



UNIVERSITY OF
TORONTO
SCARBOROUGH

Department of Psychology

PSYC59 Tentative Syllabus

Winter 2023

Tuesdays 9-11 AM

BV264 + weboption

*Contact information *

psyc59.utsc@gmail.com

** Please note that you must use your official UofT email when sending communications related to the course. Please direct all correspondence to the course email address only so that the instructors and TA can coordinate responses to questions effectively. This helps us provide quick and consistent responses to all students. There is no guarantee that messages sent to another address will receive a response. Please do not send messages via the direct messaging system in Quercus. **

Instructor: Dr. Bruna Seixas-Lima

TA: Di Mo

Office Hours: 11:10-12:10 Tuesdays, in room HW511 by appointment only. Please let the instructor know 24 hours in advance. Additional hours may be offered during high demand times during the semester and will be advertised on Quercus.

Course Description and Objectives

This course provides an overview of the cognitive and neural processes and representations that underlie language abilities. Core topics include first language acquisition, second language acquisition and bilingualism, speech comprehension, and reading. Insights into these different abilities will be provided from research using behavioural, neuroimaging, computational, and neuropsychological techniques.

Course Textbook

Kemmerer, D. (2022). Cognitive Neuroscience of Language (Second Edition). Psychology Press.

Target Learning Outcomes

Upon completion of the course, students will be able to:

- (1) *Identify* the core components of the language system from both cognitive and neuroscience perspectives;
- (2) *Understand* the basic theoretical and methodological approaches used in current interdisciplinary research into the cognitive neuroscience of language;
- (3) *Relate* the core representations and computational principles underlying language abilities to other related (domain-general) cognitive abilities such as vision, hearing, and memory;
- (4) *Compare* and *contrast* competing accounts of different aspects of language processing (e.g., Dual Route versus neural network computational models of reading aloud);
- (5) *Explain* how learning, representation, and processing principles interact to give rise to language processing abilities (e.g., “fuzzy” letter position coding in English vs. precise letter position coding in Hebrew; development of sensitivity to a native language and insensitivity to other languages during infancy);
- (6) *Link* theories of language processing to theories of impaired language processing and its neural underpinnings (e.g., developmental dyslexia, aphasia);
- (7) *Communicate* the core principles of the cognitive neuroscience of language to others.

Instructional Approach for this Course

Successful completion of the target learning outcomes will be accomplished through two main veins: lectures and assigned readings. In some parts of the course, the lectures will parallel the readings to reinforce core concepts and issues in the field. In other parts of the course, the lectures and readings will diverge so that the readings provide a general foundation in a given area whereas the lectures provide an opportunity to explore in greater depth particularly important studies in the field, recent debates, and breaking findings. Students are responsible for the material covered both in lecture and in the assigned readings, even if not every aspect of the assigned readings is covered in class. Collectively, this approach will provide both advanced foundational knowledge as well as knowledge of the critical issues under current investigation in the cognitive neuroscience of language. Questions for the quizzes and exams will be drawn from both the lectures and the course textbook and students are responsible for all of this material.

Quercus

This course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. The site is dynamic and new information and resources will be posted regularly as we move through the term, so please make it a habit to log in to the site on a regular, even daily, basis. To access the course website, go to the U of T Quercus log-in page at <https://q.utoronto.ca>. Once you have logged in to Quercus using your UTORid

and password, you should see the link or "card" for PSYC59. You may need to scroll through other cards to find this. Click on the PSYC59 Cognitive Neuroscience of Language link to open our course area, view the latest announcements and access your course resources. There are Quercus help guides for students that you can access by clicking on the "?" icon in the left side column.

SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.

Tentative Schedule & Readings

Note: Recordings of lectures will be posted as soon as possible after the "regular" in-class scheduled meeting time.

Graded work appears in yellow.

