wrong answers. What you choose to focus on is up to you.

The course reflection is meant to be a short summary (i.e., **150-250 words**). You will submit your reflection via onQ **before Monday, April 8th at 4pm**.

Feedback Activities

At various points during the course, you may be asked to take part in feedback activities, such as surveys and questionnaires. This feedback will give me a real-time sense for how things are

progressing in the course, which will be used to improve the overall structure of the course for future cohorts.

All feedback activities will be submitted via onQ, though **no marks will be provided for your response**. Feedback activities are optional and completely anonymous.

Assessment Methods	% of Grade	Due Date
Weekly Seminar	-	-
Thought Questions	28%	Fridays at 4pm, before the scheduled seminar
Group Brainstorms	35%	Tuesdays at the end of seminar
Policy Brief: Outline	10%	Friday, March 1st at 4pm
Policy Brief: Final Report	25%	Friday, April 5th at 4pm [Optional Submission: Friday, March 29th at 4pm]
Course Reflection	2%	Monday, April 8th at 4pm
Feedback Activities	-	[As needed]

5. Course Assessment Flexibility

Most of the assessment methods in this course have been designed with flexibility for academic consideration for all students. For Thought Questions, Policy Brief: Outline, and Policy Brief: Final Report, all students can take an additional 3 days to complete these assessments if required, with no need for academic consideration or accommodation. This 3-day "grace period" ends on different days depending on the assessment method:

- For Thought Questions, the grace period ends on Mondays at 4pm.
- For Policy Brief: Outline, the grace period ends on Monday, March 4th at 4pm.
- For Policy Brief: Final Report, the grace period ends on Monday, April 8th at 4pm.

The only two assessment methods where a grace period cannot be included are:

- For Group Brainstorms, due to the interactive nature of these sessions.
- For Course Reflection, due to the need for self-reflection after the final policy brief.

In addition to 3-day extensions, although there are 12 weeks of weekly seminars, of which there will be 9 weeks where Thought Questions and Group Brainstorms can be graded. In these instances, only your top 7 grades will count towards your final grade in the course. This allows for 2 weeks where, if the grace period is not sufficient, you do not need to submit work.

These flexible design features means that "Short term Requests for Academic Consideration" (submitted through the Faculty of Arts and Science portal without documentation) are not needed and long-term requests will be handled on a case-by-case basis, if needed.

6. Course Timeline

Note: Our course timeline might be subject to change. In particular, there may be substitutions or additions to the list of readings for a week. Any changes will be announced during weekly seminar and via onQ.

#	Week	Topic & Readings
Introduction & Historical Context		
1	Jan 9th	Course Overview • Welcome & introductions • Explanation of course content and assessment methods
2	Jan 16th	The Interconnectedness of Cognition • Styles, E. A. (2005). Introduction. In E. A. Styles (Ed.), *Attention, perception, and memory: An integrated introduction* (pp. 1-10). New York, NY: Psychology Press. • Pessoa, L. (2022). From one area at a time to networked systems. In L. Pessoa (Ed.), *The Entangled Brain: How perception, cognition, and emotion are woven together* (pp. 1-14). Cambridge, MA: MIT Press.
3	Jan 23rd	The Progression of the Digital Age • Ortiz-Ospina, E. (2019). The rise of social media. Published online at *OurWorldInData.org*. Retrieved: https://ourworldindata.org/rise-of-social-media. • Roser, M. (2022). The brief history of artificial intelligence. Published online at *OurWorldInData.org*. Retrieved: https://ourworldindata.org/brief-history-of-ai. • Costanza-Chock, S., Raji, I. D., & Buolamwini, J. (2022). Who Audits the Auditors? Recommendations from a field scan of the algorithmic auditing ecosystem. In *Proceedings of the Conference on Fairness, Accountability, & Transparency*, 1571-1583.
Attention		
4	Jan 30th	Divided attention & Media multitasking • Finley, J. R., Benjamin, A. S., & McCarley, J. S. (2014). Metacognition of Multitasking: How well do we predict the costs of divided attention? *Journal of Experimental Psychology: Applied, 20*(2), 158-165. • Wang, Z., & Tchernev, J. M. (2012). The "Myth" of Media Multitasking: Reciprocal dynamics of media multitasking, personal needs, and gratifications. *Journal of Communication, 62*, 493-513.

