

### ***General Information***

***Instructor:*** Steve Winters  
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Office Hours: by appointment.

***Lectures:*** T&Th 11:00-12:15 Social Sciences 836

This course is an introduction to the process, concepts and methodology of phonetics research. We will discuss the primary theories of the field, develop basic laboratory skills for the collection and analysis of phonetic data, and investigate the mechanisms involved in the production, perception and acoustic transmission of speech. The goal of this introduction is to provide students with the expertise and skills necessary to conduct their own phonetics research. To that end, students will carry out a small phonetics study of their own design during the term, in which they will empirically test a relevant hypothesis about the linguistic nature of speech.

### ***Course Web Page:***

[https://webdisk.ucalgary.ca/~swinters/public\\_html/ling631/index.html](https://webdisk.ucalgary.ca/~swinters/public_html/ling631/index.html)

All lecture notes, handouts, readings and lab exercises—along with phonetics links and updated versions of this syllabus—will be posted to the course website. Please check it on a regular basis if you are interested in having access to these materials.

### ***Readings***

There is no required text for this course; however, there will be regular, assigned readings on a weekly basis. These readings will be announced in class and posted to the course website (see above).

### ***Grading***

The course grade will be based on your performance on lab exercises (50%), a course project (25%) and a final exam (25%).

**Laboratory exercises** are designed to improve your skills in collecting and working with phonetic data, and to give you firsthand experience with the principles

discussed in lecture. For each lab exercise, you will prepare and turn in a lab report, in which you present, in standard research paper format, the theoretical motivation, empirical results, and basic findings of the exercise. Lab reports should be approximately 4-5 pages in length, depending on the content of the lab. We will go over, in detail, the requisite tools and skills necessary to complete these exercises during the course of the semester. On occasion, it will be necessary to meet in the phonetics lab (Education 259) in order to introduce the specifics of a lab exercise.

Note: late assignments will only be accepted in cases of documented medical or family emergencies.

### **Course Project.**

Over the course of the semester, you will be responsible for designing and executing a small phonetics research study, in which you collect and analyze data that tests a theoretical proposal about the linguistic nature of speech. You will produce a final term paper on the study that you have executed (~10-15 pages), and also present the results of your work to the class at the end of the semester.

The topic of this study is left up to each individual student, but I will ask that you discuss any potential topics with me before proceeding with any data collection. A (non-exhaustive) list of possible topic ideas for this project include:

- An analysis of the unique or notable phonetic characteristics of a specific language.
- An analysis of the unique or notable phonetic characteristics of a specific speaker, or group of speakers.
- Replications/variations of famous or important studies from the history of phonetics.
- Phonetic expansions or elaborations on your own (external) research program
- Articulatory studies involving methodologies that we develop in class
- Acoustic analysis of a corpus of recorded speech
- A perception study testing the relative salience or confusability of different classes of speech sounds
- Seemingly crazy, off the wall ideas are acceptable (and maybe even encouraged), so long as they are of theoretical interest.

Please note that you are required to collect some, but not necessarily a lot of data for this project. In many cases, data from one or two subjects will suffice. The main goal of the exercise is to familiarize you with the intellectual process of designing and carrying out a study that tests a phonetic/phonological hypothesis empirically.

More detail on the expectations for this project will be provided as we proceed through the term.

**Final Exam.** The final exam will be cumulative. Make-up exams will not be given except in the case of dire, documented medical emergencies.

The grading scale for the course will be as follows:

$98\% \leq A+$	$78 \leq C+ < 80$
$92 \leq A < 98$	$72 \leq C < 78$
$90 \leq A- < 92$	$70 \leq C- < 72$
$88 \leq B+ < 90$	$68 \leq D+ < 70$
$82 \leq B < 88$	$60 \leq D < 68$
$80 \leq B- < 82$	$F < 60$

Please note that I do not round up in calculating final grades.

### **Resources**

1. The Department of Linguistics Phonetics Lab is located in Education 259 (phone: 220-3598). You will each receive a key to this lab, early in the semester.
2. Doulos SIL is a freely available phonetics font for your computer. You may download it from this weblink:

[http://scripts.sil.org/cms/scripts/page.php?site\\_id=nrsi&id=DoulosSILfont](http://scripts.sil.org/cms/scripts/page.php?site_id=nrsi&id=DoulosSILfont)

Although it is not necessary to do so, you are encouraged to use your computer—and this font—in writing up homework assignments for this class.

3. Praat is a great, freely available software package for phonetic analysis. Among (many) other things, you may use Praat to record, edit and play sound files on your computer. Praat is available for download at:

<http://www.fon.hum.uva.nl/praat/>

4. Just for (educational) fun: I have a homemade IPA Scrabble set, which you are welcome to borrow at any time. All you have to do is ask!

## ***Plagiarism and Academic Misconduct***

Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course, when, in fact, it is not. Most commonly plagiarism exists when:

- a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),
- b) parts of the work are taken from another source without reference to the original author,
- c) the whole work (e.g., an essay) is copied from another source, and/or
- d) a student submits or presents work in one course which has also been submitted in another course (although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved.

While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Some course assignments call for students to work in groups. Unless noted otherwise in writing, students must write up their own answers for submission of the assignment. Failure to do so constitutes plagiarism.

Plagiarism is an extremely serious academic offense. Possible penalties for plagiarism include: failing the assignment, failing the course, disciplinary probation, suspension, or expulsion.

Any student who voluntarily and consciously aids another student in the commission of plagiarism is also guilty of academic misconduct.

## ***Disability Accommodation***

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

## **Course Schedule**

Please note that this schedule is meant to provide an *ideal* course of future action and is therefore likely to change before the end of the semester. New course schedules will be issued if and when those changes occur.

Week 1 - Introduction + Overview, Laryngeal Physiology + Voice Quality

Week 2 - Basic Acoustics; Airflow; Fundamental Frequency; EGG

Week 3 - Source/Filter Theory; Harmonics, Resonance, Formants, Spectral Analysis

Week 4 - Models of vowel production; Adaptive Dispersion; Hypo- and Hyperarticulation

Week 5 - Digital Signal Processing; Praat Scripting

*Week 6 - Reading Week; no classes*

Week 7 - Articulatory Physiology; Gestural Phonology; Static Palatography

Week 8 - Stops and Fricatives; VOT; Enhancement Theory; Secondary Articulations

Week 9 - Sonorants, Glides, Nasals and Nasalization; Nasometer

Week 10 - Suprasegmentals; Time; Prosody

Week 11 - Theories of Speech Perception; Acoustic Cues; Perception in Phonology

Week 12 - Speech Synthesis and Speech Recognition

Week 13 - Time for catch-up and/or alternative directions

Week 14 - Student Presentations

Week 15 - Final Exam: Time and Place to be determined