

Linguistics 4100 Phonetics

TR 2:20-3:40 Derby Hall 0029

Instructor: Dr. Becca Morley
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Office Hours: TBA

To get to my office: Come in through the glass doors in between Gates 22 and 24 of the Stadium (it will say Linguistics Dept.). Go up one set of stairs to first floor. Take the left branch of the hallway. My office is about halfway down on the left side.

Course Description:

This course is an introduction to phonetics: the study of the speech sounds that make up the spoken languages of the world. Phonetics can be divided up into four main areas:

- **Phonetic Transcription:** a way for speech sounds to be written down so they can be successfully reproduced and analyzed
- **Articulatory Phonetics:** the study of how speech is produced by the coordination of the articulators of the human vocal tract
- **Acoustic Phonetics:** the study of the characteristic sound signals associated with the linguistic units of speech
- **Auditory Phonetics:** the study of how speech sounds are processed by human listeners

Phonetics is one of the branches of linguistic study, and is the starting point for doing descriptive fieldwork. Phonetics, concerned with the physical aspect of speech sounds, is distinct from phonology, concerned with the abstract categorization of speech sounds into mental units. However, phonetics cannot really be done without phonology, and vice versa.

Course Goals:

This course is designed to give you an understanding of what each area of phonetics entails. Furthermore, by the end of this class you should be able to read both oscillogram and spectrogram representations of sound waves, and be comfortable using the speech analysis program Praat. You will be able to identify many sounds from reading spectrograms and transcribe those sounds in the IPA alphabet. You will become familiar with the acoustic measures that are used to characterize speech sounds, and will take your own measurements. Finally, you will get a sense for what it means to do laboratory phonetics/phonology research.

Texts:

Reetz, H., & Jongman, A. (2009). *Phonetics*. Malden, MA: Wiley-Blackwell.

Responsibilities/Grading (percentages subjects to adjustment)

- 15%: In class exercises + class participation
- 25%: Homework assignments (4): you will have 1 week to complete each homework assignment. I will be assigning you randomly to groups of 3-4 people. Use your group for brainstorming, questions, emotional support. If you don't want to meet you don't have to. **Everyone will turn in their own assignment.**
- 50%: Lab Assignments (4): you will have 2 weeks to complete every lab. I will be assigning you randomly to groups of 3-4 people. These are different from the homework groups. Try to actually meet with your group members in person. **You will turn in 1 assignment for the group¹.**
- 10%: Final Lab. TO BE DONE INDEPENDENTLY

Hard copies of all homeworks and labs are to be turned in at the beginning of the class period².

The above numbers are only estimates. I take improvement into account, and I grade on a non-penalty curve³. Therefore, it is hard for me to provide grade estimates in the middle of the semester. However, if you are concerned about your standing in the class you are welcome to email me and we can discuss how you are faring.

Technical Details:

We will be using the speech analysis software Praat quite extensively in this class. It should be installed on the classroom computers. You can also download and install it on your personal computer. It is available for free, for both pc and mac, at the following address: <http://www.fon.hum.uva.nl/praat>. We will be working with Praat in class, but the speakers on most of these computers are not very good, therefore I ask that you **bring your own headphones to class if you can.**

Some homework will require you to analyze sound files. These sound files will be available for you to download from the Carmen site. I will also make pdfs of my powerpoint slides available online. I'll try to do this at least the day before the lecture. However, you are still responsible for taking notes in class. Good note taking is an

¹ This is not an attempt to destroy your soul. The groups are designed to make things easier for you, not harder. You are required to make a genuine effort to a) arrange at least one physical meeting with your group members, b) contribute to collaborative discussion of the lab questions. If your schedule is insane and you can't make it work, do your own assignment, with your own name on it – AND LET YOUR GROUP KNOW. If your group mates are slackers who don't return emails, fail to show up to arranged meetings, or expect you to do all the work, do your own assignment, with your own name on it – AND LET YOUR GROUP KNOW.

² Unless you have made prior arrangements with me, the following are not acceptable: homework handed in to my mailbox during class, homework handed in halfway through the class. These will both be considered late. See my policy regarding late homework under Late Work.

