

LING 110: Fall 2017  
Introduction to Phonetics and Phonology

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office	Mon 11a-12p & Fri 10a-11a	Tue 4p-5p & Fri 4p-5p	Wed 1p-2p 556 Evans;
hours	1215 Dwinelle	1307 Dwinelle	Fri 3p-4p 1307 Dwinelle

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**Lectures.** MWF 2:00p-3:00p; 2 LeConte

**Discussion Sections.**

104 (Cheng) Tu 8a-9a 41 Evans	105 (Cheng) Tu 9a-10a 51 Evans	106 (Cheng) Tu 3p-4p 5 Evans	101 (Shen) We 8a-9a 225 Dwinelle	102 (Shen) We 9a-10a 233 Dwinelle	103 (Shen) We 12p-1p 72 Evans
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**Course Description.** The aim of this course is to provide the student with the practical skills and the conceptual framework to do further work in phonetics and phonology, especially as this involves the description and scientific explanation of language sound systems. It will give training in the production, perception, physiological and acoustic description, and IPA transcription of the speech sounds used in the languages of the world. It is an overview of phonetic representations and models, including the International Phonetic Alphabet, the acoustic theory of speech production, theories of prosodic structure, the gestural organization of speech, and speech aerodynamics and theories of speech perception. It also covers some of the essential background for courses in phonological theory by reviewing the principles of phonological contrast and alternation and distinctive feature representations, and by providing the opportunity to exercise transcription skills in conjunction with other methods of observation by doing a small field project. (4 units)

**Prerequisites.** Ling 100 or concurrent enrollment in Ling 100 or graduate student status.

**Specific learning goals.** With diligent study, by the end of this course, you will be able to

- transcribe speech of any language or dialect.
- produce most of the sounds found in the languages of the world.
- perform basic acoustic analyses of speech sounds.
- understand and explain basic speech perception phenomena.
- apply phonetic theories of speech production and perception to the study of other sub-disciplines of linguistics, including, but not limited to morphology, historical linguistics, and sociolinguistics.
- acknowledge and/or appreciate the vast diversity of speech and languages that humans are capable of.

Students interested in continuing work in topics covered in this course are encouraged to enroll in 113 (Experimental Phonetics), 210 (Phonetic Theory; requires permission from the instructor), or to become involved in research opportunities through Undergraduate Research Apprenticeship Program (URAP) or

Linguistics Research Apprentice Practicum (LRAP).

**Textbooks.** This course has two required textbooks and two optional textbooks. Additional required and suggested optional readings from other sources will be made available on bCourses.

- Johnson, K. *Acoustic and Auditory Phonetics*, 3rd edition preferred
- Ladefoged, P. & Johnson, K. *A Course in Phonetics*, 6th or 7th edition
- International Phonetic Association. *Handbook of the IPA* (optional)
- Gick, B., Wilson, I. & Derrick, D. *Articulatory Phonetics* (optional)

Copies of *A Course in Phonetics* and *Handbook of the IPA* are available on short loan (2 hours) at the Moffitt Library course reserve desk. This textbook has a very useful partner website (<http://linguistics.berkeley.edu/acip/>).

*Acoustic and Auditory Phonetics* can be borrowed digitally for 2 weeks at a time from the library.

**Technology.** This course makes use of, and assumes that you have regular access to a computer (no specific operating system required) with Praat<sup>1</sup> (<http://www.praat.org>), an reliable internet connection, and the ability to record audio<sup>2</sup>. For the purposes of writing up homework assignments and term projects, you should also ensure that you are able to use IPA fonts.

A pair of headphones or earbuds is not strictly required, but highly recommended for best appreciation of audio recordings. Headphones are especially recommended if you often work in a public space.

If you do not have access to one or more of these technologies, please contact Professor Lin and Technology Specialist Ronald Sprouse ([ronald@berkeley.edu](mailto:ronald@berkeley.edu)) as early as possible.

**Course Requirements.** As a student taking the course for credit, you are expected to

- Complete assigned readings.
- Attend lectures and discussion sections regularly.
- Turn in homework assignments.
- Complete a midterm and a final exam.
- Research and write up a phonetic description of a language new to you, which you will work on over the course of the semester.

