

Introductory Phonetics

Lecture sections: Ballantine 147
M, W, 2:30 – 3:45

Lab Sections: Memorial 401
Th, 11:15 – 12:30
Th, 4:00 – 5:15
F, 9:30 – 10:45

You must be enrolled in a lab section to be enrolled in this course.

Additional information at: <http://www.indiana.edu/~1541/> (that's lower-case L 541)

Instructor: Ken de Jong,
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Office Hours: W: 1:00 – 2:00, R: 11:30 – 12:30

Assoc. Inst. Yen-chen Hao,
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more on her in lab

Required Texts: Peter Ladefoged, *A Course in Phonetics, 5th ed.*, Thomson, 2006
Keith Johnson, *Acoustic and Auditory Phonetics, 2nd ed.*, Blackwell, 2003
Various handouts made available through various means.

Supplementary Texts: You are not required to acquire these texts, though, they are excellent references, especially the *Speech Science Primer*, and will likely be useful supplements for now and for the future.
Gloria Borden, Katherine Harris, and Lawrence Raphael, *Speech Science Primer, Any ed.*, Williams and Wilkins, 1994.
Peter Ladefoged and Ian Maddieson, *The Sounds of the World's Languages*, Blackwell, 1996.
Geoffrey Pullum and William Ladusaw, *Phonetic Symbol Guide*, U. of Chicago, 1986.

General.

Introductory Phonetics is designed to introduce students to the various facets of phonetic investigation. In this course, we hope to cover the basics of speech production and speech acoustics as they are relevant to the expression of linguistic structures. Along the way, we hope to develop basic skills for linguistic investigation of speech behavior. The first part of the course will focus on the segmental analysis of speech, and we will work on the ability to analyze speech by means of the IPA (International Phonetic Alphabet). The later part of the course will focus on understanding various quantitative aspects of speech. Most important, we will introduce you to a range of acoustic techniques for analyzing speech, and help you through a short experimental investigation of some linguistic phenomenon of your choice.

Requirements.

1) Assignments. There will be weekly homework assignments (which will trail off toward the end of the semester in favor of the course project). These assignments will entail performing various analyses, beginning with transcriptional analyses of speech. Other parts will entail performing exercises related to the course project, and to various kinds of data related to subject matter in the lectures.

2) Exams. There will be a mid-term and a final exam and two transcription exams in the discussion sections. The dates are marked on the schedule of events below.

3) A Term Project: This project will concern the acoustic investigation of a topic of your choice, filtered by Eric and me. Projects will be done in collaboration with (usually) two others in the class, and will involve the collection of relevant records, data-extraction analyses of these, analysis of this data, and a thoughtful write-up of the project and its results. More information on this project will be provided shortly -- including an appropriate schedule of events.

Grade calculation will be based on the following formula

Homework	-- 20%	Mid-term	-- 20%	
Transcription exams	-- 15%	+	Final	-- 25%
Project	-- 20%			

Schedule: All Topics are Tentative (except for exam dates)

Week	Date (Monday)	Topics	Readings	Discussion/Lab
1	Jan 12	Introduction: Observation and Transcription,	Ladefoged, Chs. 1 & 2	Introduction Symbol and Lab Overview
2	Jan 19 (no class on Monday)	The IPA Basics Supra-laryngeal Physiology	Ladefoged, Ch. 3 (L&M, Ch. 1)	Consonant Transcription
3	Jan 26	Consonant and Vowel Categorization	Ladefoged, Ch. 4; Ch. 9, section on cardinal vowels	Vowel Transcription
4	Feb 2	Narrow Transcription	Ladefoged, Ch. 7	Narrow Transcription Data acquisition
5	Feb 9	Exotic Consonants	Ladefoged, Ch. 6 (BHR, pp. 70 - 83)	Non-English Transcription Computer Lab Work
6	Feb 16	Aerodynamics, Physiology and Function of the Pulmonic System	(BHR, Ch. 5)	Laryngeal Transcription Data Analysis
7	Feb. 23	Laryngeal Physiology, Airstream Mechanisms and Laryngeal Contrasts	Ladefoged, Chs. 5 & 10 Notes on Intonation Notes on the IPA	Transcription Exam I
8	March 2 Mid-term March 4.	Problems with Transcription: Prosodic Structure	Ladefoged, Ch. 10	Experimental Design
9	March 9	Linguistic Uses of Pitch Duration, Juncture, and Stress		Tone & Intonation Transcription
		Major Breath Group Juncture		
10	March 23	Basic Acoustics Source Filter Theory	Johnson, Sect. 1 & 2, (BHR, Ch. 3)	Source Acoustics
11	March 30	Acoustics of the Source Resonance	Ladefoged, Chs. 8 & 9, Johnson, Sect. 4 + 5, (BHR Ch. 6)	Spectrographic Analysis
12	April 6	Perturbation Theory and the Acoustics of Vowels Acoustics of Obstruents	Johnson, Sect. 6 & 7	Transcription Exam II Hypothesis Testing
13	April 13	Articulatory to Acoustic Mapping, Spectrogram Reading,	Johnson, Sect. 8, (BHR, pp. 131 - 159)	Project Work
14	April 20	Quantitative Analysis and Variability Handling Data	'Notes on Articulation' - readings packet , (BHR, pp. 176 - 197)	Project Work
15	April 27	Phonetic Intent	Ladefoged, Ch. 11 (Johnson, Sect. 3, BHR, Ch. 6.)	Project Work
Final		Final: Mon., May 4 2:45 – 4:45		

BHR = Borden, Harris, and Raphael. Note: L&M = Ladefoged and Maddieson. L&M provides a comprehensive cross-linguistic description of the contrasts we discuss over the first 8 weeks, and is best used as a reference material for any particular set of contrasts one is wondering about. The introduction is also an excellent discussion of what the IPA is about.