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# LIN 427: Laboratory Phonetics

## Fall 2019

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### Instructor

Karthik Durvasula  
Office: B463 Wells Hall  
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### Meetings

by Regular Off. hours:  
Mon/Wed, 2:10 - 3:30pm  
(or) by appointment

### Class Schedule / Location

Monday/Tuesday	10:20 - 11:40am	Wells Hall B125
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**Note 1:** 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.

### Course Goals

This course is intended to introduce students to the basic concepts, principles and methods of modern *Phonetics*. You will gain an understanding of what human speech is and how it works. By the end of the course, you will be able to reflect on your own speech and the speech of those around you, and you will be able to analyze what you observe and discuss it in a meaningful way.

### Recommended Text

- Johnson, Keith. (2012). *Acoustic and Auditory Phonetics*. Wiley-Blackwell.
- Materials may be
  - (a) distributed in class.
  - (b) posted on the course website (D2L).
  - (c) placed on reserve in the library.

**Note 2:** You are responsible for all material in the assigned chapters and supplemental readings, even if we do not discuss it in class (unless you are given information to the contrary). You are also responsible for all material covered that is not in the book (unless you are given information to the contrary).

### Course Requirements

#### Attendance

Students are expected to attend all classes. It is important to attend all classes since materials that are not covered in the textbook maybe be presented. Please be sure to get the notes from any class you may miss. Some materials maybe be sent via email, but you should also check with me or a classmate regarding material you may have missed.

## Readings

Students are expected do all the assigned readings. 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.

## Labwork (assignments to be sent by e-mail or posted on D2L)

If you are not able to turn in your labwork on time, you must contact me IN ADVANCE; if you do not do this, you will automatically receive 0% for the assignment.

Labwork must be typed and turned 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).

## Exams, Quizzes and Final Project

There will be 4 quizzes, 2 Tests and a Final Project. NO MAKE-UPS WILL BE GIVEN, except in the case of an excuse officially recognized by the Dean's office.

Grading Weight		Grading Scale	
Quizzes	20%	4.0	93% or higher
Test 1	15%	3.5	85% - 92.9%
Test 2	15%	3.0	77% - 84.9%
Lab Work	30%	2.5	69% - 76.9%
Final Project	17%	2.0	61% - 68.9%
Final Presentation	3%	1.5	53% - 60.9%
Total	100%	1.0	45% - 52.9%
		0.0	44.9% or lower

**Note 3:** 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.

## Spartan Code of Honor Academic Pledge

*As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do.*

## Course Schedule

This schedule is subject to slight variation, so if you miss a class, be sure to check with me or a classmate.

Wk	Date (Monday)	Lecture Topic (Monday)	Lab Topic (Wednesday)
1	August 26		Course organisation; Intro. Articulatory Phonetics: Consonant & Vowels Homework/Lab 0 - Transcriptions
2	September 2	<b>No class; Labor day</b>	More on Consonants & Vowels; Homework/Lab 0: due
3	September 9	<b>Quiz 1</b> Sound & Pitch	Introduction to Praat; Lab 1: Measuring Pitch
4	September 16	Basic Digital Signal Processing	Lab 1: due; Lab 2: Stress, Pitch & Vowel Length
5	September 23	Acoustic Theory of Speech Production - I	<b>Quiz 2;</b> Lab 2: due; Lab 3: Vowel Measurements
6	September 30	Acoustic Theory of Speech Production - II	Lab 3: due <b>Discussion of final projects</b>
7	October 7	<b>TEST 1</b>	Lab 4: Aspiration and Voicing
8	October 14	Perturbation Theory	Lab 4: due; Lab 5a: Praat Scripting; <b>Discussion of final projects</b>
9	October 21	The Sound of Consonants	<b>Quiz 3;</b> Lab5a: due; Lab5b: More Praat Scripting
10	October 28	Introduction to the Ear	Lab5b: due; Lab5c: Even More Praat Scripting
11	November 4	Speech Perception I	Lab5c: due; Lab 6a: Psychopy; Perceptual experiments
12	November 11	<b>Quiz 4</b> Speech Perception II	<b>Discussion of final projects</b> Lab 6b: Perceptual distance
13	November 18	Lab 6a - b: due & Lab 7: Synthesising Sounds	Lab7: Due; <b>Discussion of final projects</b> Review for Test 2 (if need be)
14	November 25	<b>TEST 2</b>	Forced Alignment; Praat spectrogram reading practice; <b>Discussion of final projects</b>
15	December 2	Final Project Presentations	Final Project Presentations; <b>Final Papers due</b>