Week of	Topic + Important Notes	Readings	Presentation Format
Week 1: January 10	Introduction; Brain Mapping Methods	Chapter 1, Chapter 2	In person+ weboption
Week 2: January 17	Brain Mapping [continued] Speech Perception / Perceiving speech in a second language	Chapter 5	In person+ weboption
Week 3: January 24	Speech Perception [continued] Speech Production	Chapter 5/ 6	In person + weboption
Week 4: January 31	Reading and Writing	Chapter 15	ONLINE ONLY
Week 5: February 7	<i>Mid-Term Test + Writing Assignment Consultations</i>		IN PERSON TEST
Week 6: February 14	Semantic Memory - Guest lecturer: Dr. Howard Chertkow <i>*Writing Assignment DUE by midnight February 14*</i> <i>*Optional: Final paper topic and preliminary list of references due by February 17th at midnight*</i>	Chapter 4	In person + weboption
February 21	READING WEEK	READING WEEK	

Week 7: February 28	Object Nouns / Computational models of semantic organization	Chapter 8	In-person + weboption
Week 8: March 7	Action Verbs/ Abstract Concepts	Chapter 9/10	In-person + weboption
Week 9: March 14	Sentence Comprehension / Computational and Empirical Studies of Semantic Ambiguity	Chapter 13	In-person + weboption
	<i>*Optional: Final paper outline due by March 15th at midnight*</i>		
Week 10: March 21	<i>Mid-Term Test + YouTube Assignment Consultations</i>		IN PERSON TEST
	<i>YouTube Assignment Due Sunday March 26 @ midnight.</i>		
Week 11: March 28	YouTube Assignment Presentations and Discussion	No readings this week	In-person + weboption
Week 12: April 4	Aphasia, Neuropsychology, and other language disorders	Chapter 3	In-person + weboption
	<i>*YouTube Peer reviews Due April 5 @ midnight*</i>		
	<i>*FINAL PAPERS DUE April 5 @ midnight*</i>		

Grade Break-Down

Item	Value (%)
Mid-term Exam 1	24%
Mid-term Exam 2	28%
Final Paper	24%
Assignment 1: Written Assignment	9%
Assignment 2: YouTube Assignment	15%

Mid-term exams: Mid-term Exam 1 will cover all material covered in the class and assigned in the readings up to the date of the exam. Mid-term Exam 2 will cover all material covered to date, although the focus is on the material covered since Mid-term Exam 1. The exam will consist of a combination of multiple choice questions and short written answer questions. The second mid-term is worth slightly more because it may draw upon some content covered in the entire class up to that point, and so that students have a lower-stakes opportunity to become familiar with my testing format in mid-term 1.

Ungraded Online Quizzes: Quizzes will not form part of your grade in the course. That said, *ungraded* quizzes will be made available throughout the course. You will have one week to complete each quiz, except the quiz in the last week of class, which must be completed by the last day of the semester. The purpose of these quizzes is to give students the opportunity to self-assess their knowledge and familiarize themselves with the multiple choice component of the exams.

Assignments:

Assignment 1: Writing Assignment. This assignment taps into your written communication skills, much as the short answer questions on the exams do. It will also provide students with practice reading the primary scientific literature and writing. The assignment will have a word limit of 500 words, excluding any references, which do not count to your word limit. Papers should be double-spaced in 12-pt font and be submitted either in Microsoft Office word or pdf format and submitted on Quercus.

Your first task is to read the paper referenced below and provide a written response to the following points, which relate to several key learning objectives of the course:

1. Identify the variables manipulated in the experiment and the different levels of each manipulated variable took on in the experiment.
2. Discuss the rationale of studying these variables
3. Summarize the findings.
4. Explain the results

Paper: Eyigoz, E., Mathur, S., Santamaria, M., Cecchi, G., & Naylor, M. (2020). Linguistic markers predict onset of Alzheimer's disease. *EClinicalMedicine*, 28, 100583. Accessible at <https://www.sciencedirect.com/science/article/pii/S2589537020303278> (Links to an external site.)

[note, you may need to log in to the UofT library to access this file]

Grading rubric:

Correct identification of all variables discussed and their levels	25%
Explanation of rationale for the variables used	20%
Complete summary of key findings	25%
Explanation of the significance of the findings	20%
Clear and organized writing	10%

Assignment 2: YouTube Presentation Assignment.

This assignment can be completed either individually or in groups of up to three students. All students working in a group will receive the same grade.

The second assignment will consist of creating and discussing YouTube Videos which communicate, to a general audience (e.g., other undergraduate students at UTSC), the motivation, methods, results, and implications of a research paper. This assignment allows you to gain more experience reading current empirical work and communicating orally. Videos can be 5:00 minutes max and should be uploaded to YouTube, with the link to the video submitted on Quercus. In completing the assignment, you will advance towards several of the learning objectives of the course:

1. Understanding the basic theoretical and methodological approaches used in current interdisciplinary research into the cognitive neuroscience of language;
2. Communicating the core principles of the cognitive neuroscience of language to others, as exemplified by the paper you selected.

