

LING 321 : Phonology

TTh 1:10–2:30, Physics 121

Course Syllabus

Spring 2006

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PREREQUISITES

Successful completion of Linguistics 311 (or equivalent), or instructor consent.

CONTENT OF THE COURSE

Phonology is concerned with the grammar of *speech sounds*—specifically, with discovering the abstract mental principles which govern how speech sounds are arranged into systems of contrast, how they are organized into larger units such as syllables, and how their features are manipulated on the basis of their context of occurrence ('sound change rules'). Phonology also deals with the principles governing prosodic aspects of the speech signal, such as stress and rhythm, tone, and intonation.

Phonology is distinct from *phonetics*, although the two fields overlap. Whereas phonology is concerned with how sounds are organized into abstract systems, phonetics deals with the physiological and acoustic properties of the sounds themselves—how they are made, perceived, and classified. Since phonology relies on a foundation of solid phonetic description (and since phonetics is not taught as a separate course at Reed), the first couple weeks of the course will include some review of basic phonetic concepts, with particular reference to IPA and other transcription systems, and the anatomy of the vocal tract.

This course is divided roughly into three units:

(a) ***Segmental phonology***: This unit focuses on speech sounds, or *segments*. We begin by reviewing a little phonetics, focusing our attention on the production, transcription, and classification of segments. We then introduce the two fundamental insights underlying the phonological analysis of segments, namely *the phonemic principle* and *feature theory*. We explore various applications and elaborations of these insights, and practice techniques for analyzing data and representing generalizations in the form of *rules*. We introduce the notation for expressing rules within the traditional *Generative Phonology* framework, and introduce some important concepts within rule-based theories, such as *rule ordering* and *abstractness*. The readings for this portion of the course will mostly come from the Odden textbook, with one or two short supplementary readings added.

(b) ***Suprasegmental structure and non-linear phonology***: In this unit we consider the organization of segments into larger units, and the imposition of metrical and prosodic structure onto such units. We begin by talking about *syllables*, and then turn to the representation of *stress* and *tone*, enriching the theory developed in the first unit to deal with these new levels of organization. Here we introduce a more recent alternative framework to generative phonology, namely *Autosegmental Phonology*, which more

insightfully captures phenomena such as assimilation and tone sandhi. In our discussion of stress, we also introduce *feet* and *metrical structure*. The readings for this unit include the final chapter of the Odden textbook, and various supplementary readings.

(c) **Issues in phonological theory:** The final unit gives a partial overview of recent developments in phonological theory. We begin with a brief look at *Prosodic Morphology*, a theory designed to handle hard-to-explain phenomena such as reduplication and Semitic consonantal root morphology. We then turn to *Optimality Theory* (or “OT”), which has become the dominant theoretical framework in phonology over the past 10 years. In addition to examining the basic mechanisms and insights of OT, we will discuss how this theory compares—both conceptually and empirically—with the traditional rule-based phonology that we learned in the first part of the course. This unit will be based on the first half of the Kager textbook, with supplementary readings from various sources.

READINGS AND RESOURCES

Our textbooks are *Introducing Phonology* (2005), by David Odden, and *Optimality Theory* (1999), by René Kager. Both books are available at the Reed bookstore. We will be reading all of Odden and as much of Kager as we can get through (hopefully at least the first half). I have also assigned supplementary readings from the following sources. Aronoff & Rees-Miller can be found in the reference (non-circulating) section of the library. The remaining sources are available on 2-hour reserve.

- Aronoff, Mark and Janie Rees-Miller (eds.). 2001. *The Handbook of Linguistics*. Blackwell. <P121.H34 2001>
- Dell, François & Mohamed Elmedlaoui. (1988) “Syllabic Consonants in Berber: Some New Evidence”. *Journal of African Languages and Linguistics* 10: 1-17. <reserve folder>
- Goldsmith, John. (1990) *Autosegmental and Metrical Phonology*. Blackwell. <P217.7.G65 1990>
- Goldsmith, John, ed. (1995) *The Handbook of Phonological Theory*. Blackwell. <P217.H36 1996t>
- Hayes, Bruce. (1995) *Metrical Stress Theory: Principles and Case Studies*. University of Chicago Press. <P231.H38 1995>
- Hayes, Bruce. (2001) *Introductory Phonology*, chapter 3 “More on Phonemes”. <reserve folder>
- Ladefoged, Peter. (2001) *A Course in Phonetics* (4th ed.). Harcourt. <P221.L2 2001>
- Prince, Alan & Paul Smolensky. (2004) *Optimality Theory: Constraint Interaction in Generative Grammar*. Blackwell. <P158.42.P75 2004>
- Werker, Janet & Richard Tees. (1984) “Cross-language speech perception: Evidence for perceptual reorganization during the first year of life”. *Infant Behavior and Development* 7: 49–63. <reserve folder>

