

Linguistics 415: Phonetics

Spring 2021, 38873R



Class: T, Th 10:30-11:50

Zoom Link: <https://usc.zoom.us/j/98245725843?pwd=NG0zUGdRWVJNTDFKVGIkWG5dmU2dz09>

Professor: Louis Goldstein

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Office Hours: TBA

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Phonetics: Why should you study it?

Useful for people interested in:

- speech pathology/therapy
- speech technology (speech recognition and synthesis)
- teaching English as a second language
- dialect coaching
- learning to speak other languages
- understanding the nature of language, the most quintessentially human activity.

Goals

- to investigate the structure of speech, "the dance of the tongue," and how it functions linguistically in the languages of the world.
- to gain experience with the experimental and computational techniques that are used to investigate and model speech and its organization. This includes learning about speech acoustics, vocal tract anatomy and articulation, dynamical modeling, speech analysis and synthesis.
- to gain practical experience in producing and transcribing speech patterns of any language.

Class Organization

Tuesday class will be primarily lecture. Thursday class will be some lecture but will also include production and transcription practice, background and instruction for computer-based exercises, in-class lab exercises.

Website for class materials: <https://sail.usc.edu/~lgoldste/Ling415/>

Assignments, lecture slides, audio-visual materials will be available there, NOT on Blackboard.

Required Work

Weekly:

- light reading (in textbook)
- computer lab assignments
- written homework

Exams:

- midterm
- final

Final Paper or Project

Course Grading

Exams: The dates of the exams are in the schedule. Students are asked to check to make sure that they have no conflicts on these dates. Please advise the instructor as soon as possible if there are any test conflicts.

Grades: Students will be evaluated in the course through 2 exams, a final paper, homework and participation.

Midterm:	20%
Final:	30 %
Final Paper:	15%
Homework:	25%
Class Participation:	10%

Books

Ladefoged, P. & Johnson, K. (2015). *A Course in Phonetics*. 7th ed. Palo Alto, CA: Cengage.

Software

Students will use PRAAT software to record their voice, and investigate speech acoustics. They will also use software written in MATLAB to analyze speech, simulate vocal tract movement and synthesize speech. They can both be downloaded free:

PRAAT can be downloaded from here: <http://www.praat.org>

MATLAB can be downloaded from here: <http://itservices.usc.edu/matlab/>

Schedule

organized by weeks. If there is no topic listed for the Thursday class, it will be a continuation of the Tuesday class.

	Introduction to Phonetics and English Phonetics		
19-Jan	Intro to Speech Gestures	21-Jan	Introduction to Acoustics
26-Jan	Representations of speech	28-Jan	Transcription Practice
2-Feb	Dynamical Systems	4-Feb	Simulating Speech
9-Feb	Variation in English speech	11-Feb	Transcription Practice
	Consonants in the World's Languages		
16-Feb	Sound Initiation	18-Feb	
23-Feb	Gestures of the Larynx	25-Feb	
2-Mar	Consonant Contractions	4-Mar	
9-Mar	Review	11-Mar	Midterm Exam
	Vowels in the World's Languages		
16-Mar	Source-Filter Theory	18-Mar	Spectrograms and Formants
23-Mar	Wellness Day	25-Mar	Vowels: Articulation To Acoustics
30-Mar	Vowel Representations	1-Apr	Speech Perception
	Auditory System and Brain Representation		
7-Apr	Auditory System and Speech Perception	9-Apr	Neural representations of speech
	Prosody		
13-Apr	Syllables	15-Apr	Phrasing
20-Apr	Tone and Intonation	22-Apr	Wellness Day
27-Apr	Student Presentations		

Final Exam Tuesday 11 May 8-10 AM

The virtual classroom: netiquette

Although we are not in a physical classroom, we need to still treat the virtual environment with respect as a learning environment.

- It is required that your laptop/tablet's webcam and audio be operational. A phone is not an adequate device for class purposes.
- Just as visual and hearing communication is important to learning in an in-person classroom, it is important in a virtual classroom. Please have your webcam turned on ("Start Video") unless confronted with unavoidable personal or technical limitations. Please mute audio when you are only listening. Your full name should be displayed.
- You are not permitted to give the class's Zoom meeting link or password to anyone not enrolled in the class. You are expected to login with your USC address/zoom account through USC's SSO (single sign on).
- You should understand that USC records class meetings. This will allow students in Asia to attend asynchronously if they need, or will be provided for unanticipated emergencies. The provost states that "students should plan to attend every synchronous session for the classes in which they are enrolled, irrespective of when it occurs in their time zone...within reasonable learning hours in the student's time zone, defined as 7:00am to 10:00pm."

The provost reminds "students of their responsibilities towards the appropriate use and handling of these recordings under existing SCampus policies regarding class notes (<https://policy.usc.edu/scampus-part-c/>)...[students] are not permitted to create their own class recordings without the instructor's permission. Violations of these policies will be met with the appropriate disciplinary sanction.

Try to keep external distractions to a minimum. It is important to be cognizant of the following in our learning environment:

- Do your best to find a quiet, well-lit space prior to logging onto the live session. The setting should be an environment conducive to learning.
- Proper classroom attire is expected. (If you wouldn't wear it in an in-person classroom, please don't wear it in our virtual classroom.) Ditto for behavior.
- Please sit up at your table or desk, just as you would in a physical classroom. Your face should be in the camera frame.
- Please minimize distractions, both for your own learning and for others in the virtual classroom. Some visual and audio distractions that are best avoided during class time are: children, pets, TV, music, media, phones, and people moving in the background. If such a situation arises, simply briefly mute your video and audio.
- Public spaces are not conducive to learning in the virtual classroom. You should be in a place where you can hear and see the instructor and other classmates without distractions, and they can likewise hear and see you without distractions.

Students should attend class in a timely manner and remain until the class session is over. Although virtual, the Zoom meeting is a classroom and should be respected as such, in compliance with the USC Student Conduct Code.

*Netiquette here was adapted by Dani Byrd from Professor Christa Bancroft and from the Virtual Academic Center in the USC Suzanne Dworak-Peck School of Social Work

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 / Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symlicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity / Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776
dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/ notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention - (213) 821-4710
campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101
diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.