Depending on the specific paper you select, I also expect this work will contribute to your understanding of how to relate core representation and computational principles of language with other related (domain-general) abilities, how empirical research is used to compare and contrast different competing accounts of language, how to explain the way in which learning, representation principles give rise to language processing abilities, and/or how to link typical performance with various theories of impaired language processing.

You should select a research paper published in 2018 or later that probes some aspect of the neural basis of language for your video. Your paper could consist of a behavioural (experimental), computational, neuroimaging, neurostimulation and/or patient study, but cannot consist of a review or opinion paper that does not present new results. Students are strongly encouraged to submit a copy of their proposed research paper to the course email for feedback well in advance of the submission deadline.

Videos can be 5:00 minutes max and will be uploaded to YouTube. Students should run a test upload of a draft presentation well in advance in order to ensure that they do not encounter any technical difficulties. You should then submit a link to your YouTube video. *Note that you need to make the link viewable to anyone with the link for the instructor and TA to access your video. *

Depending on final enrolment, either all or a representative subset of the videos will be presented and discussed in a later class. The selection process will be designed to ensure a broad coverage of topics. Students will then complete a peer review of several of the YouTube presentations submitted by other students. The exact number of peer reviews to complete will be announced once the YouTube videos

have been submitted. The peer reviews will be submitted via Quercus and will be due a week after the class in which the YouTube Videos are presented.

Grading rubric:

Did the presentation communicate the motivation, methods, results, and implications of the paper	50%
Clarity and organization of presentation	20%
Peer review of other YouTube presentations	30%

Final paper:

The final assignment will involve writing a paper that reviews two contrasting theoretical perspectives and their supporting empirical evidence. As a few examples of possible topics, the paper could focus on:

Do humans have a “rules and exceptions” word learning system?

Are children born with an innate and specialized language learning system?

Do humans have a domain-specific ability to process visual words, or is this ability governed by domain-general visual processes?

Do humans have a special innate ability to segment words, or can this behaviour be explained by domain-general statistical learning processes?

Is lexical semantic memory explicitly organized into categories such as "living things" versus "nonliving things"? How do you explain findings of category-specific semantic deficits depending on your answer?

Are all types of semantically ambiguous words processed similarly? If not, how and why do different types of words exhibit different behavioural and neural signatures?

These example topics will all receive some general coverage in class, although students will have the option of choosing another topic of interest that falls within the Cognitive Neuroscience of Language.

The paper must reference at least 10 published papers in the last 5 years. Each of these papers must include some empirical work (i.e., they cannot be pure review papers, opinion papers, or computational modelling papers, but should include some behavioural, neuroimaging, neurostimulation, or patient data). You are free to cite and discuss any papers that you find relevant to your paper in addition to those 10 empirical papers. Most papers will consist of approximately 10 pages of double-spaced main text, excluding title page, abstract, and references. The entire paper should be no more than 16 pages in length in total.

Your entire paper should be written in APA form (for a brief overview, see (<https://www.easybib.com/guides/citation-guides/apa-format/>)). For detailed information, please consult the APA 6e Manual).

The development of your final paper can be scaffolded as follows:

Optional: Final paper topic and preliminary list of references due by February 17th at midnight

Optional: 1-2 page outline of final paper due by March 15th at midnight

Required: Final paper due April 5.

The purpose of the optional scaffolding components of your final paper will be to receive additional feedback as you progress on each phase of producing your final paper and to encourage spreading the work across the semester. Because of the pedagogical motivations of submitting these components well in advance so as to provide the opportunity for feedback, it will not be possible to accept late submissions. However, note that you are not penalized for not submitting an optional component.

