

COGS 401: Seminar in Cognitive Systems (3 Credits)

Instructor: Gloria Mellesmoen (gloria.mellesmoen@ubc.ca)

Office Hours: Thursdays 11:00-11:45 (**location TBA**)

TA: Laura Bickel (lbickel@mail.ubc.ca)

TA Office Hours: by appointment

Land Acknowledgement

The University of British Columbia is located on the traditional, ancestral and unceded territories of the xʷməθkʷəy̓əm, Skwxwú7mesh, and Səlilwətał Nations (Vancouver campuses) and the Syilx peoples (Okanagan campus). This land acknowledgment is an opportunity to show a commitment towards reconciliation and the recognition of Indigenous peoples and languages. Please visit <https://native-land.ca> or <https://maps.fpcc.ca/> to learn more about these places, peoples, and languages.

Official UBC Course Description

Interdisciplinary seminar integrating theory, methods, and current research topics.

Learning Outcomes

Students will learn about ongoing research programs related to cognitive systems, which will cover various aspects of cognition, behaviour, and language; these topics will be explored from different perspectives, such as considering different methodologies (fMRI) and ethical considerations (neuroethics). The presentations, discussions, and assessments throughout term will build skills needed for participating and conducting research in the relevant fields and further prepare students for COGS 402, where students must complete a research project. By the end of the course, students will be able to:

- Engage with research from different disciplines and participate in Q&A discussion with experts in those fields.
- Critically engage with ongoing research by identifying research questions, hypotheses, key arguments, methods, results, interpretation, and larger implications.
- Summarise research clearly and concisely in both written and oral formats.
- Collaborate with classmates by leading and participating in student-led discussion.
- Write a proposal for a project that synthesises existing literature, states a clear research question, proposes methods, and considers the interpretation/implications of possible results.
- Prepare for a directed studies project in COGS 402.

Prerequisites for COGS 401

COGS 300 is a pre-requisite for COGS 401.

Course Delivery

Classes will be held in-person Tuesday and Thursdays 9:30-11:00. Participation in class is worth 15% of your final grade. Classes are a combination of guest lectures, discussion, and student presentations:

GUEST LECTURES (G): A researcher in the field will give a guest lecture for the first 45 minutes of class, followed by a Q&A period. Students are expected to have completed the assigned reading prior to this lecture; participation will be based on engagement in the Q&A period.

DISCUSSIONS (D): Students will lead activities and discussion in the class, based on the assigned reading and presentations. Participation will be based on engagement with the activities and discussion proposed by the student leaders. Quality of participation in student-led activities and discussions will be considered.

PRESENTATIONS (P): Students will give two presentations during the term.

Elements of the Class

Assessments in COGS 401 are divided into three categories: reflection, communication, and research. Instructions and further guidance will be provided for each element. Journal entries and the proposal are due by midnight on the assigned dates, all other assessments must be submitted before class on the due date.

REFLECTION:

RESEARCH JOURNAL (28%)

Students will document their process of identifying a topic and working on their proposal. Students will submit these reflections (for completion) at various points throughout the term. Mid-semester, students will give a flash talk that showcases their current ideas and prepare a mind map that shows what ideas they have for topics, hypotheses, background literature, and methodologies. Students will give provide peer feedback to two classmates. The final research journal will be submitted alongside the final proposal. The goal of the research journal is to support the development of ideas prior to writing the proposal.

COMMUNICATION:

GROUP-LED DISCUSSION (20%)

Students will lead one discussion class as part of a group. This will require summarising the paper and main points from the guest lecture. Groups will come up with questions and activities to guide the class based on the topic of the guest lecture. Students who are not presenting are expected to submit a question for the presenter and about the paper in advance each week.

RESEARCH**RESEARCH: PROPOSAL (35%)**

Students will write a research proposal that contains an overview of the relevant literature pertaining to their chosen research topic, as well as proposing research questions, methodology, and discussing potential outcomes and implications of the research.

