

# GESM 140g Syllabus

# Speech & Hearing in

# Health & Breakdown

syllabus under development for Fall 2025

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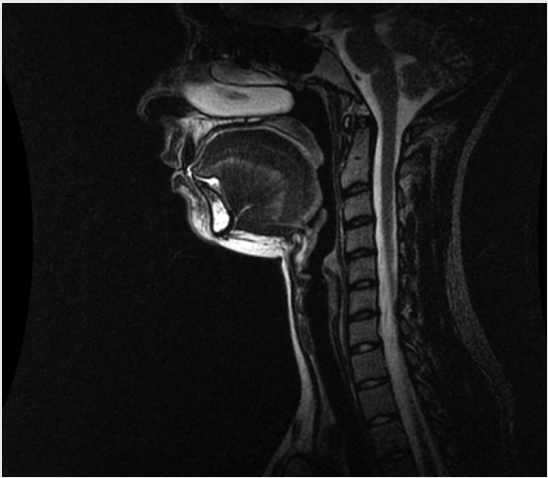
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courtesy of Dr. Yongwan Lim

[Prof. Dani Byrd](#)

*USC Linguistics Dept. GFS 301*

*office hours [amended]: by appt &  
Tues & Thurs 2-2:30*

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How do humans speak and hear? And how can this exquisite a hallmark of humanity falter during the lifespan. This course will consider how moving our bodies—our tongue, larynx, and lips—creates sound that encodes the informational substance of human language. *This course introduces students to thinking about spoken language communication as a physical act taking place in a dynamic and social context in health and in breakdown.*

After an introduction to vocal tract anatomy, students will take an audio-visual tour through the varied speech sounds that languages of the world use—from vowel and consonant sounds to clicks to tone. We will practice phonetic transcription and give a go at transcribing less familiar varieties of English. We work toward a basic grasp of speech acoustics and the physiology of human hearing, while appreciating the abstract nature of human speech perception. We look at how bilingual speakers juggle their multiple languages. This body of phonetic knowledge is deployed in a consideration of how diseases and disorders can affect the ability to speak and hear. For example, we learn about voice disorders, stuttering, oropharyngeal cancer, deafness, and hearing loss. We finish by considering implications of what we have learned for speech technologies, including cochlear implants, speech synthesis, and automatic speech recognition.

If you're interested in linguistics, cognitive science, voice and speech, speech technology, or human health, this GSEM seminar might be up your alley. All backgrounds and interests are welcome!

## Class Meetings Fall 2025

GSEM 140g 35462R (Byrd)

*Lecture:* T Th 12:30-1:50 in GFS 113

[If we become remote, here are Professor Byrd's [Netiquette](#) expectations for the virtual classroom. ]

*GSEM 140g in Life Sciences. Scientific understanding of a full range of living systems from molecules to ecosystems, prokaryotes to humans, past and present. (Satisfies GE-D, Life Sciences) Open only to Freshmen.*

## Course Goals

- To situate the physiology and functions involved in producing human language
- To understand how sounds of the World's Languages are articulated and how English varies globally & around the US
- To have an elementary understanding of speech acoustics

- To grasp the basic physiology of human hearing and appreciate the abstract nature of human speech perception
- To appreciate how bilingual speakers juggle their multiple languages
- To become familiar with breakdown in disorders of voice and speech
- To become familiar with the causes of hearing loss and deafness and understand the role of hearing aids, cochlear implants, and signed languages
- To appreciate the benefits and limitations of spoken language technologies

## Learning Objectives

- Demonstrate learning related to course goals through question-answer assessment
- Analyze original data in mini datasets
- Participate in phonetic exercises both oral (practicum & listening) and written (transcription)
- Peruse, select, synthesize, and critique original research articles in speech and hearing sciences from library journal collections
- Practice public presentation of scientific material to lay audience
- Develop a functional understanding of healthy and disordered language, including via interacting with atypical speakers/hearers, that can be drawn on to make informed life decisions.