5	Feb 6th	Sustained attention & Social media • Firth, J., et al. (2019). The "online brain": How the Internet may be changing our cognition. *World Psychiatry, 18*(2), 119-129. • Malkovsky, E., et al. (2012). Exploring the relationship between boredom and sustained attention. *Experimental Brain Research, 221*, 59-67.
6	Feb 13th	Attentional resources & Autonomous vehicles • Calder, S. (2023). Self-driving cars and buses: Your guide to the future of autonomous vehicles. Published online at *The Independent UK*. Retrieved: https://www.independent.co.uk/travel/news-and-advice/self-driving-cars-buses-autonomous-vehicles-b2413681.html. • Figalová, N., et al. (2024). From Driver to Supervisor: Comparing cognitive load and EEG-based attentional resource allocation across automation levels. *International Journal of Human-Computer Studies, 182*, 103169.
	Winter Reading Week – NO CLASS	
Memory		
7	Feb 27th	Working memory & Virtual environments • Doheny, M.M., & Lighthall, N.R. (2023). Social cognitive neuroscience in the digital age. *Frontiers in Human Neuroscience, 17*, 1168788. • Fauville, G., et al. (2023). Video-conferencing usage dynamics and nonverbal mechanisms exacerbate Zoom Fatigue, particularly for women. *Computers in Human Behavior Reports, 10*, 100271.
8	Mar 5th	Memory stores & Deep fakes • Weikmann, T., & Lecheler, S. (2023). Visual disinformation in a digital age: A literature synthesis and research agenda. *New Media & Society, 25*(12), 3696-3713. • Liv, N., & Greenbaum, D. (2020). Deep Fakes and Memory Malleability: False memories in the service of fake news. *AJOB Neuroscience, 11*(2), 96-104.
Decision-Making		
9	Mar 12th	Problem solving & Large language models • Dickson, B. (2021). Why we must be careful about how we speak of large language models. Published online at *VentureBeat*. Retrieved: https://venturebeat.com/ai/why-we-must-be-careful-about-how-we-speak-of-large-language-models/. • Binz, M., & Schulz, E. (2023). Using cognitive psychology to understand GPT-3. *Proceedings of the National Academy of Sciences of Sciences of the United States of America, 120*(6), e2218523120.

10	Mar 19th	Analytical thinking & Fake news • Pennycook, G., & Rand, D. G. (2021). The Psychology of Fake News. *Trends in Cognitive Sciences, 25*(5), 388-402. • Ecker, U. K., et al. (2022). The psychological drivers of misinformation belief and its resistance to correction. *Nature Reviews Psychology, 1(*1), 13-29.
11	Mar 26th	Collective cognition & Collective action • Decety, J., & Yoder, K. J. (2016). Empathy and motivation for justice: Cognitive empathy and concern, but not emotional empathy, predict sensitivity to injustice for others. *Social Neuroscience, 11*(1), 1-14. • Theiner, G., Allen, C., & Goldstone, R.L. (2010). Recognizing group cognition. *Cognitive Systems Research, 11*(4), 378-395.
12	Apr 2nd	Open Topic • To be decided

7. Course Calendar

January

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

March

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Seminar | Thought Questions | Group Brainstorm | Policy Brief | Course Reflection

8. Grading Scheme

All assessment methods for this course are designed to reward your effort, promote your independent discovery, and encourage your growth as scholars. For each assessment method, you will receive a numerical percentage mark, with the final grade being derived by converting your numerical course average to a letter grade according to Queen's Official Grade Conversion Scale:

Letter Grade	Average Range
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

9. Accommodations for Disabilities

Queen's University is committed to working with students with disabilities to remove barriers to their academic goals. Queen's Student Accessibility Services (QSAS), students with disabilities, instructors, and faculty staff work together to provide and implement academic accommodations designed to allow students with disabilities equitable access to all course material (including in-class as well as exams). If you are a student currently experiencing barriers to your academics due to disability related reasons and you would like to understand whether academic accommodations could support the removal of those barriers, please visit the QSAS website to learn more about academic accommodations or start the registration process with QSAS by clicking *Access Ventus* button at Ventus | Accessibility Services | Queen's (queensu.ca).