Below are some reference works for you to peruse at your leisure. I have placed these on 24-hour reserve.

- Ladefoged, Peter & Ian Maddieson. (1996) *The Sounds of the World’s Languages*. Blackwell. <P221.L24 1996> [A technical but nevertheless readable overview of the phonetic properties of different sounds, both common and ‘exotic’, from around the world.]
- McCarthy, John, ed. (2004) *Optimality Theory in Phonology: A Reader*. Blackwell. <P217.3.O67 2004> [An anthology of seminal and influential writings on OT.]
- Pullum, Geoffrey & William Ladusaw. (1986) *Phonetic Symbol Guide*. University of Chicago Press. <P221.P85 1986> [A useful reference guide to symbols used in phonetic transcription—both official IPA symbols and others which are commonly used (such as those used by Odden).]

There are some useful on-line resources which you should take advantage of:

- <http://www.uiowa.edu/~acadtech/phonetics/#>
 - This is the website for the University of Iowa's Phonetics Flash Animation project. Here you can look at animated diagrams illustrating different places and manners of articulation in English, Spanish, and German.
- <http://www.phonetics.ucla.edu/>
 - The homepage for the UCLA Phonetics Lab. To listen to sound files of the different types of sounds discussed in the reading, along with cool sounds from other languages, click on "Index of Languages" (to search alphabetically by language), "Index of Sounds" (to search by natural class), or "Map Index" (to search for language by location). For a handy 'self-pronouncing' version of the IPA chart, click on "A Course in Phonetics", and then click on "The IPA Chart".
- <http://www.sil.org/computing/fonts/encore-ipa.html>
 - If you have not already done so, you should equip your computer with an IPA font. IPA fonts for Windows and Macintosh are available for free download from the Summer Institute for Linguistics website at the address above. Free phonetic fonts are also available from other sites, but the SIL fonts are the most widely used.

COURSE REQUIREMENTS, GRADING, AND POLICIES

Participation: Students will be expected to attend class and participate in discussion on a regular basis. At various points in the course, students may also be asked to lead discussion or present supplementary material in class. Participation will count for up to 10% of the final grade.

Written work: Students will be required to complete (a) a two-part quiz on phonetic transcription, given after the completion of the phonetics unit; (b) eight problem sets; and (c) a comprehensive take-home final exam. The problem sets will count for 65% of the final grade in the course, while the exam and quiz will count for 25%. Due dates for problem sets are given in the table below.

	<i>handed out</i>	<i>due in class</i>
PS 1	Tues, Jan 31	Thurs, Feb 9
PS 2	Thurs, Feb 9	Tues, Feb 21
PS 3	Tues, Feb 21	Thurs, Mar 2
PS 4	Thurs, Mar 2	Thurs, Mar 9
PS 5	Tues, Mar 21	Thurs, Mar 30
PS 6	Thurs, Mar 30	Tues, Apr 11
PS 7	Tues, Apr 11	Thurs, Apr 20
PS 8	Thurs, Apr 20	Thurs, Apr 27

Problem sets must be turned in by **5:00 PM** on the date they are due. You may submit your assignments in either hardcopy or electronic versions. Electronic versions should be submitted as email attachments. Attachments *must* be in PDF, so as to avoid any font problems.

Written work must be turned in on time if you wish to receive full credit and comments. Late assignments will be penalized 10% of total possible points for each day that they are late, unless you receive an extension from me. Late assignments will not be accepted for credit if turned in after the problem set has been returned to students with comments, or discussed in class, whichever comes first (moreover, late assignments will probably receive minimal comments, and may not be returned in a timely fashion).