Assessments and Grading

21%	Group-Led Discussion	33%	Proposal
15%	Leading Discussion	8%	Presentation
6%	Reading Questions	25%	Proposal
29%	Research Journal	17%	Participation
10%	Journal Entries	15%	Class Participation
14%	Mindmap and Peer Feedback	2%	Research Outside the Classroom
5%	Flashtalk		

Course Schedule

Week	Date	Topic	Tasks (Reading/Due Dates)
Week 1	September 5	Introduction to COGS 401	
Week 2	September 10	G1: Laura Bickel (Philosophy)	<i>Read: Wittmann et. al. (2007)</i> DUE: Qs FOR G1/D1 DUE: SCHEDULING QUIZ
	September 12	D1:	DUE: JOURNAL ENTRY #1
Week 3	September 17	G2: Dr. Molly Babel (Linguistics)	<i>Read: Lloy et. al. (2024)</i> DUE: Qs FOR G2/D2
	September 19	D2:	DUE: JOURNAL ENTRY #2
Week 4	September 24	G3: Dr. Todd Woodward (Psychiatry)	<i>Read: Aguirre (2003)</i> DUE: Qs FOR G3/D3
	September 26	D3:	DUE: JOURNAL ENTRY #3
Week 5	October 1	G4: Dr. Catharine Rankin (Psychology) <i>** reading still to be confirmed **</i>	<i>Read: TBD</i> DUE: Qs FOR G4/D4
	October 3	D4:	DUE: JOURNAL ENTRY #4
Week 6	October 8	G5: Dr. Darko Odic (Psychology)	<i>Read: Odic & Starr (2018)</i> DUE: Qs FOR G5/D5
	October 10	D5:	DUE: JOURNAL ENTRY #5
Week 7	October 15	P1: Flash Talks, Day 1	DUE: MIND MAP
	October 17	P2: Flash Talks, Day 2	
Week 8	October 22	G6: Dr. Ève Poudrier (Music)	<i>Read: TBA</i> DUE: Qs FOR G6/D6
	October 24	D6:	
Week 9	October 29	P3: Flash Talks, Day 3	

	October 31	Mid-Semester Check-In class	DUE: PEER FEEDBACK
Week 10	November 5	G7: Dr. Anne-Michelle Tessier (Linguistics)	<i>Read: Tessier (2017)</i> DUE: Qs FOR G7/D7
	November 7	D7:	DUE: JOURNAL ENTRY #6
Week 11	November 12	Midterm Break (November 11-13)	
	November 14	D8:	<i>Read: Hammerly et al. (2022)</i> DUE: Qs FOR G8/D8
Week 12	November 19	G8: Dr. Christopher Hammerly (Linguistics)	DUE: JOURNAL ENTRY #7
	November 21	P4: Final Presentations	
Week 13	November 26	P5: Final Presentations	
	November 28	G9: Dr. Judy Illes (Neurology)	<i>Read: Illes (2023)</i> DUE: Qs FOR G9/D9
Week 14	December 3	D9:	
	December 5	P6: Final Presentations	DUE: CONFIRMATION OF RESEARCH PARTICIPATION
	December 12		DUE: PROPOSAL

Grading Policies

UBC faculties, departments, and schools reserve the right to scale grades to maintain equity among sections and conformity to university, faculty, department, or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed. Grades are not official until they appear on a student's academic record. Students may request regrading on any assessment by the instructor, but the outcome may be an increase, a decrease, or no change to the total grade on the full assignment.

Grading Scale

A+	90%-100%	C+	64%-67%
A	85%-89%	C	60%-63%
A-	80%-84%	C-	55%-59%
B+	76%-79%	D	50%-54%
B	72%-75%	F	<50%
B-	68%-71%		

Assigned Readings and Course Material

An assigned reading accompanies each guest lecture. All course materials will be made available on Canvas. Students are expected to have read the assigned reading prior to the guest lecture. This list will be updated throughout the term to reflect any changes in

presenter availability. In the event of a last-minute change to the reading list, students writing summaries will be given an option between the original and a new article.¹

Aguirre, G. K. (2003). Functional imaging in behavioral neurology and cognitive neuropsychology. In T. E. Feinberg, and M. J. Farah (eds.). *Behavioral Neurology and cognitive neuropsychology*: 85–96.

Hammerly, C., Staub, A., & Dillon, B. (2022). Person-based prominence guides incremental interpretation: Evidence from obviation in Ojibwe. *Cognition*, 225, 105122.

Illes, J. (2023). Environmental Neuroethics for Global Neuroscience. *Journal of Neuroscience*, 43(49), 8272–8274.

Lloy, L., Patil, K. N., Johnson, K. A., & Babel, M. (2024). Language-general versus language-specific processes in bilingual voice learning. *Cognition*, 250, 105866.

Odic, D., & Starr, A. (2018). An introduction to the approximate number system. *Child Development Perspectives*, 12(4), 223-229.

Tessier, A. (2016). Early phonology: The shapes of syllables. In *Phonological acquisition: Child language and constraint-based grammar*. Bloomsbury Publishing: 51–92.

