

Course Syllabus

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Time	Th 09:00-12:00
Place	HL B106
Instructor	Philip J. Monahan
Contact	philip.monahan@utoronto.ca (mailto:philip.monahan@utoronto.ca)
Office	MW 338
Office Hours	Th 12:00-13:00 or by appointment
Prerequisite	LINB29 <i>Quantitative Methods</i> , PLIC55 <i>Psycholinguistics</i>

Disclaimer

We identify core themes in speech perception research by working with actual data—often data that you collect. There will be very little in the way of lectures throughout the term. Instead, the vast majority of in-class time will be spent running experiments, doing analysis and visualizing data. We make heavy use of [Praat](http://www.fon.hum.uva.nl/praat/) (<http://www.fon.hum.uva.nl/praat/>), and most particularly [R](https://cran.r-project.org/) (<https://cran.r-project.org/>), a free, command-line statistical and graphing software application that was utilized in LINB29.

Description

An examination of the acoustics and perception of human speech. We will explore how humans cope with variation found in the auditory signal, how infants acquire their native language sound categories and the perceptual mechanisms underlying speech perception.

Core Themes

- Speech signal is variable
- Categories play a central role in perception
- Knowledge of your language and the world impact how you perceive speech

Objectives

To learn about speech perception by doing speech perception research. The primary component of the course is to run, analyze and write-up experiments and data. We will also read from the primary literature, including cutting edge findings in the field.

Learning Outcomes

- Discover core concepts of speech perception by doing speech perception research
- Visualize and draw inferences from collected data
- Apply core concepts of speech perception to novel quantitative data
- Evaluate scientific hypotheses from the field, assess supporting data
- Critically read from the primary literature and integrate into the bigger picture
- Design experiments to test particular hypotheses, determine appropriate methods

Readings

There is no textbook. Instead, we will read from the primary literature. These will be distributed electronically. If you would like a textbook discussion of some fundamentals, the book by Jan Schnupp, Eli Nelken and Andrew King [*Auditory Neuroscience: Making Sense of Sound*](http://go.utlib.ca/cat/8837705) (<http://go.utlib.ca/cat/8837705>). MIT Press (2011) is recommended as an accessible overview of the auditory system, physical properties of sounds and more.

Quizzes

Questions from the assigned readings distributed via Quercus. Quizzes will be done at home on Quercus, they will consist of multiple choice/true-false questions and will be timed. I will attempt to make them available immediately after the class in which they (and the reading) are assigned. They will be due at 09:00 on the Tuesday of the following class. You will have one opportunity to do the quiz but can look at the paper(s) during the quiz. We will drop the lowest quiz grade and no make-ups will be given even in the case of technical difficulties (please ensure you have a secure internet connection during the quiz).

Labs

Problem sets, doing experiments, working with data and reasoning about speech perception questions/theories. More instructions provided in the Lab Assignment itself. In-class we'll be collecting data and practicing using the software to analyze and visualize your data. At home, you will reflect upon what you find in class and answer questions. Labs will be written up in the form of lab reports and numerical data and plots should be included.

- All labs will be turned in on Quercus in PDF.
- Do not submit Word documents. They will not be accepted.
- Do not e-mail your lab assignments. They will not be accepted.
- Since experiments will be completed in class, you are required to bring a pair of headphones to class for use. Earbud-type headphones are fine.

Final Project

The course concludes with a final project that arises out of group work. [Something general about the final project i.e. a peer graded presentation and paper would help here]. Groups and topics will be

determined once the overall attendance for the course settles down (early October). There is no final exam or midterm.

Grading Scheme

The grading scheme used in this class is the standard [UTSC grading scheme](https://www.utsc.utoronto.ca/registrar/u-t-grading-scheme) (<https://www.utsc.utoronto.ca/registrar/u-t-grading-scheme>).

