

University of Florida at Gainesville
Department of Linguistics
4131 Turlington Hall
LIN 6226: Advanced Phonetics

T 8-9th period (3:00-4:55PM)
R 4-5th period (4:05:4:55PM)

MAT 0003 (Matherly Hall)
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Professor: Ratreé Wayland
E-mail: ratree@ufl.edu

Turlington 4131E
Phone: (352) 294-7450

Office Hours: T (1:55-2:45 PM), and by appointment (please email to schedule)

Course materials on Canvas: <http://elearning.ufl.edu> log in and find LIN 6226

Technical Issues? Contact the UF Computing Help Desk: helpdesk@ufl.edu or call (352) 392-4357.

Overview:

The goal of this course is to introduce students to acoustic analysis techniques, theoretical issues in phonetics, and experimental phonetic research design. Experimental phonetic studies particularly those pertaining to an investigation into second language acquisition (production and perception) in general and on linguistic prosody in particular will be read and discussed.

Prerequisite: LIN 4205 (Fundamental Phonetics)
LIN 6208 (Phonetics for Linguists)

Objectives: On completion of this course, students should be able to:

- perform acoustic analysis on various acoustic characteristics of speech signals
- design experimental phonetic research to answer specific research questions
- be familiar with general theoretical issues in phonetics
- be informed of current trend in experimental phonetics research

Assessment	% of course grade
Class participation and exhibition of having read reading assignments	15%
Midterm exam	25%
Homework (5)	25%
Presentation of selected papers	10%
Final project	25%
(Acoustic analysis and write-up of stimuli provided or of your own choice)	

Grading Scale

93–100% = A	90-92.9% = A-	87-89.9% = B+
83-86.9% = B	80.0-82.9% = B-	77-79.9% = C+
73-76.9% = C	70.0-72.9% = C-	67-69.9% = D+
63-66.9% = D	60.0-62.9% = D-	Below 60% = E

Information on current UF grading policies for assigning grade points can be found here. <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Attendance Policy: Class attendance is mandatory. Acceptable reasons for absence from or failure to engage in class can be found here [Attendance Policies < University of Florida \(ufl.edu\)](#). In addition, appropriate documentation for absences (except for religious holidays), missed work, or the inability to fully engage in class is required. A warning will be issued after two consecutive weeks of absences. Attendance will be prohibited after four weeks of absences, resulting in a withdrawal recommendation and/or a failing grade for excessive absences.

Late Policy: 10% penalty per day up to 3 days unless you receive permission before the due date. Let me know as soon as you realize you will be unable to meet a deadline. Assignments are collected at the beginning of class on the date they are due.

Textbooks

Required:

Wayland, R. Phonetics (2018). A Practical Introduction. Cambridge University Press

Recommended:

1. Reetz, Henning and Jongman, Allard. Phonetics: Transcription, Production, Acoustics, and Perception. Wiley-Blackwell Publisher, 2009
2. Rosen, S. and Howell, P. (1991). Signals and systems for speech hearing. Academic Press
3. Kent, R. and Read, C. (1992). The Acoustic analysis of speech. Singular Publishing Group, Inc.
4. Borden, G., Harris, K., and Raphael, L. (1994). Speech Science Primer. Latest Edition.
5. Johnson, Keith. (2012). Acoustic and Auditory Phonetics. Blackwell Publishers, Inc. 3rd Edition.
6. Stevens, K. (1999). Acoustics Phonetics. The MIT Press.

Course Outline

Lectures will follow the outline below. This outline is tentative and may be updated as we go.

Week	Date	Topic	Reading Assignments	HWs & Exams
1	1/14/2025	Intro & Review Basic Acoustics: Wave Loudness, pitch, Quality, resonance Auditory scales	Wayland Chapter 6	

2	1/21/2025	Speech Analysis I: - Recording - Interpreting spectrograms - Temporal measurement - Amplitude measurement - Pitch measurement	Wayland Chapter 7 Sawusch 2005	
3	1/28/2025	Speech analysis II: - LPC - FFT - etc.	Wayland Chapter 8	HW1
4	2/4/2025	Acoustic characteristics of segments	Wayland Chapter 9	
5	2/11/2025	Acoustic characteristics of suprasegments (stress, tone, rhythm, etc.)	Wayland Chapter 2	HW2
6	2/18/2025	Prosody		
7	2/25/2025	Prosody		HW3
8	3/4/2025	Automatic acoustic feature extraction		
9	3/11/2025	Speech perception -acoustic invariance -consonant perception -vowel perception -effects of contexts & rate - etc.	Raphael 2005 Johnson 2005 Steven & Blumstein 1978	Mid-term
10	3/18/2025	SPRING BREAK!	NO CLASS!	
11.	3/25/2025	Neural coding of speech -duplex perception -McGurk effects -non-speech analog	McGurk 1976 Whalen & Liberman 1987	
12.	4/1/2025	Speech perception theories/models -Motor theory -Direct realist	Wayland Chapter 10, 11 Liberman et al 1985	HW4

		-Psychoacoustic		
13.	4/8/2025	Speech perception development	Kuhl et al. 2000 Houston 2005 Maye et al. 2002	
14.	4/15/2025	Speech production and Perception relationship	Fowler et al. 2005	HW5
15.	4/22/2025	L1-L2 perception theories and models -NLM -SLM -PAM etc.	Flege & Bohn 2021_A Flege & Bohn 2021_B Iverson & Kuhl 1995 Best,1995	
16.	4/29/2025	Presentation		

Accommodations for students with disabilities: Students requesting classroom accommodation must first register with the Dean of Students Office <https://disability.ufl.edu/get-started/> The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation.

Academic honesty: It is expected that all students will adhere to the University of Florida Honor Code and the academic honesty guidelines available at: https://flexible.dce.ufl.edu/media/flexible_dce_ufl.edu/documents/uf_policy_student_conduct.pdf
The UF Honor Code states that “

Course feedback: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>

Recording: Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Campus resources:

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: [Visit the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website](#).

University Police Department: [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

Academic Resources

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: [Visit the Student Honor Code and Student Conduct Code webpage for more information.](#)

On-Line Students Complaints: [View the Distance Learning Student Complaint Process.](#)