If you complete BOTH optional components, your final paper grade will be broken down as follows:

Final paper topic + list of references	1% of final grade
Outline of final paper	1% of final grade
Final paper evaluation	22% of final grade
TOTAL:	24% of final grade

If you only complete ONE of the optional components

Final paper topic + list of references OR Outline of final paper	1% of final grade
Final paper evaluation	23% of final grade
TOTAL:	24% of final grade

If you do not complete either of the optional components

Final paper evaluation	24% of final grade
------------------------	--------------------

Grading rubric for final paper:

Adherence to APA format	10%
Inclusion of at least 10 relevant empirical papers in the discussion (papers must be <u>discussed</u> , not just cited without discussion)	10%
Identification, comparison, and critical analysis of two different theoretical perspectives	40%
Identification and justification for specific outstanding issues or limitations of different studies or theoretical perspectives that need additional work	10%
Overall clarity, organization, and quality of writing	30%

The final paper should be submitted electronically through Quercus as either a pdf or Word Doc. This copy should be double spaced. We will be using the University's plagiarism detection tool for your submission. This tool assists in detecting textual similarities between compared. You can find more information about this tool later in the syllabus.

Contesting a Grade

Students must submit requests for re-grading in writing to the course email address as soon as possible, and no later than one week after the grade is made available to the student. Only requests with adequate written justification that a grading error has taken place will be considered. In the event that a re-grade is granted, the ENTIRE work in question (test, assignment, etc.) will be re-graded. This may result in your grade increasing, decreasing, or staying the same.

Psychology Department Missed Term Work Policy, WINTER 2023

For missed term work (assignments and term tests) due to illness, emergency, or other mitigating circumstances, please follow the procedures outlined below.

Note:

- The following reasons are not considered sufficient for missed term work: travel for leisure, weddings, personal commitments, work commitments, human error.
- [Missed Final Exams](#) are handled by the Registrar's Office and should be declared on eService.
- Instructors cannot accept term work any later than five business days after the last day of class. Beyond this date, accommodations are only possible via the Registrar's Office [petition process](#).

The email address to submit missed term work accommodation requests in **PSYC59** is:
psyc59.utsc@gmail.com

ILLNESS OR EMERGENCY accommodations:

For missed work due to ILLNESS OR EMERGENCY, complete the following process:

1. Complete the [Request for Missed Term Work Accommodations Form](#).
2. Declare your absence on [ACORN](#) (Profile & Settings > Absence Declaration)
3. Email **both** of the following items to the course email **WITHIN 2 BUSINESS DAYS** of the missed work:
 - a. the [Request for Missed Term Work Accommodations Form](#)
 - *AND***
 - b. a screenshot of your Self-Declared Absence on ACORN

Note:

- *If you are unable to submit your request within 2 business days, you must still email your instructor within the 2 business day window to explain the nature of the delay. Exceptions to the 2 business day deadline will only be made under exceptional circumstances.*
- *If your absence is declared on ACORN, we do not require any additional supporting documentation (e.g. medical notes) to support your missed term work accommodation request.*

ACADEMIC CONFLICT accommodations:

For missed term work due to an ACADEMIC CONFLICT (e.g. two midterms at the same time):

1. Complete the [Request for Missed Term Work Accommodations Form](#).
2. Take screenshots of your course Quercus pages that demonstrate the conflict.
3. Email the form and screenshots to the course email **at least two weeks (10 business days) before the date of the activity**, or as soon as possible if it was not possible to identify the conflict earlier. Requests sent after the activity deadline may not be accommodated.

Note:

- *Multiple assignments due on the same day are not considered conflicts. Students are expected to manage their time effectively to meet assignment deadlines.*
- *Back-to-back tests/quizzes are not considered conflicts. Only overlapping activities are conflicts.*
- *Students are responsible for keeping their course timetables conflict-free. Students who register in two courses with overlapping lecture/tutorial/lab schedules will not be accommodated.*

RELIGIOUS CONFLICT accommodations:

For missed term work due to a RELIGIOUS CONFLICT:

1. Complete the [Request for Missed Term Work Accommodations Form](#).
2. Email the form to the course email **at least two weeks (10 business days) before the date of the activity**, or as soon as possible if it was not possible to identify the conflict earlier. Requests sent after the activity deadline may not be accommodated.

ACCESSABILITY SERVICES accommodations:

For missed **TERM TESTS** due to ACCESSABILITY REASONS:

- **Contact your AccessAbility consultant** and have them email the course email detailing accommodations required.

For missed **ASSIGNMENTS** due to ACCESSABILITY REASONS:

- If your desired accommodation is **within the scope** of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” and you need 3 days):
 1. Complete the [Request for Missed Term Work Accommodations Form](#).
 2. Email the form ***AND*** your **Accommodation Letter** to the course email specifying how many days extension you are requesting.
- If your desired accommodation is **outside the scope** of your Accommodation Letter (e.g. your letter includes “extensions of up to 7 days” but you need more time than that):
 1. **Contact your AccessAbility consultant** and have them email the course email detailing the accommodations required.