³ However, I can, and have, failed people before. I allot such a large percentage to in-class work in part to give students a better chance of succeeding. This cuts the other way too, however. If you consistently fail to show up, you are sacrificing about 15% of your grade.

acquired skill, but one that will serve you well. If I start going too fast for you to write everything down, or you need terminological or technical clarification **let me know**.

Questions:

I expect you to ask questions if you have them. I rely on you to let me know when what I'm saying doesn't make sense. I will probably slip up and use a term that you don't know from time to time. Ask in class. Come to office hours. Email me if you can't make office hours. Additionally, there will be a discussion forum on Carmen for each homework assignment. Post questions there and I will answer them – within a day, and in most cases within a few hours⁴.

Thinking:

I expect you to think for yourself in this class. I expect you to try things that may not be in the textbook. Phonetics is both art and science. There will be ambiguity. This is scary. I know. Do your best to get over it⁵. Think of yourself as a fieldworker recording an undocumented language. Trust me; by the end of the class you will feel like you've actually learned something⁶.

Absences:

If you miss class it is your responsibility to track down the material you missed. I recommend contacting a fellow classmate. All handouts will be available online on the Carmen site for this class.

Late Work:

Late work is not accepted except in rare instances. If a health or family related situation arises, let me know and arrangements can be made. Otherwise, if you know you will need to miss class for any reason then you may turn in homework early, and schedule an appointment to go over the missed in-class exercises. This is only an option for unavoidable absences that YOU LET ME KNOW ABOUT AHEAD OF TIME. You should know that I will not be sympathetic to appointments that you suddenly remember the day of class.

Accommodation:

LET ME KNOW NOW – NOT HALFWAY THROUGH THE QUARTER

If you feel you may need an accommodation based on the impact of a disability, you should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614 292-3307 or in Pomerene Hall 150 to coordinate reasonable accommodations for students with documented disabilities.

Ethics:

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State

⁴ Seriously. This is habitually under-utilized. I will answer just about anything here. And if I won't I might even let a classmate of yours answer it. Of course, it does require you to actually start on the homework before 6:00 pm the day before it's due...

⁵ I'm here for you. Your classmates are here for you. Walk towards the light.

⁶ Provided you've followed the guidelines below.

University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct* (oaa.osu.edu/coam/home.html), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* may constitute "Academic Misconduct."

Basic Etiquette:

Here are some things I never thought I would have to teach anyone.

- 1) Do not text in class
 - a. Do not text under the desk (not subtle)
 - b. Do not text while sitting the front row and participating in class discussion (even less subtle)
- 2) Do not address your professor by their first name unless you are given explicit permission. I am now giving you explicit permission to call me Becca. Your other options include the following:
 - a. Dr. Morley
 - b. Um, excuse me?
- 3) Show up to class on time, and if you can't, do not come in late and then come to sit in the front row.

Here are some more things I really never thought I'd have to teach anyone!

- Things that are my job
 - Doing what I can – within reason – to help you learn the material
 - Making my expectations clear
 - Providing feedback on your performance
 - Being consistent and coherent
 - Being responsive to requests and complaints
- Things that are not my job
 - Providing you with up-to-the-minute calculations of your grade
 - Going out of my way to enable you to pass without actually attending class
 - Assisting you to exert the exact minimum amount of effort you need to pass the class
 - Answering basic questions about assignments the night before they are due
- Things That will Seriously Diminish Your Chance of Passing this Class
 - Scheduling work hours during class meeting times
 - Scheduling other classes during class meeting times
 - Attending for the first half of the semester and then assuming you know the drill and don't need to keep coming.

Obstacles To Success: Common Misconceptions & Maladaptive Strategies:

- Questions should only be asked as an absolute last resort⁷
- Being wrong is the worst thing that could ever happen to me
- Office Hours are for the weak – and should only be utilized once I have bombed on 4 assignments
- Since I can't figure out how to do every problem, and even though I sort of think I know what #4 is about, I'm probably wrong, so I should just not turn anything in.
- Probably everyone else totally knows what's going on, so I should just keep my mouth shut.
- Working in groups is for the lazy. Plus, everyone knows that in the real world I will never have any contact with other humans, so I might as well get used to it now.
- The fact that there is no single right answer means that there is no wrong answer.

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Extra Stuff:

For those of you who are interested in being able to use IPA symbols on your computer, you'll need to download some fonts. In fact, you're really going to want not only the font, but some sort of keyboard layout as well for shortcuts.