## Two Books

D. Byrd & T. Mintz. (2010) *Discovering Speech, Words, and Mind*. Wiley-Blackwell Publishing. (Also available downloadable from the [Libraries](#) if you choose not to purchase.)

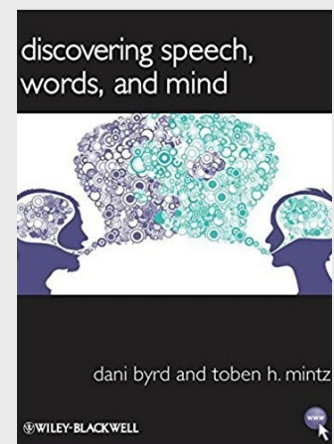
Optional to purchase; pdfs will be available if you prefer not to buy this:

*Introduction to Communication Disorders* Robert Owens and Kimberly Farinella. Pearson.

Other readings will be assigned and posted as links or downloadable pdfs.

## Work

- Readings and multimedia material in preparation for class
- Attendance and participation in class required
- Assigned independent work
- Two tests (non-cumulative)



**Slack** will be used for information sharing about interesting media, news and current events, to reiterate in-class announcements, or for class-relevant conversation. Please turn on notifications for the class channel.

## Grades

- Test 1 20%
- Test 2 20% (not cumulative but in the final exam timeslot)
- Homework 1: Transcription
- Homework 2: Identifying Consonant Articulation
- Homework 3: Language Variation
  - All Homeworks together comprise a total of 20% (i.e. approx 6.7% each)
- Written Interview Report 20%
- Oral Presentation of Research Article 20%
- Engagement: For course grades that are computed to be 'on the bubble,' in-lecture engagement and participation may be taken into account in tipping a grade upward or not.

**Assignments:** Some assignments will involve the use of a computer; some will be writing and/or analysis oriented. Assignments will be released at least one week prior to their due date.

**Late homeworks** are not accepted with the following exception: A request to the professor in advance to use your course 'TimeBank' allows for one two-day extension during the semester to be applied to **Homework 1-3 only—not** applicable to tests, interview report, or oral presentation.

**The course** will be graded on a curve (applied to final grades): *roughly* top 45% As, next 45% Bs, next 10% Cs and below. The curve will not however move grades down.

**Tests** cannot be 'made up' or taken early unless arrangements with the instructor are *made in advance* and are due to documented *unavoidable circumstances* (aka an emergency).

**All assignments are to be done \*\*independently\*\***, not in teams, not with

partners, not in collaboration. Copying or collaborating on homework assignments (or exams) will be considered a violation of Academic Integrity (see further below).

This course aims to develop creative, analytical, and critical thinking skills. Therefore, all assignments should be prepared by the student working *individually*. Students may not have another person or entity complete any portion of an assignment. Therefore, using AI-generated text, code, or other content is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity. If I believe material submitted by a student was produced by A.I. (e.g. ChatGPT) or it is flagged by a GPT Detector, I reserve the right give the student an immediate impromptu oral exam on the same material.

Click here for detailed **Weekly Course Schedule**

with lecture by lecture schedule and Readings and Assignments by Week

*Topics are expected to include:*

- The Human Vocal Tract and how it is used to make the sounds of English and other languages
- Acoustic Properties of Speech
- Using the International Phonetic Alphabet to transcribe speech
- Language Variation
- Speech Perception
- Bilingualism
- Human Hearing, Hearing Loss, Deafness, Signed Languages
- Voice and Speech Disorders
- Aphasia and Dyslexia
- Speech Technologies

## **USC and Related Support Resources**

<https://sites.google.com/view/uscphongroup/usc-support>

## **Communication and Policy Information**



**Slack and Email:** In addition to the utility of **Slack**, it is useful if we can communicate with each other **using email**. In this way, you can be advised of changes, and I can be advised of any problems that you encounter. Please know that for this class *I will expect you to check your email*. In case you are unfamiliar with email, communications should be respectful and grammatical.