Accommodation Procedure:

After submitting your documentation, you will receive a response from your instructor or TA. This form does not guarantee that you will be accommodated. The course instructor reserves the right to decide what accommodations (if any) will be made. Failure to adhere to any aspect of this policy may result in a denial of your request. **You are responsible for checking your official U of T email and Quercus course announcements daily**, as accommodations may be time-critical.

For missed assignments, **do not wait for the instructor’s response to resume work on your assignment**. Extensions may be as short as one business day, depending on the nature of the illness/emergency. Complete your assignment as soon as you’re able, and email it to your instructor.

For an **anticipated absence** (e.g. a scheduled surgery or an illness with a prolonged recovery period), if you would like to request accommodations in advance, submit a [Verification of Illness Form](#) completed by your doctor AND the [Request for Missed Term Work Accommodations Form](#) to the course email. Absences can be declared up to 14 days into the future on ACORN.

Missed Accommodations

If an accommodation is granted but a continued illness/emergency prevents you from meeting its requirements, you must repeat the missed term work procedure to request additional accommodations. **Please make it clear in your subject line that you are requesting a second accommodation.** E.g. If you are given an extension but are still sick and need more time, or if you miss a make-up term test, you must submit *another* [Request for Missed Term Work Accommodations Form](#) and declare your extended absence on ACORN. *Note: In the case of a missed make-up test, an opportunity to write a second make-up test may not necessarily be provided.

A note on Academic Integrity

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The [University of Toronto's Code of Behaviour on Academic Matters](#) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor in all relevant courses
- Making up sources or facts
- Obtaining or providing unauthorized assistance on any assignment

On tests and exams:

- Using or possessing unauthorized aids
- Looking at someone else's answers during an exam or test
- Misrepresenting your identity

In academic work:

- Falsifying institutional documents or grades
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes

All suspected cases of academic dishonesty will be investigated following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me or the teaching assistants. Note that you are expected to seek out additional information on academic integrity from me

or from other institutional resources (for example, the [University of Toronto website on Academic Integrity](#)). When in doubt, reach out!

A note on unauthorized assistance

You may see advertisements for services offering grammar help, essay editing and proof-reading. Be very careful. If these services take a draft of your work and significantly change the content and/or language, you may be committing an academic offence (unauthorized assistance) under the *Code of Behaviour on Academic Matters*.

It is much better and safer to take your draft to the Writing Centre as early as you can. They will give you guidance you can trust. Students for whom English is not their first language should go to the English Language Development Centre.

If you decide to use these services in spite of this caution, you must keep a draft of your work and any notes you made before you got help and be prepared to give it to your instructor on request.

A note on Writing Skills and Improving Academic English from the Centre for Teaching and Learning's Writing Support and English Language Support

For all written work in the class, consistently poor writing (spelling, grammar, etc.) will be taken into consideration as part of your grade. Please make use of the assistance offered by the university if you feel that you need additional help with your writing or wish to improve your current skills.

The Centre for Teaching and Learning offers personalized support for developing academic writing skills and English writing skills that are needed in academic communications. More information on relevant services are available here: <https://www.utsc.utoronto.ca/ctl/academic-learning-support>.

A note on Accessibility Services in Relation to this Course

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services as soon as possible.

AccessAbility Services staff (located in Rm SW302, Science Wing) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. Several ways of contacting AccessAbility are listed on their website: <https://www.utsc.utoronto.ca/ability/welcome-accessability-services>. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Video and Auditory Recording

Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the instructor.

For questions about the recording and use of videos in which you appear, please contact your instructor.

Unauthorized video or audio recording in the classroom is prohibited, as outlined in the Provost's guidelines on Appropriate Use of Information and Communication Technology. Students must obtain the written consent of the instructor before recording lectures. The private use of videos for students with disabilities will not be unreasonably withheld.

On the University's plagiarism detection tool

The University's plagiarism detection tool is a tool that will assist in detecting textual similarities between compared works. University's plagiarism detection tool is an efficient way to identify common writing issues and deter plagiarism in course assignments.

Normally, students will be required to have their written work (e.g., final papers, written assignments, written test questions) analyzed by the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their materials to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).

On Equity, Diversity and Inclusion

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.