Late Policy

Late assignments are accepted, but note that your grade will be reduced one letter grade (e.g., A →A-, B+ →B) per late day. Late final papers will **not** be accepted without relevant documentation (e.g., doctor's note, medical certificate) communicated beforehand, unless it is an absolute emergency, of course.

University Statement on Accessibility

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 Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in AA142) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability.utsc@utoronto.ca (<mailto:ability.utsc@utoronto.ca>).

University Statement 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](https://governingcouncil.utoronto.ca/sites/default/files/import-files/ppjun0119954871.pdf) (<https://governingcouncil.utoronto.ca/sites/default/files/import-files/ppjun0119954871.pdf>) 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.
- 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, you are expected to seek out additional information on academic integrity from your instructor or from [other institutional resources](https://www.academicintegrity.utoronto.ca) [_\(https://www.academicintegrity.utoronto.ca\)_](https://www.academicintegrity.utoronto.ca).

Useful writing resources

[How not to plagiarize](https://advice.writing.utoronto.ca/using-sources/how-not-to-plagiarize/) [_\(https://advice.writing.utoronto.ca/using-sources/how-not-to-plagiarize/\)](https://advice.writing.utoronto.ca/using-sources/how-not-to-plagiarize/)

Help with writing:

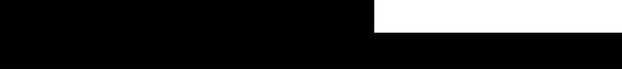
- [UTSC Centre for Teaching and Learning](https://www.utsc.utoronto.ca/ctl/) [_\(https://www.utsc.utoronto.ca/ctl/\)](https://www.utsc.utoronto.ca/ctl/)
- [UTSC CTL Writing Centre](https://utsc.utoronto.ca/twc/) [_\(https://utsc.utoronto.ca/twc/\)](https://utsc.utoronto.ca/twc/)
- [UTSC CTL Writing Centre: Using and Citing Sources](#)
- [General Services for Students \(SCSU\)](https://www.scsu.ca/scsu-academic-support-centre) [_\(https://www.scsu.ca/scsu-academic-support-centre\)](https://www.scsu.ca/scsu-academic-support-centre)

Tentative Course Schedule

This is subject to change at instructor's discretion. Readings and quizzes will be distributed via Quercus at least the week prior to when they should have been read.

Course Summary:

Date	Details	Due
Thu Jan 13, 2022	 Week 1: Introduction, Course Overview, R review	9am to 12pm
Thu Jan 20, 2022	 Week 2: Invariance	9am to 12pm

Date	Details	Due
	 Quiz 1 	due by 9am
Thu Jan 27, 2022	 Week 3: Categorical Perception 	9am to 12pm
	 Week 4: Categorical Perception 	9am to 12pm
Thu Feb 3, 2022	 Quiz 2 	due by 9am
	 Lab 1 	due by 9pm
Thu Feb 10, 2022	 Week 5: L2 Perception 	9am to 12pm
	 Lab 2 	due by 9am
Thu Feb 17, 2022	 Week 6: Infant Perception 	9am to 12pm
	 Quiz 3 	due by 9am
Thu Mar 3, 2022	 Week 7: Top-down 	9am to 12pm
Thu Mar 10, 2022	 Week 8: Top-down 	9am to 12pm

Date	Details	Due
	 Lab 3 [Redacted]	due by 9am
	 Quiz 4 [Redacted]	due by 9am
Thu Mar 17, 2022	 Week 9: The Lexicon [Redacted]	9am to 12pm
Thu Mar 24, 2022	 Week 10: The Lexicon [Redacted]	9am to 12pm
	 Quiz 5 [Redacted]	due by 9am
Thu Mar 31, 2022	 Week 11: Final Project Presentations [Redacted]	9am to 12pm
Thu Apr 7, 2022	 Week 12: Discussion, Wrap-up [Redacted]	9am to 12pm
	 Lab 4 and 5 [Redacted]	due by 9am
	 Participation [Redacted]	due by 11:59pm
Mon Apr 11, 2022	 Final Project [Redacted]	due by 11:59pm