Wittmann, M., Leland, D. S., Churan, J., & Paulus, M. P. (2007). Impaired time perception and motor timing in stimulant-dependent subjects. *Drug and Alcohol Dependence*, 90(2-3), 183–192.

TBD Reading #1: Guest Lecture/Discussion #4 (Dr. Rankin – pending confirmation)

TBD Reading #2: Guest Lecture/Discussion #6 (Dr. Poudrier – topic: the influence of dissonance on perceived emotions)

Attendance and Missing Assignments

All course events and deadlines listed on course materials are in Vancouver time zone. There are no grades for attendance, but 15% of your final grade is based on active participation throughout the term. If you know you unable to hand-in an assignment, contact the instructor **before** the due date. If you have errors with Canvas, screenshot the error and submit your assignment via email **before** the deadline.

Late assignments are subject to a deduction of 15% per day and exceptions will only be granted in advance of the deadline or in emergency circumstances at the instructor's discretion. Reading questions **must** be submitted before the deadline. Presentations will only be rescheduled in exceptional circumstances. If you are unable to make your group discussion class, your contribution to your group's preparation will be considered and, if sufficient, you may be offered an alternate way to demonstrate understanding of the topic.

¹ A last-minute change is defined here as less than 10 days before the due date.

Research Outside the Classroom

Students will receive 2% of their grade from learning about research outside the classroom. There are three options for completing this requirement:

MEETING/INTERVIEW: Reach out to a potential supervisor for COGS 401 and discuss your ideas for a proposal. Students will submit a short summary of the meeting.

ATTENDANCE AT A RESEARCH TALK: Attend a relevant research talk at UBC and write a short summary of the talk. The talk must be approved by the teaching team in advance (via a post on the Canvas Discussion Board).

PARTICIPATE IN A LINGUISTICS STUDY: You may complete 2 credits through the Linguistics Outside the Classroom program (see below).

Linguistics Outside the Classroom (LOC)

Participation in Linguistics Outside the Classroom (LOC) is an option for satisfying the research participation requirement. To sign up for experiments, please visit <https://ubclinguistics.sona-systems.com> to register and participate. Experiments typically take anywhere from 15 minutes to 1 hour and offer the opportunity to contribute to and learn about linguistics research firsthand. Your participation in research is voluntary. A second way of completing this requirement is by attending Linguistics research seminars or colloquia and writing a one-paragraph summary of each talk, which you submit through SONA *within a week of attending*. You can browse the talk series here: <https://linguistics.ubc.ca/events/event/?date=upcoming-events&eventTag=&topic=&type=>.

Email and Communication

We will do our best to respond to all emails within 2 business days. Students are encouraged to ask questions on the Canvas discussion board or ask in-person. You are welcome to *send* emails at any time of day or day of the week, but do not expect responses outside of business hours. Please make sure to include the course code (COGS 401) and a brief topic in the subject of your email. Please use a format and tone that is appropriate for professional communication.

Office Hours

The instructor will host regular office hours. Students are encouraged to attend these to ask questions. One-on-one (or group) meetings may be scheduled with the instructor at alternate times for those with scheduling conflicts. Barring unforeseen or emergency circumstances, meetings that fall outside the scheduled course time (lecture or office hours) should be scheduled at least a week in advance.

Academic Honesty

Please view the UBC regulations for the university policy on cheating, plagiarism, and other forms of academic dishonesty. Students must submit only their own work. You should not cheat, copy, or mislead others about what is your work.

The use of AI or similar programs for completing any assignment in this course is discouraged and will be considered academic dishonesty if not explicitly acknowledged or if it results in work that is missing appropriate or correct citations. You are responsible for the accuracy and academic honesty of your assignment and should understand all decisions you have made. Using AI programs may result in academic honesty infractions if used irresponsibly.

If you consult course material or external information, whether from electronic sources or more traditional paper sources, you **must** give a full bibliographic reference to the material (please use the APA citation format). All sources of information and ideas in submitted work must be properly acknowledged and attributed.

It is the student's obligation to inform himself or herself of the applicable standards for academic honesty.

<https://vancouver.calendar.ubc.ca/campus-wide-policies-and-regulations/academic-honesty-and-standards>

<https://vancouver.calendar.ubc.ca/campus-wide-policies-and-regulations/student-conduct-and-discipline>

University Statement on Values, Policies, and Student Resources

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all their actions. Details of the policies and how to access support are available [here](#).