**Point Distribution.**

Participation	5
Homework & Milestones	40
Midterm Exam	15
Final Exam	25
Project writeup	15
<b>TOTAL</b>	<b>100</b>

**Letter Grade Distribution.**

$\geq 93.00$	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	$\leq 59.99$	F

<sup>1</sup>You are free to use other software for acoustic analysis (e.g. Wavesurfer) if you know what you're doing.

<sup>2</sup>Many laptops now come with microphones capable of creating suitable recordings for use in your term project. Your first homework assignment will require you to record yourself using your proposed project recording setup, so that we may assess their quality.

## Course Policies.

All **homework assignments** should be submitted electronically, by 11:59 of the due date. Please do not submit your homework in person or by email. **Collaboration on homework is permitted**, in groups up to four. This class will use Gradescope integration in bCourses for homework submission and dissemination of graded feedback. Instructions for submitting your homework will be included with your first assignment. Because we aim to return homework grades and feedback within a week of the due date, **late homework** will be penalized with a 1-point cap reduction per day, and will only be accepted with evidence of exceptional circumstance, and at the discretion of your GSI. Homework turned in after feedback or solutions have been posted will not be graded, but can still be submitted for feedback.

In addition to regular homework assignments, you will be working in parallel on a **term project**. In this project, you will conduct a phonetic description of a language you do not speak, practicing the skills you will learn in class. At the end of the semester, you are expected to turn in a **project write-up**, documenting your work. This write-up is due **Sunday, Dec 10**. To help you along the way, we will provide you a number of **project milestone assignments**. These milestone assignments will be graded largely on perceived effort, rather than accuracy, but you are welcome to meet with your GSI during their office hours to check on the accuracy of your work. All the same, we encourage you to make every effort to complete these on time. Not only do they serve as a reminder of approximately what kind of progress you should have made on your project at any given time, but altogether they are worth the same number of points as one homework assignment.

**Participation** points will be assigned at the end of the semester, at the discretion of your section leader. These points are typically earned through regular attendance and non-disruptive contributions during section and lectures. Please see your section leader's syllabus for more specific information.

No **make-up midterm or final exam** will be given except in the case of a documented emergency, or when the date conflicts with a religious observation day, as stipulated by university policy. Requests for religious accommodation must be submitted in writing to Professor Lin no later than Sept 8.

The week of Oct 16-20 is **midterm week**. Neither lectures nor sections will meet normally during this week. In place of the regular lecture hour on Friday, Oct 20, the **written component of the midterm exam** will occur in room TBD. Appointments to take the **oral component** of the midterm exam will be available **Monday, Oct 16 through Thursday, Oct 19**. Signups will become available later in the semester. The midterm exam will cover all content from required readings and lectures through Friday, Oct 13.

The **final exam** will be held during the designated final exam time-slot for our course: **Tuesday Dec 12, 11:30a-2:30p**, room TBD. The final exam is entirely written, and will be comprehensive – review all topics from the course.

Though we will endeavor to respond to your **emails and bCourses messages** quickly, you should not expect to receive a response on weekends, holidays, and between the hours of 6p and 9a. In particular, homework questions asked during the weekend they are due are likely to go unanswered. Please plan accordingly.

## University Policies.

**Academic misconduct.** All forms of academic misconduct, including plagiarism, failing to cite a source of information, alteration of university documents, or cheating during exams are serious offenses with serious consequences. In accordance with University policy, incidents of academic misconduct will be reported to the UC Berkeley Center for Student Conduct and Community Standards.

**Accommodation of religious creed.** In compliance with Education code, Section 92640(a), it is the official policy of the University of California at Berkeley to permit any student to undergo a test or examination, without penalty, at a time when that activity would not violate the student's religious creed, unless administering the examination at an alternative time would impose an undue hardship that could not reasonably have been avoided. Requests to accommodate a student's religious creed by scheduling tests or examinations at alternative times should be submitted directly to the faculty member responsible for administering the examination **by the second week of the semester.**

**Principles of community.** These principles of community for the University of California, Berkeley, are rooted in our mission of teaching, research and public service. They reflect our passion for critical inquiry, debate, discovery and innovation, and our deep commitment to contributing to a better world. Every member of the UC Berkeley community has a role in sustaining a safe, caring and humane environment in which these values can thrive.