A final note on homework: You are encouraged to work on problem sets *together*, so long as you write up your answers *in your own words*. You should also feel free to come see me during office hours if you're having difficulty completing an assignment (preferably *before* the assignment is actually due). I am always willing to talk about any aspect of the course, and to give you whatever help you may need, so please take advantage of my services!

COURSE OUTLINE

The schedule outlined below is subject to modification. I have opted not to include specific dates for reading assignments, since it makes more sense to me to set the pace of the course as we go along. Each unit is divided into sections, with the various topics to be discussed listed after each section heading, followed by the reading assignments for that section.

UNIT I – The Segment: Sounds, Features, and Rules

(1) Overview of the field

- Odden, chapter 1 “What is Phonology?”
- *The Handbook of Linguistics*, chapter 8 “Phonology” (Abigail Cohn)

(2) Articulatory phonetics: Producing, transcribing, and classifying sounds

- Odden, chapter 2 “Phonetic Transcriptions”
- Ladefoged, *A Course in Phonetics*, chapter 1 “Articulatory Phonetics”
- Ladefoged, *A Course in Phonetics*, chapter 2 “Phonology and Phonetic Transcription”
- Ladefoged, *A Course in Phonetics*, chapter 6 “Airstream Mechanisms and Phonation Types”
- Ladefoged, *A Course in Phonetics*, chapter 7 “Place and Manner of Articulation”

(3) The phoneme as a unit of contrast

- Odden, chapter 3 “Allophonic Relations”
- Hayes, *Introductory Phonology*, chapter 3 “More on Phonemes”
- Werker & Tees, “Cross-Language Speech Perception: Evidence for Perceptual Reorganization During the First Year of Life”

(4) Phonological derivations and alternations: Rules and rule ordering

- Odden, chapter 4 “Underlying Representations”
- Odden, chapter 5 “Interacting Processes”

(5) Features and natural classes

- Odden, chapter 6 “Feature Theory”

(6) More on derivations: Phonological naturalness and problems of abstraction

- Odden, chapter 7 “Doing an Analysis”
- Odden, chapter 8 “Phonological Typology and Naturalness”
- Odden, chapter 9 “Abstractness and Psychological Reality”

UNIT II – Above the Segment: Syllables, Tiers, and Prosody

(7) Autosegmental phonology: The tonal and skeletal tiers

- Odden, chapter 10 “Nonlinear Representations”
- Goldsmith, *Autosegmental and Metrical Phonology*, chapter 1 “Autosegmental Representation”
- Goldsmith, *Autosegmental and Metrical Phonology*, chapter 2 “The Skeletal Tier”

(8) Metrical structure: Moras, syllables, and feet

- *The Handbook of Phonological Theory*, chapter 6 “The Syllable in Phonological Theory” (Juliette Blevins)
- Dell & Elmedlaoui, “Syllabic Consonants in Berber: Some More Evidence”
- Hayes, *Metrical Stress Theory*, chapters 2-5 [also, read through at least two or three of the case studies in chapter 6 that are cross-referenced in earlier chapters]

UNIT III – Recent Topics in Phonological Theory

(9) Prosodic morphology

- *The Handbook of Phonological Theory*, chapter 9 “Prosodic Morphology” (John McCarthy & Alan Prince)

(10) Optimality theory

- Kager, chapter 1 “Conflicts in Grammars”
- Kager, chapter 2 “The Typology of Structural Changes”
- Prince & Smolensky, *Optimality Theory: Constraint Interaction in Generative Grammar*, chapter 2 “Optimality in Grammar: Core Syllabification in Imdlawn Tashlhiyt Berber”
- Prince & Smolensky, *Optimality Theory: Constraint Interaction in Generative Grammar*, chapters 3-4 “Generalization-Forms in Domination Hierarchies” [optional]
- Kager, chapter 3 “Syllable Structure and Economy”
- Kager, chapter 4 “Metrical Structure”
- Kager, chapter 5 “Correspondence in Reduplication”
- Kager, chapter 6 “Output-to-Output Correspondence”