# Linguistics 441

## **Advanced Phonetics**

Course information and syllabus

### **General Information**

*Instructor*: Steve Winters

Social Sciences 814 2500 University Drive NW

Phone: 220-6135

Email: swinters@ucalgary.ca Office Hours: by appointment.

**Teaching Assistant**: Susan Jackson

Social Sciences 817 Phone: 220-6122

Email: sejackso@ucalgary.ca

Office Hours: TBD

Lectures: TTh 11:00-12:15 Science Theater 061

This course continues the introduction to phonetic study that began in linguistics 341. In this course, students will hone their transcription skills through a small, phonetic field study on an unfamiliar language, develop laboratory skills for the acquisition of experimental phonetic data, acquire in-depth knowledge of the mechanisms involved in the production, perception and acoustics of speech, and become familiar with the primary theories in the field of phonetics. Upon conclusion of the course, students should be prepared to conduct an honors-level research project in phonetics.

Practical training in phonetics is particularly valuable for professions in language education – whether foreign language education, English education, or ESL. Phonetic training also benefits students who are interested in human/computer interface technology, and students are in training for certification as speech pathologists or audiologists. Of course, students who major in linguistics should take phonetics.

Note on departmental grade requirement: a student may not register in any linguistics course unless a grade of at least C- has been achieved in each prerequisite for that course. The prerequisite for this course is linguistics 341.

## Course Web Page:

https://webdisk.ucalgary.ca/~swinters/public\_html/ling441/index.html

All lecture notes, handouts and homework exercises—along with 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.

#### **Textbooks**

Keith Johnson (2003) Acoustic & Auditory Phonetics, 2nd ed. Malden, MA: Blackwell.

Lawrence J. Raphael, Gloria J. Borden, Katherine S. Harris (2007) *Speech Science Primer*, 5th ed., Baltimore, MD: Lippincott, Williams & Wilkins.

These textbooks are <u>recommended</u> for this course. Further readings will be announced and made available during the course of the semester.

# Grading

The course grade will be based on your performance on homework exercises, a semester-long course project, a midterm exam and a final exam.

**Homework** will consist primarily of laboratory exercises that are designed to improve your skills in collecting and working with phonetic data. We will go over, in detail, the requisite tools and skills necessary to complete these exercises during the course of the semester.

Late homeworks will only be accepted in cases of documented medical or family emergencies.

**Course Project.** Your primary responsibility in this course will be the execution of a small, phonetic field study involving a native speaker of an unfamiliar language. Your goal in this project is to learn how to identify and transcribe the sounds of the unfamiliar language, primarily through data that you have elicited from the native consultant. At the end of the semester, you will either (1) produce a final term paper, or (2) present the results of your work to the class at the end of the semester, detailing the phonetic characteristics of the language you have chosen to study. More detail on this project is provided in an additional handout.

I am happy to entertain alternative ideas for course projects. Please come talk to me as soon as possible if you have an idea for another project that you would like to work on over the course of the semester.

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

Your final grade will be based on:

Homework exercises: 20%
Course Project: 30%
Midterm exam: 25%
Final exam: 25%

The grading scale for the course will be as follows:

98% <u>&lt;</u> A+	78 <u>&lt;</u> C+ < 80
92 < A < 98	72 < C < 78
90 ≤ A- < 92	70 <u>&lt;</u> C- < 72
88 <u>&lt;</u> B+ < 90	68 <u>&lt;</u> D+ < 70
82 <u>&lt;</u> B < 88	60 <u>&lt;</u> D < 68
80 < 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). I will set up regular lab hours during the first week of 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

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. A great website for looking up background information on the languages of the world is SIL's Ethnologue site:

http://www.ethnologue.com

I will also put the print version of Ethnologue on reserve in the main library.

# Resources in the main library

The following books, available for loan in the main library, may provide useful reading for some of the topics we will cover in this class:

- Ladefoged, Peter (1964) Elements of Acoustic Phonetics, 2nd ed. [QP306.L33]
- Ladefoged, P. & Maddieson, I. (1995) Sounds of the World's Languages [P221.L315 1995]

# 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.

Wk	Date	Day	Lecture Topic	Reading	Course Project
1	1/11	Tu	Introduction + Overview		
	1/13	Th	Basic Acoustics + Digital Signal	AAP 3-33	
			Processing		
2	1/18	Tu	Pitch Tracking + Prosody	AAP 33-36	
	1/20	Th	ToBI: Basics		
3	1/25	Tu	ToBI: Boundary Tone combos		1. Intro
	1/27	Th	ToBI: Bi-Tonal Pitch Accents		
4	2/1	Tu	ToBI: Downstepping		
	2/3	Th	ToBI: Intermediate Phrases		
5	2/8	Tu	Respiration + Vocal Fold	SSP 70-100	2. Stops +
			Physiology		Phonation
	2/10	Th	Voice Quality	AAP 126-	
				130	
6	2/15	Tu	Spectral Analysis		
	2/17	Th	MID-TERM EXAM		
7	2/22	Tu	Reading Week: No Classes		
	2/24	Th	Reading Week: No Classes		
8	3/1	Tu	Lab: Korean Stops		3. Suprasegmentals
	3/3	Th	Fourier Analysis +	AAP 32-45	
	_		Spectrograms		
9	3/8	Tu	Formants + Resonance	AAP Ch. 5	
	3/10	Th	Vowels: Perturbation Theory	AAP Ch.	
				6.2; SSP	
				113-130	
10	3/15	Tu	Vowels II	1 1 2 61	
	3/17	Th	Vowels III: Tube Models	AAP Ch. 6.1	1
11	3/22	Tu	Sonorant Acoustics	AAP Ch. 9	4. Vowels
	3/24	Th	Transitions + Perception	SSP: 237-	
-10	- /			253, 258-264	
12	3/29	Tu	Obstruent Acoustics	AAP Ch. 8	
	3/31	Th	Vocal Tract Physiology + Static	SSP: 105-	
4-	–	-	Palatography	110	
13	4/5	Tu	Audition	SSP: 201-	5. Fricatives +
				211	Sonorants
	4/7	Th	Auditory Perception	AAP Ch. 4;	