VENTUS is an online portal that connects students, instructors, Queen's Student Accessibility Services, the Exam's Office, and other support services in the process to request, assess, and implement academic accommodations. To learn more, go to: https://www.queensu.ca/ventus-support/students/visual-guide-ventus-students. If you have any questions regarding the implementation of your accommodations in this course, please contact:

- **Accommodations Assistant:** Tara Karasewich
- **Accommodations Assistant:** psyc.accom@queensu.ca

10. Academic Consideration for Students in Extenuating Circumstances

Academic Consideration is a process for the University community to provide a compassionate response to assist students experiencing unforeseen, short-term extenuating circumstances that may impact or impede a student's ability to complete their academics. This may include but is not limited to:

- Short term physical or mental illness or injury (stomach flu, anxiety / depression, mononucleosis, concussion, broken bones, surgery, medical treatments, etc.)
- Traumatic event / confidential (bereavement, serious injury, illness or required treatment for a significant other / family member or a traumatic event such as divorce, sexual assault, social injustice, etc.)
- Requirements by law or public health authorities (court dates, jury duty, requirements to isolate, etc.)
- Significant event (varsity athletic event, distinguished event, serving in the Reserve Forces, etc.)

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances. For more information, please see the Senate Policy on Academic Consideration for Students in Extenuating Circumstances.

Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. For more information, undergraduate students in the Faculty of Arts and Sciences should consult the Faculty's webpage on Academic Consideration in Extenuating Circumstances and submit a request via the Academic Consideration Request Portal. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

If you need to request academic consideration for this course, you will be required to provide the name and email address of the instructor / coordinator. Please use the following contact information:

- **Instructor/Course Coordinator Name:** Tara Karasewich
- **Instructor/Course Coordinator Email Address:** psyc.accom@queensu.ca

Students are encouraged to submit requests as soon as the need becomes apparent and to contact the instructor / course coordinator as soon as possible once academic consideration has been granted. Any delay in contact may limit the options available for academic consideration.

For more information on the Academic Consideration process, what is and is not an extenuating circumstance, and to submit an Academic Consideration request, please see the Faculty of Arts and Science's Academic Consideration website.

11. Academic Support

All undergraduate students face new learning and writing challenges as they progress through university: essays and reports become more complex; effectively incorporating research into writing

becomes more important; the types of assignments become more diverse; managing your time and developing the skills you need to read and think critically gets more challenging. If you face any challenges in this course, I encourage you to contact Student Academic Success Services (SASS). SASS offers many different ways to receive support:

- Free online or in-person appointments to get personalized support on writing and academic skills from expert staff and trained peers.
- Workshops and drop-in programs. SASS' Events Calendar lists events coming soon.
- Online resources that provide strategies for academic skills and writing development at university.
- If English is not your first language, SASS has specific resources for English as Additional Language students, including weekly programs and EAL academic skills appointments. You can meet on an ongoing basis with an EAL consultant to work on your academic writing, speaking, listening, and reading skills.

12. Academic Integrity

Queen's University is dedicated to creating a scholarly community free to explore a range of ideas, to build and advance knowledge, and to share the ideas and knowledge that emerge from a range of intellectual pursuits. Queen's students, faculty, administrators and staff therefore all have responsibilities for supporting and upholding the fundamental values of academic integrity. Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect, and responsibility, and by the quality of courage. These values and qualities are central to the building, nurturing, and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University.

The following statements from "The Fundamental Values of Academic Integrity" (2nd edition), developed by the International Center for Academic Integrity (ICAI), contextualize these values and qualities:

- **Honesty:** Academic communities of integrity advance the quest for truth and knowledge through intellectual and personal honesty in learning, teaching, research, and service.
- **Trust:** Academic communities of integrity both foster and rely upon climates of mutual trust. Climates of trust encourage and support the free exchange of ideas which in turn allows scholarly inquiry to reach its fullest potential.
- **Fairness:** Academic communities of integrity establish clear and transparent expectations, standards, and practices to support fairness in the interactions of students, faculty, and administrators.
- **Respect:** Academic communities of integrity value the interactive, cooperative, participatory nature of learning. They honor, value, and consider diverse opinions and ideas.
- **Responsibility:** Academic communities of integrity rest upon foundations of personal accountability coupled with the willingness of individuals and groups to lead by example, uphold mutually agreed-upon standards, and take action when they encounter wrongdoing.

