

LING 110: Fall 2015  
Introduction to Phonetics and Phonology

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office hours	Tu 3p-4p and Fr 2p-3p, 1215 Dwinelle, or by appointment	Tu 3p-4p in 556 Evans and We 3:30p-4:30p in 1307 Dwinelle, or by appointment	Tu 1p-2p in 556 Evans and We 10a-11a in 1307 Dwinelle, or by appointment

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**Lectures.** MWF 1:00p-2:00p; 2 LeConte

**Discussion Sections.**

101 (Heath)	102 (Bakst)	103 (Heath)	104 (Heath)	105 (Bakst)	106 (Bakst)
Tu 9a-10a	Tu 2p-3p	Tu 2p-3p	We 8a-9a	We 9a-10a	We 11a-12p
51 Evans	35 Evans	51 Evans	211 Dwinelle	35 Evans	122 Wheeler

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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 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.
- apply phonetic theories of speech production and perception to the study of other sub-disciplines of linguistics, including, but not limited to, phonology and morphology, historical linguistics, and sociolinguistics.
- 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) and 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 one optional textbook. 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)

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/>) with all of the media contained on previous editions' CDs, and more!. This website is free to access, and is maintained by Keith Johnson.

*Acoustic and Auditory Phonetics* can be “checked out” for 2 weeks at a time electronically from the library. To obtain a copy, you will need a UC Berkeley IP address (be on campus or logged into campus via VPN or proxy), then go to <http://site.ebrary.com/lib/berkeley/detail.action?docID=10483227>.

**Technology.** This course makes use of, and assumes regular access to a computer (no specific operating system required) with Praat (<http://www.praat.org>) and MS Excel (free for UC Berkeley students at <https://software.berkeley.edu/>) installed<sup>1</sup>. For the purposes of writing up homework assignments and term projects, you should also check to ensure that you are able to use IPA fonts. See the bCourses Pages entry on this topic for assistance.

Audio recording for term projects should be performed using the Phonology Lab's recording booths, or if using your own computer, an external microphone. **We strongly recommend that you do not use your computer's built-in microphone!** Even a cheap external microphone will be a major improvement. See the Project Description document in bCourses > Pages for more details.

A pair of headphones is not strictly required, but highly recommended, especially 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.** Each student taking the course for credit is expected to

- Complete assigned readings.
- Attend lectures and discussion sections.
- Turn in homework assignments (the top 10 scores of 11 will be counted towards the grade).

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

- Sit a midterm and a final exam.
- Complete a term project: a phonetic description of a language new to you, which you will work on over the course of the semester. Portions of this project will be assigned as regular homework.

### Point Distribution.

Participation	5
Homework	40
Midterm Exam	20
Final Exam	20
Project writeup	15
<u>TOTAL</u>	<u>100</u>

### 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

## Course Policies.

All **homework assignments** should be submitted through bCourses, by 11:59p of the due date. Please do not submit your homework by email. Homework will be graded by your section leader. **Collaboration on homework is allowed**, except where indicated. (Several homework assignments will refer to your project data, and collaboration is therefore not appropriate.) You should submit your own assignment, and indicate which other students were involved.

Because homework grades and feedback will be released within a week of the due date, **late homework** will only be accepted with evidence of exceptional circumstance, at the discretion of your section leader. Note however that your lowest scoring homework will not count towards your final grade.

Please submit, in a short paragraph justifying your request, any **grade disputes** that arise to either your GSI or Prof. Lin.

**Participation points** will be assigned at the discretion of your section leader. These points are typically earned through regular attendance and non-disruptive contributions during section and lectures.

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 September 9.

## 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.**

## Class schedule.

Abbreviations: ACIP = *A Course in Phonetics*; AAP = *Acoustic and Auditory Phonetics*  
 Pagination listed from 7th edition of ACIP and 3rd edition of AAP. [Optional readings in brackets.]

Date	Topics	Readings & Homework
08/26 W	Welcome!	[ACIP 1]
08/28 F		ACIP 3
08/31 M	Consonants and Vowels of English	ACIP 4
09/02 W		
09/04 F	Transcription (English)	<b>HW1</b> , ACIP 2 (p35-47)
09/07 M	<b>Labor Day</b> – no lecture	
09/09 W	Transcription and variation	ACIP 5 (p115-119)
09/11 F		ACIP 7
09/14 M	Consonants around the world	<b>HW2</b>
09/16 W		ACIP 6
09/18 F		
09/21 M	Airflow and aerodynamics	<b>HW3</b> , Gick et al 5
09/23 W		
09/25 F		ACIP 9
09/28 M	Vowels around the world	<b>HW4</b>
09/30 W		
10/02 F	Acoustics – basics	AAP 1[, 3]
10/05 M		<b>HW5</b>
10/07 W	Acoustics of vowels	AAP 2
10/09 F		AAP 6
10/12 M	Acoustics of fricatives and stops	<b>HW6</b> , AAP 7, 8
10/14 W		
10/16 F	Acoustics of nasals and laterals	[AAP 9]
10/19 M	<b>Midterm exam (written)</b> during lecture hour; <b>145 Dwinelle</b>	
10/21 W	<b>Midterm exam (production)</b> & project workshop	
10/23 F	during 10/21, 10/23 lecture hours and 10/20, 10/21 sections	
10/26 M	Using spectrograms	<b>HW7</b> , ACIP 8 (p213-221)
10/28 W		ACIP 10
10/30 F	Suprasegmentals	
11/02 M		<b>HW8</b>

Date	Topics	Readings & Homework
11/04 W	Phonology	ACIP 2 (p47-51)[, 11]
11/06 F		Hayes 2
11/09 M		
11/11 W	<b>Veterans Day</b> – no lecture 11/11; no sections 11/10 and 11/11	
11/13 F	Articulation and coarticulation	<b>HW9</b> , [Bell-Berti and Krakow (1991)]
11/16 M	Phonological typology	Odden 8
11/18 W	Aerodynamic voicing constraint	Ohala (1983)
11/20 F	Audition	<b>HW10</b> , AAP 4
11/23 M	Speech perception	AAP 5
11/25 W	<b>Thanksgiving Break</b>	
11/27 F	no lectures 11/25 and 11/27; no sections 11/24 and 11/25	
11/30 M	Speech Perception	
12/02 W		
12/04 F		<b>HW11</b>
12/06 Su	<b>Term project writeup due (11:59pm)</b>	
12/16 W	<b>Final exam, 7p-10p; location TBD</b>	

### Assignments schedule.

HW	Due date	Description
HW1	09/04	English consonants, essential speech physiology
HW2	09/14	English transcription project milestone 1 – find a language and consultant
HW3	09/21	non-English consonants
HW4	09/28	airstream and aerodynamics project milestone 2 – record and transcribe minimal data
HW5	10/05	project milestone 3 – consonants and vowels of project language
HW6	10/12	acoustics
HW7	10/26	English vowel plot
HW8	11/02	suprasegmentals project milestone 4 – project language vowel plot
HW9	11/13	phonological features and rules
HW10	11/20	project milestone 5 – project language phonemic patterns
HW11	12/04	aerodynamic voicing constraint speech perception