LIN 891: Advanced Phonetics
Spring 2016

Instructor/TA Info:

Instructor
Karthik Durvasula
Office: B330 Wells Hall
E-mail: durvasul@msu.edu

Meetings:
by Regular Off. hours:
Mon, 2:15pm – 5:00pm
(or) by appointment

[NOTE: It's best to email me a day or two BEFORE you meet with me so that I can let you know if I am free at the time you plan to come.]

Class Schedule / Location
Tuesday 3:00 – 5:50pm Wells Hall A224

COURSE GOALS:
This course is intended to introduce students to the advanced concepts, principles and methods of modern Phonetics. The course is designed to be a continuation to *LIN 491: Laboratory Phonetics*. The course includes a heavy focus on Praat scripting and the use of corpora such as the Buckeye Corpus. We will also get familiar with the use of the nasal airflow system that is available in the department. The course is structured so that with each topic there is an associated lab assignment involving Praat scripting and analysis. Along the way, you will learn to measure and automate the measurements for vowel characteristics, phonation types, fricative characteristics, and nasalization amongst other things.

TEXTBOOKS:
Reetz, Henning and Jongman, Allard. (2009). Phonetics: Transcription, Production, Acoustics, and Perception. Wiley-Blackwell.

Johnson, Keith. (2012). Acoustic and Auditory Phonetics. Wiley-Blackwell.

Required readings maybe be given to you in one of the following ways:
a) distributed in class, b) posted on the course website on D2L, and/or c) placed on reserve in the library.

COURSE REQUIREMENTS:

- **Participation**

Students are expected to attend all classes and participate in group work and the discussions.

- **Readings**

Students are expected do all the assigned readings, preferably before a topic begins.

- **Lab work** (assignments to be sent by e-mail or posted on D2L)

If you are not able to turn in your lab work on time, you must contact me IN ADVANCE; if you do not do this, you will automatically receive 0% for the assignment.
Lab work must be typed in the lab report format (look at *Appendix 1*), and turned in at the beginning of class. If you are absent, you may e-mail the assignment or leave it in my mailbox in the linguistics department (B330 Wells Hall).

- **Final Research Paper**

Your final paper will consist of measurements related to a new topic (i.e., not a lab assignment) for which you will actually write a script or use the nasal airflow system for the measurements, followed by a brief report of your findings. We will have regular discussions in the second half of the semester about the progress of your work. It is best to come to class prepared with a short hand-out for any research discussions about your work.

- **Grading Policy**

  Note: There are no Tests.

GRADING WEIGHTS:		**GRADING SCALE:**		
Labs	**50%**	**4.0**	**-**	**93% or higher**
Final Res. Presentation	**10%**	**3.5**	**-**	**85% - 92.9%**
Final Paper	**40%**	**3.0**	**-**	**77% - 84.9%**
	100%	**2.5**	**-**	**69% - 76.9%**
		2.0	**-**	**61% - 68.9%**
		1.5	**-**	**53% - 60.9%**
		1.0	**-**	**45% - 52.9%**
		0.0	**-**	**44.9% or lower**

If you cannot come to a scheduled test, you must discuss this with me at least ONE CLASS PERIOD BEFORE the test. If there is an emergency after this, and you cannot contact anyone in person, send me an e-mail explaining the nature of the emergency and how you can be contacted to discuss the matter.

COURSE SCHEDULE:

This schedule is subject to variation, so if you miss a class, be sure to check with me or a classmate. It is most helpful to do the readings for a given topic BEFORE the first class dealing with that topic. This will make the lectures easier to follow, and you will be in a better position to ask questions about things that might not be clear to you.

Homework will be emailed or handed out in class.

DATE	TOPIC
12th Jan	Discussion of Syllabus + Course expectations
19th Jan	Review of source-filter theory and tube models (and perturbation theory?) (Johnson 2014; Chapter 5, 6)
26th Jan	Review Praat Scripting Lab 1: Automated formant measurements from a corpus
2nd Feb	Physiology of the vocal tract (Henning & Jongman 2009; Chapter 5)
9th Feb	Tone + Praat Scripting Lab 2: Automated tone measurements from a corpus
16th Feb	Phonation Types (Gordon & Ladefoged 2001; Hanson & Chuang 1999)
23rd Feb	***No Class***
1st Mar	Scripting for phonation; Lab 3: Automated phonation measurements from a corpus
8th Mar	***Spring Break (No Class)***
15th Mar	Acoustics of Nasalisation (Wil Styler's Dissertation, Marjorie Chen (1997)) Lab 4: Automated nasality (acoustic) measurements from a corpus
22nd Mar	Different techniques for measuring nasalization (Krakow and Huffman 1993)
29th Mar	Getting familiar with a nasal airflow system Lab 5: Nasal airflow measurements
5th Apr	Acoustics of Fricatives (Gordon, Bathmaier, Sands 2002; Johnson 2014; Chapter 7)
12th Apr	Scripting for fricative POA Lab 6: Automated centroid frequency measurements from a corpus
19th Apr	TBD (normalization for speaker variation?)
26th Apr	TBD
5th May (Thursday) Finals Week	**Final Presentations (3:00-5:00pm; in your regular classroom)**

Appendix 1: Lab Report format

Since most labs will include some sort of scripting, what I provide below is primarily a reporting format that will help you write up such labs (NOTE: some labs might require a more standard lab report format).

Section1: Introduction (Discuss the topic and the aim of the lab)

Section 2: Discuss the materials (including what software was used, and how the data was collected...)

Section 3: Discuss what you did in words and perhaps figures, what you decisions you took to measure the relevant data.

Section 4: Results (plots and tables summarising the results).

Section 5: Discussion (major findings and any problems you encountered with your measurement decisions, and what you might do in the future to fix them.)

Section 6: The script with proper comments.

Section 7: Sample output of the Script (maybe 5/6 line, include a proper header for each column).