				SSP 264-268	
14	4/12	Tu	Speech Synthesis		
	4/14	Th	Time for catch-up and review		
15			FINAL EXAM		
			Time and Place TBA		

## GENERAL COURSE/UNIVERSITY INFORMATION FOR ALL STUDENTS

#### LINGUISTICS STUDENT ADVISING

For any questions regarding the linguistics major or minor, the organization of your program, or the selection of courses, you can see the linguistics under/graduate advisor/program director:

Dr. Steve Winters SS 814 403-220-7230 ling.undergrad@ucalgary.ca

Dr. Suzanne Curtin SS 842 403-220-3927 <u>linggrad@ucalgary.ca</u>

#### FACULTY of ARTS PROGRAM ADVISING and STUDENT INFORMATION

Have a question, but not sure where to start? The new Faculty of Arts Program Information Centre (PIC) is your information resource for everything in Arts! Drop in at SS110, call us at 403-220-3580 or email us at <a href="mailto:artsads@ucalgary.ca">artsads@ucalgary.ca</a>. You can also visit the Faculty of Arts website at <a href="mailto:http://arts.ucalgary.ca/undergraduate">http://arts.ucalgary.ca/undergraduate</a> which has detailed information on common academic concerns.

For program planning and advice, contact the Student Success Centre (formerly the Undergraduate programs Office) at (403) 220-5881 or visit us at the 4<sup>th</sup> Floor of MacEwan Student Centre.

For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at (403) 210-ROCK [7625] or visit us in the MacKimmie Library Block.

#### ACADEMIC 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.

#### FREEDOM OF INFORMATION AND PRIVACY ACT (FOIP)

The Freedom of Information and Protection of Privacy Act was enacted by the Alberta Legislature on June 1, 1994. The Act is intended first of all to allow any person the right of access to the records in the custody and under the control of a public body although this right is subject to limited and specific exceptions. The Act also includes a strong right to privacy component, allowing individuals to control the manner in which a public body collects personal information, to control the use that a public body may make of the information, and to control the disclosure of that information by a public body. It also allows individuals the right of access to personal information about themselves held by a public body and the right to request corrections to that information.

For more information on FOIP, please visit: <a href="http://www.ucalgary.ca/secretariat/privacy">http://www.ucalgary.ca/secretariat/privacy</a> Or contact Jo-Anne Munn Gafuik at (403) 220-3602 or by email: <a href="mailto:munngafu@ucalgary.ca">munngafu@ucalgary.ca</a>

#### 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:

- 1. 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),
- 2. parts of the work are taken from another source without reference to the original author,
- 3. the whole work (e.g. an essay) is copied from another source, and/or
- 4. 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. Students are encouraged to work together in preparing homework assignments. However, 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 offence. 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.

For more information on academic misconduct and related UofC regulations please consult the Student Misconduct web pages in the on-line University Calendar. These can be found at <a href="http://www.ucalgary.ca/pubs/calendar/current/k.html">http://www.ucalgary.ca/pubs/calendar/current/k.html</a>

#### EMERGENCY EVACUATION / ASSEMBLY POINTS

The University of Calgary is committed to creating a safe and healthy living and learning environment. The health and safety of our employees, students and the general public are the highest priority of the University of Calgary's Emergency Management Program. During times of emergency, Assembly Points have been identified across campus. These areas have been selected as they are large enough to hold a significant number of people and will provide an evacuated population access to washroom facilities and protection from the elements. Assembly points are also designed to establish a location for information updates:

- from the emergency responders to the evacuees; and
- from the evacuated population to the emergency responders.

Please familiarize yourself with the Emergency Assembly Points listed here:

http://www.ucalgary.ca/emergencyplan/assemblypoints

And the Emergency Instructions listed here: http://www.ucalgary.ca/emergencyplan/node/28

#### SAFE WALK INFORMATION

Twenty four hours a day and seven days a week Safewalk volunteers walk people safely to their destination on campus. This service is free and available to students, staff and campus visitors.

## Requesting Safewalk volunteers to walk with you is easy!

- Call 403-220-5333 (24 hours a day/seven days a week, 365 days a year)
- Use the Help Phones (they are not just for emergencies)
- Approach an on-duty Safewalker and request a walk

For more information call the Safewalk office at 403-220-4750 or email <a href="mailto:safewalk@ucalgary.ca">safewalk@ucalgary.ca</a>. STUDENT REPRESENTATIVE INFORMATION

The Students' Union in partnership with the University of Calgary and the Graduate Students' Association (GSA) offers students a key advocacy resource to assist in addressing concerns and issues they encounter at the university with the Office of the Student Ombuds.

Students in undergraduate programs, please contact the Student's Union: <a href="http://www.su.ucalgary.ca/home/contact.html">http://www.su.ucalgary.ca/home/contact.html</a>

Students in graduate programs, please contact the GSA: http://www.ucalgary.ca/gsa/

Student Ombudsman: http://www.su.ucalgary.ca/services/student-services/student-rights.html