- We place honesty and integrity in our teaching, learning, research and administration at the highest level.
- We recognize the intrinsic relationship between diversity and excellence in all our endeavors.
- We affirm the dignity of all individuals and strive to uphold a just community in which discrimination and hate are not tolerated.
- We are committed to ensuring freedom of expression and dialogue that elicits the full spectrum of views held by our varied communities.
- We respect the differences as well as the commonalities that bring us together and call for civility and respect in our personal interactions.
- We believe that active participation and leadership in addressing the most pressing issues facing our local and global communities are central to our educational mission.
- We embrace open and equitable access to opportunities for learning and development as our obligation and goal.

**Class schedule.**

Abbreviations: ACIP = *A Course in Phonetics*; AAP = *Acoustic and Auditory Phonetics*; AP = *Articulatory Phonetics*. Readings are listed under the first day the material is expected to be relevant. Pagination listed from 7th edition of ACIP and 3rd edition of AAP. [Optional readings in brackets.]

Date	Topics	Readings
08/23 W	Welcome! & introduction	[ACIP 1]
08/25 F	Essential speech physiology	[AP 6.1, 7.1, 8.1, 9.1]
08/28 M	English sounds (a review)	ACIP 3
08/30 W		ACIP 4
09/01 F	Transcription	ACIP 2 (p35-47)
09/04 M	<b>Labor Day</b> – no lecture	
09/06 W	Transcription (cont.)	ACIP 5 (p115-119)
09/08 F	Consonants	ACIP 7
09/11 M		
09/13 W		ACIP 6
09/15 F	Airflow and aerodynamics	
09/18 M		AP 5
09/20 W		
09/22 F	Vowels	ACIP 9
09/25 M		
09/27 W		
09/29 F	Acoustics: fundamentals	AAP 1[, 3]
10/02 M		
10/04 W	Acoustics: vowels	AAP 2
10/06 F		AAP 6
10/09 M	Acoustics: fricatives and stops	AAP 7
10/11 W		AAP 8
10/13 F		
10/16 M	<b>Midterm exam (production)</b> in place of lectures and sections	
10/18 W		
10/20 M	<b>Midterm exam (written)</b> during lecture hour; <b>location TBD</b>	
10/23 M	Acoustics: nasals and laterals	AAP 9
10/25 W		
10/27 F	Suprasegmentals	ACIP 10
10/30 M		
11/01 W	Phonology	ACIP 2 (p47-51)[, 11]
11/03 F		Hayes [2,] 4
11/06 M		
11/08 W	Coarticulation	AP 11[, Bell-Berti and Krakow (1991)]
11/10 F	<b>Veterans Day</b> – no lecture	
11/13 M	Phonological typology	Odden 8
11/15 W	Aerodynamic voicing constraint	Ohala (1983)
11/17 F	Audition	AAP 4

Date	Topics	Readings
11/20 M	Speech perception	AAP 5
11/22 W 11/24 F	<b>Thanksgiving Break</b> no lectures 11/22 and 11/24; no sections 11/21 and 11/22	
11/27 M	Speech Perception	Mann (1980)[, Lotto and Kluender (1998)]
11/29 W		Ganong (1980)
12/01 F		Beddor (2009)
12/12 Tu	<b>Final exam, 11:30a-2:30p; Location TBD</b>	

### Assignments schedule.

All assignments are due at 11:59p on the listed date. Approximate percentage of your total grade each assignment

Assignment	Due	Description	% total grade
HW1	09/03	English consonants, essential speech physiology	3.6
HW2	09/10	English vowels & transcription	3.6
Milestone 1	09/10	find a language and consultant	0.3
HW3	09/17	consonants	3.6
HW4	09/24	airstream and aerodynamics	3.6
Milestone 2	09/24	record minimal data, start transcribing	0.7
Milestone 3	10/01	preliminary consonants and vowels inventory	1.1
HW5	10/08	acoustics of vowels, fricatives, and stops	3.6
HW6	10/15	English vowel plots	3.6
Milestone 4	10/29	project language vowel plot	1.5
HW7	11/05	acoustics of nasals and laterals & suprasegmentals	3.6
HW8	11/12	phonological features and processes	3.6
HW9	11/19	typology, aerodynamic voicing constraint, coarticulation	3.6
HW10	12/03	speech perception	3.6
Term Paper	12/10	Term project write up with supplementary audio files	15.0