- **Courage**: To develop and sustain communities of integrity, it takes more than simply believing in the fundamental values. Translating the values from talking points into action – standing up for them in the face of pressure and adversity – requires determination, commitment, and courage.

Students are responsible for familiarizing themselves with and adhering to the Senate regulations concerning academic integrity, along with Faculty or School specific information. Departures from academic integrity include, but are not limited to, plagiarism, use of unauthorized materials, facilitation, forgery, and falsification. Actions which contravene the regulation on academic integrity carry sanctions that can range from a warning, to loss of grades on an assignment, to failure of a course, to requirement to withdraw from the university.

Queen's Student Academic Success Services (SASS) offers a self-directed, online academic integrity module, which I encourage all students to take which will help with:

- Understanding the nature of the academic integrity departure
- Understanding the expectations of and role of sources in scholarly writing
- Integrating sources into your writing (paraphrasing, quoting, summarizing)
- Understanding when and how to cite your sources
- Managing your time effectively to avoid the need for shortcuts
- Taking effective notes to ensure accuracy of source material and correct attribution

13. Guidelines for Discussion

Universities are a place to share, question, and challenge ideas. Each student brings a different set of lived experiences, and you are more than welcome to draw on your own experiences to guide your discussion. To create a respectful classroom community that will allow us all to learn from one another, please consider the following guidelines:

- Make a personal commitment to learn about, understand, and support your colleagues.
- Assume the best of others and expect the best of them.
- Recognize and value the experiences, abilities, and knowledge each person brings to the course.
- Acknowledge the impact of oppression on other people's lives and make sure your words and tone are respectful and inclusive.
- Encourage others to develop and share their ideas.
- Pay close attention to what your colleagues say /write before you respond. Think through and re-read what you have written before you post anything online or send your comments to others.
- Be open to having your ideas challenged and challenge others with the intent of facilitating growth.
- Look for opportunities to agree with one another, building on and intentionally referencing your colleagues' thoughts and ideas; disagree with ideas without making personal attacks, demeaning, or embarrassing others.

14. Statement on Generative Artificial Intelligence (AI) Tools

My typical policy on generative AI writing tools like ChatGPT, Scribe, and Jasper has always been that are not prohibited in my courses, but that student must cite any and all material that these tools generate.

However, in December 2023, the New York Times filed a lawsuit against OpenAI (i.e., the creator of ChatGPT) providing quite compelling evidence that generative AI is directly copying large swaths of text rather than "generating" its own (for more information, see this summary from CBC Business and an excellent perspective from Cecilia Ziniti, a lawyer specializing in issues of Intellectual Property Rights and AI). This is a common "overfitting" problem that can occur with neural networks (and we will discuss these concepts further during Weeks 8 and 9), but given this new information, the use of generative AI writing tools would constitute as plagiarism.

For these reasons, my policy has now changed. For this course, **using generative AI writing tools in your submitted work is not permitted** and its use will constitute a Departure from Academic Integrity. Only original work, completed wholly by you, is expected to be submitted in this course.

15. Statement on Turnitin software

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments via onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarized text in this course. Data from submissions is also collected and analyzed by Turnitin for detecting Artificial Intelligence (AI)-generated text. These results are not reported to me as your course instructor at this time but could be in the future.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. The similarity report generated after an assignment file is submitted produces a similarity score for each assignment. A similarity score is the percentage of writing that is similar to content found on the internet or the Turnitin extensive database of content. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process.

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16. Copyright of Course Material

Course materials created by me as your course instructor, including slides, presentations, handouts, tests, exams, and other similar course materials, are the intellectual property of the instructor. It is a departure from academic integrity to distribute, publicly post, sell, or otherwise disseminate an instructor's course materials or to provide an instructor's course materials to anyone else for distribution, posting, sale, or other means of dissemination, without the instructor's express consent. Any student who engages in such conduct may be subject to penalty for a Departure from Academic Integrity and may also face adverse legal consequences for infringement of intellectual property rights.