### **In-Class Health Notes**

Students with symptoms of illness should not be in the classroom. If you are ill, *let me know* and we will work together to address continuity of education. If your symptoms are consistent with Covid-19, you should arrange to test through MySHR.

Students are expected to comply with all aspects of USC's COVID-19 policy as extant at any given time, including its masking policy. Failure to do so may result in removal from the class and referral to Student Judicial Affairs and Community Standards. If we find ourselves needing to be remote, here are Professor Byrd's Netiquette expectations for the virtual classroom.

For students enrolled in classes that will be taught in-person, **the default attendance expectation is in-person**. Students who present an OSAS accommodation that permits them to take the class online-only will be accommodated. Similarly, we want to support and accommodate students who test positive for COVID or are required to self-isolate due to a high-risk exposure. That said, there should be no expectation that this class will be recorded, though it may be recorded at times for students who cannot be present due to illness.

**Emergency Preparedness/Course Continuity in a Crisis**—New Students are automatically signed up for TrojanAlerts. “In case of a declared emergency if travel to campus is not feasible, USC executive leadership will announce an electronic way for instructors to teach students in their residence halls or homes using a combination of Blackboard, teleconferencing, and other technologies. See the university’s site on Campus Safety and Emergency Preparedness.”

**(The material below is required by USC.)**

### **Academic Integrity**

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university’s mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the USC Student Handbook. All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or “recycle” work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be

reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

Academic dishonesty has a far-reaching impact and is considered a serious offense against the university. Violations will result in a grade penalty, such as a failing grade on the assignment or in the course, and disciplinary action from the university itself, such as suspension or even expulsion.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

In this class, **unless specifically designated as a 'group project,' all assignments are expected to be completed individually.** In this class, you are expected to submit work that demonstrates your individual mastery of the course concepts.

Please ask me if you are unsure about what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

## Course Content & Recording Distribution Policies

**USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.**

**Violations of Academic Integrity: Recording a university class without the express permission of the instructor and announcement to the class,** or unless conducted pursuant to an OSAS accommodation.

Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

**Violations of Academic Integrity: Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor** for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. Distributing course material without the instructor's permission will be presumed to be an intentional act to facilitate or enable academic dishonesty and is strictly prohibited. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

## Course Evaluations

Course evaluation occurs at the end of the semester university-wide.

### Accommodations

**(from USC Center for Excellence in Teaching <https://cet.usc.edu/teaching-resources/syllabus-template/>)**

OSAS is responsible for the determination of appropriate accommodations. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are

determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](https://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

## **Support Systems**

**(this section originates from USC Center for Excellence in Teaching**

**<https://cet.usc.edu/teaching-resources/syllabus-template/>)**

### **Counseling and Mental Health** - (213) 740-9355 – 24/7 on call

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

### **988 Suicide and Crisis Lifeline** - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices.

### **Relationship and Sexual Violence Prevention Services (RSVP)** - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations including sexual assault, intimate partner violence, and stalking.

### **EEO-TIX** - (213) 740-5086

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: (213) 740-5086 or (213) 821-8298 to report incidents of bias, hate crimes, and microaggressions to the EEO-TIX for appropriate investigation, supportive measures, and response.

### **OSAS** - (213) 740-0776

OSAS provides academic accommodations and auxiliary aids in accordance with federal laws and university policy.

### **USC Campus Support and Intervention** - (213) 740-0411

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

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

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) 442-1200 – 24/7 on call

Non-emergency assistance or information.

### **Office of the Ombuds** - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will



work with you to explore options or paths to manage your concern.

*Occupational Therapy Faculty Practice* - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

**The section above originates from *USC Center for Excellence in Teaching***

**<https://cet.usc.edu/teaching-resources/syllabus-template/>**

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