

Linguistics 580: General Phonetics

Fall 2021, 38955D



Time: Tues 4:30 - 6:50

Location: GFS 330

Professor: Louis Goldstein

Email: louisgol@usc.edu **Office Hours:** TBA

Course Description

Phonetics is the study of the human speech system and how it is used for communication. This includes speech articulation, planning, and perception, along with their cognitive representation and its relation to phonology. It also includes areas of physics that are outside phonetics *per se*: dynamical systems, kinematics, acoustics, and aerodynamics, and computational tools for analysis of speech articulation and acoustics, simulation of speech processes, and use of speech data corpora. All of these concepts be developed in the course, which will also aim to develop a description of the range of distinct phonetic units and structures found in the languages of the world.

Learning Objectives

In addition to a theoretical understanding of the the speech system, students will gain experience using the computational tools that can contribute to their own research trajectories. They will also gain practical experience producing and transcribing phonetic units from the languages of the world.

Class Organization

Website for class materials is here: https://sail.usc.edu/~lgoldste/General_Phonetics

Assignments, lecture slides, exercise materials will be available there, NOT on Blackboard.

Lectures will typically last 1.5 hours with the rest of the class devoted to working with the analysis and synthesis tools together (so please make sure you zoom with a computer, not a tablet or a phone) or practice in production and transcription.

Required Work

- Each week reading will be assigned from the books (below) or articles. There will also be some self-grading assignments to assure understanding of the material, and weekly “laboratory” assignments involving speech tools.
- Final Take-home Exam
- Final project/paper

Course Grading

- Final exam 25%
- Final project/paper 40%
- Homework 25%
- Participation 10% (this includes sharing screen during practice sessions and asking questions on reading.)

Resources Required

Books

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

I recommend getting the Kindle version

Audio materials and exercises are available here: <https://linguistics.berkeley.edu/acip/>

Gick, B., Wilson, I. & Derrick, D. (2013). *Articulatory Phonetics*. Malden, MA: Wiley-Blackwell.

Ladefoged, P. and I. Maddieson (1996). *Sounds of the Languages of the World*. Oxford: Blackwell.

Software

Students will use PRAAT software to record their voice, and perform speech analyses. They will also use software written in MATLAB to analyze 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 of Topics

	Basic concepts
24-Aug	Primitives: The gestural structure of speech
31-Aug	Dynamical models of gestures
7-Sep	Gestural Scores: Segments & gestures
14-Sep	Introduction to Acoustics I
21-Sep	Syllable structure: phonology and gestural coordination
28-Sep	Variation at Prosodic Boundaries: Temporal slowing & overlap
	Generating sound across languages
5-Oct	Aerodynamics and Initiation
12-Oct	Aerodynamics, laryngeal gestures & phonation
19-Oct	Constriction Degree and Location
26-Oct	Tone and Intonation
	Filtering and Resonance
2-Nov	Introduction to Acoustics II: source-filter
9-Nov	Interpreting spectrograms and speech perception
16–23-Nov	Vowel systems

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.symplicity.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.