

**Psychology 4210: Speech development**  
Spring 2015

**Class meetings:** Monday 15:00-17:50 D620  
**Office:** C876, University Hall  
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**Course description:** This is an advanced seminar course on child speech acquisition. The course will introduce basic concepts in speech science, evaluate classical theories and recent findings in child phonological development, and provide hands-on practice in the application of acoustic analytical tools.

**Textbook:**

Marilyn M. Vihman (2014) *Phonological development: The first two years*. 2<sup>nd</sup> Edition. Blackwell Publishers.

**Coursework and grading:**

Your final grade is accumulated through several components. First, you will be assigned four labs throughout the semester, with each of them worth 7%. Second, as this is a seminar course, you are expected to actively participate in all aspects of this course, i.e., raising intelligent questions, offering critiques to the readings, relating the course materials to major social issues, etc (7%). Third, each of you will be responsible to lead discussions on selected articles (10%). In addition, you will be quizzed over some critical concepts introduced in class occasionally (15%). Finally, you are required to write a research proposal related to children's speech development (40%).

Labs	4*7 = 28 %
Participation	7 %
Discussion leading	10 %
Quizzes	15%
Research proposal	40 %
Total	100 %

**Grading scale:**

A+	95 – 100	B+	80 – 84.9	C+	67 – 69.9	D+	55 – 59.9	F	0 -49.9
A	90 – 94.9	B	75 – 79.9	C	63 – 66.9	D	50 – 54.9		
A-	85 – 89.9	B-	70 – 74.9	C-	60 – 62.9				

**Labs:** We will have four lab sessions with associated assignments throughout this semester. These labs are designed to equip you with hands-on experiences of using *Praat* to analyze children's data. The lab sessions will be held in the computer labs. The assignment will be distributed in class time.

**Thought questions:** For each class, you are required to bring a list of at least three thought questions related to the course materials to be discussed. The questions can be

anything that came up during your reading of the assigned material, such as difficulty in understanding a particular concept, a methodological detail, or on experimental designs and statistical analysis. The questions can also reflect your deeper thinking of the reading and may relate to your own previous experience or larger social issues. Coming to class with the prepared thought questions will allow you to ask better questions during class and gain a full understanding of the materials during in-class discussion. These questions will be collected at the end of each class.

**Leading discussions:** Every student is required to lead discussions on selected papers. You will FAIL the course if you are absent on your scheduled discussion-leading day. Be creative on the format of discussion. No matter how you organize it, however, you should cover three major aspects. First, you should make sure all students have a basic understanding of the article to be discussed. To achieve this end, you are encouraged to bring out questions related to the main points of the article. Second, you should check with the audience whether they have any questions in regard to the technical jargons in the article. And if they do, you can either clarify them yourself or invite others to make comments. Last but not least, you should prepare some major theme questions to propose to the audience. The theme questions could be about the implications of the work and its relation to a larger topic. At any rate, remember that when leading a discussion, you are not to lecture, but to facilitate a conversation. Therefore, you will need to find ways to encourage people to think and talk.

**Research proposal:** A research proposal differs from regular research papers in that you have not done the study yet, and you do not have results either. You will propose a full research plan with justification of your ideas and the validity of the methodology you are about to employ to test your ideas. You may refer to the following link for more details regarding how to write a research paper in general and a research proposal in particular, as well as some writing tips.

<http://classes.uleth.ca/201003/psyc3330a/page3/page3.html>

The research proposal should be no more than 10 pages, double-spaced, not including references. The references should be submitted as well, but separately from the proposal itself. Please follow APA format specified in the link above. Your research proposal should contain five parts: introduction, objectives, methods, predicted results and theoretical implications. The introduction should provide a thorough but succinct review of the relevant literature in the field, which your research will be situated in. The objectives part is where you should state clearly what goals to achieve through the current study. The methods should be valid and reliable. You need to submit your research proposal by 5:00pm, **April 15, 2016**. If you have a well-formed idea ready to be carried out early in the semester, you are encouraged to run a pilot study and include your pilot results in the proposal. Pilot data, especially those conforming to your hypothesis, will be considered as a real asset.

**Important to note:** All written assignments have to be typed. No handwritten work is accepted.

**Late and make-up policy:** There is a late submission penalty for lab assignments and the final research proposal (50% reduction to your received grade). In order to avoid the disadvantage of this policy, please provide official written documents to justify your

absence or late submission. No make-up quiz will be offered without valid excuses accompanied by supporting documentations.

**Students with Special Needs:** If you have any special needs that require accommodation, it is your responsibility to contact Counseling Services to acquire an official letter concerning your situation. Accommodations will only be given upon receiving the official notification from that office.

**Academic misconduct:** I am required by my contract with the university to report suspected cases of academic misconduct to the University. The most common form of misconduct is plagiarism. Remember that any time you use the ideas or the statements of someone else, you must acknowledge the source in a citation.

### **Reading list:**

Curtin, S., Fennell, C., & Escudero, P. (2009). Weighting of vowel cues explains patterns of word-object associative learning. *Developmental Science*, 12(5), 725-731.

Fennell, C., & Waxman, S. R. (2010). What paradox? Referential cues allow for infant use of phonetic detail in word learning. *Child Development*, 81, 1376-1383.