You can search around online for whatever works best for you, but here are a couple of sites that describe how to download and use different types of ipa fonts:

http://scripts.sil.org/cms/scripts/page.php?site_id=nrsi&item_id=encore-ipa-download

Particularly for mac users:

<http://linguisticmystic.com/2007/03/08/using-ipa-fonts-with-mac-os-x-the-comprehensive-guide/>

Very cool site that has animations and movies of various sounds being produced:

<http://www.uiowa.edu/~acadtech/phonetics/>

Lots of audio files of sounds from around the world:

<http://www.phonetics.ucla.edu/index/sounds.html>

<http://archive.phonetics.ucla.edu/>

IPA chart with clickable symbols for pronunciation:

<http://www.phonetics.ucla.edu/course/chapter1/chapter1.html>

Encyclopedia of (all/most of) the world's languages:

<http://www.ethnologue.com>

⁷ This is the kind of class where you will probably feel much, much better about things if you ask questions. I like it when you ask questions. Scientists are supposed to ask questions. YOUR GRADE WILL BE BETTER IF YOU ASK QUESTIONS.

Week	Date	Topics	Readings	Other	
Week 1	8/22 (T)	Introduction			
	8/24 (R)	Waves I: Transverse & Longitudinal Simple Sine waves Source; Filter Oscillograms	Ch. 7.1-7.3.1.3		
Week 2	8/29 (T)	Waves II: Resonance Harmonics: F_1, \dots, F_n			
	8/31 (R)		Ch. 9.1		
Week 3	9/5 (T)	Speech Production I: Anatomy Articulators Sources Filter	Ch. 2	HW 1 due	
	9/7 (R)				
Week 4	9/12 (T)	Transcription I Consonants & Vowels IPA: English Phoneme Inventories	Ch. 3	HW 2 due	
	9/14 (R)	Transcription II IPA sounds	Ch. 4		
Week 5	9/19 (T)	Practice: Impressionistic Transcription			
	9/21 (R)	Practice: IPA sounds around the world		HW 3 due	
Week 6	9/26 (T)	Speech Production II Voicing Consonants vs. Vowels Plosives: VOT	Ch. 6		
	9/28 (R)	English Stops Praat Transcription Voicing VOT			
Week 7	10/3 (T)	Practice: identifying voicing, vowels versus consonants			
	10/5 (R)	Acoustics & Perception I Complex Waves Spectra; Harmonics (Addition) Inner Ear Tuning FFT: spectrograms	Ch. 8.3.1.-8.3.2 Ch. 12.3-23.4.3		
Week 8	10/10 (T)			Lab 1 due	

	10/12	(R)	Autumn Break Day		
Week 9	10/17	(T)	Acoustics II: Vowels Articulators Source Filter: Formants Inventories Vowel Space	Ch. 9.2-end Ch. 10.1	HW 4 due
	10/19	(R)			
Week 10	10/24	(T)	Practice: Praat settings; reading spectrograms		
	10/26	(R)	Acoustics III: Consonants Articulators Source Filter Transitions Inventories	Ch.10.2-10.3 Ch. 13.1-13.2	
Week 11	10/31	(T)			Lab 2 due
	11/2	(R)	Practice: identifying consonants from the spectrogram and the oscillogram		
Week 12	11/7	(T)	Acoustics IV:Suprasegmentals Stress Tone Prosody	Ch.11	
	11/9	(R)			
Week 13	11/14	(T)	Practice: Praat settings, transcriptions		Lab 3 due
	11/16	(R)	Spectrogram Reading Unit boundaries Transitions Under/Over-Shoot Auditory masking/deletion Phonemes & Allophones		
Week 14	11/21	(T)	Practice: transcription, segmentation		
	11/23	(R)	Thanksgiving		
Week 15	11/28	(T)	Perception II Non-linear scales Invariance Problem Non-Verdical Perception Co-articulation Types vs. Tokens	Ch. 12.5-end Ch. 10.4 Ch. 13.1;13.3.1;13.4	Lab 4 due
	11/30	(R)	Connected Speech		
Week 16	12/5	(T)	Review		
Finals (12/8-12/14) : Final lab due during finals week.					