Flege, J. E. (1995). Second-language speech learning: Theory, findings, and problems. In W. Strange (Ed.), *Speech Perception and Linguistic Experience* (pp. 233-277). Timonium, MD: York Press. ([http://jimflege.com/files/Flege\\_in\\_Strange\\_1995.pdf](http://jimflege.com/files/Flege_in_Strange_1995.pdf))

Gibbon, F. (1999). Undifferentiated lingual gestures in children with articulation/phonological disorders. *Journal of Speech, Language, and Hearing Research*, 42, 382-397.

Harada, T. (2007). The production of voice onset time (VOT) by English-speaking children in a Japanese immersion program. *IRAL - International Review of Applied Linguistics in Language Teaching*, 45, 353-378.

Gonzalez, G. L. R., Li, F., Mills, K. J., Rosen, N., & Gibb, R. L. (2014) Speech in action: Degree of hand preference for grasping predicts speech articulation competence in children. *Frontiers in Psychology*, <http://dx.doi.org/10.3389/fpsyg.2014.01267>.

Iverson, J. M. (2010). Developing language in a developing body: the relationship between motor development and language development. *Journal of Child Language*, 2010, 229-261.

Kuhl, P. K., Andruski, J. E., Chistovich, I. A., Chistovich, L. A., Kozhevnikova, E. V., Ryskina, V. L., Stolyarova, E. I., Sundburg, U., Lacerda, F. (1997). Cross-language analysis of phonetic units in language addressed to infants. *Science*, 277, 684-686.

Kuhl, P. K., Tsao, F., & Liu, H. (2003). Foreign-language experience in infancy: Effects of short-term exposure and social interaction on phonetic learning. *Proceedings of Natural Science Academy*, 100, 9096-9101.

Li (2002). Language-specific developmental differences in speech production: A cross-Language acoustic study. *Child Development*, 83, 1303-1315.

MacNeilage, P. F., & Davis, B. L. (2005). The frame/content theory of evolution of speech. *Interaction Studies*, 6(2), 173-199.

Nip, I. S. B., Green, J. R., Marx, D. B. (2011) The coemergence of cognition, language, and speech motor control in early development: A longitudinal correlation study, *Journal of Communication Disorders*, 44(2): 149–160.  
doi:10.1016/j.jcomdis.2010.08.002

Pierce, L. J., Klein, D., Chen, J. K., Delcenserie, A., Genesee, F. (2014) Mapping the unconscious maintenance of a lost first language. *Proceedings of the National Academy of Sciences of the United States of America*, 111 (48): 17314–17319.

Stager, C. L., & Werker, J. F. (1997). Infants listen for more phonetic detail in speech perception than in word-learning tasks. *Nature*, 24, 381-382.

Simon, E. (2010). Child L2 development: a longitudinal case study on Voice Onset Times in word-initial stops. *Journal of Child Language*, 37(1), 159–173.

Singh, L., Morgan, J. M., & Best, C. T. (2002). Infants' listening preferences: Baby talk or happy talk? *Infancy*, 3(3), 365-394.

Stager, C. L., & Werker, J. F. (1997). Infants listen for more phonetic detail in speech perception than in word-learning tasks. *Nature*, 24, 381-382.

Vouloumanos, A., Hauser, M. D., Werker, J. F., & Martin, A. (2010). The tuning of human neonates' preference for speech. *Child Development*, 81, 517-527.

Werker, J. F., Pons, F., Deitrich, C., Kajakawa, S., Fais, L., & Amano, S. (2007). Infant-directed speech supports phonetic category learning in English and Japanese. *Cognition*, 103, 149-162.

Wilson, S. M., Saygin, A. P., Sereno, M. I., & Iacoboni, M. (2004) Listening to speech activates motor areas involved in speech production. *Nature Neuroscience*, 7, 701-702.

### Tentative weekly schedule

Month	Date	Topic	Reading	Assignment due
Jan	11	Introduction to phonological development	Chapter 1	
	18	Precursors to language	Chapter 1 & 2	
			Lab tutorial (E640)	
	25	Development in perception	Chapter 3 & 5	
			Lab 1 (E640)	
Feb	1		Vouloumanos (2010)	Lab 1
			Stager & Werker (1997)	
			Curtin et al (2009); Fennell & Waxman (2010)	
	8	Development in production	Chapter 4 & 6	Abstract due
			Lab 2 (E640)	
	15	<i>No class</i>		
	22		Wilson et al. (2004)	Lab2
			MacNeilage & Davis (2005)	
March	7	Second language acquisition	Gibbon (1999)	
			Li (2012)	
	29	Word learning	Chapter 7	
			Lab 3 (E640)	
	14		Chapter 8	Lab3
			Lab 4 (E640)	
	21	Child-directed speech	Flege (1995)	Introduction due; Lab 4
			Pierce et al. (2014)	
April	4	Speech & motor control	Simon (2010)	
			Harada (2007)	
	11		Kuhl et al. (1997); Werker et al. (2007)	
			Kuhl et al. (2003); Singh et la. (2002)	
	15			Final proposal due
	11		Proposal presentation	