LING 205  Practical Phonetics

Spring Session 2006  1:30pm–2:55pm  Monday – Thursday  8 May – 14 June  ETL E1 008

Instructor: Geoff Morrison  tel: gsm2@ualberta.ca
        office: 4–12 Assiniboia Hall laboratory: Centre for Comparative Psycholinguistics, Arts 104

Office Hours: I will normally be available for consultation every day after every class, and at other times if you make an appointment

Teaching Assistant: Ryan Szarko

Department office:  4–32 Assiniboia Hall  492-4189  http://www.uofaweb.ualberta.ca/linguistics

Online resources: http://www.ualberta.ca/~gsm2/LING205  http://www.ualberta.ca/WEBCT/

please use WebCT discussion or mail facility for general written communication regarding the course

Course prerequisite: LING 101 Introduction to Linguistic Analysis

NOTE: The Department may cancel your registration if you do not have the required prerequisite or special permission.
Policy about course outlines can be found in Section 23.4(2) of the University Calendar. (GFC 29 SEP 2003)

Course description and goals:

This course is an introduction to the scientific study of the physical aspects of speech emission, transmission, and reception, i.e., articulatory phonetics, acoustic phonetics, and auditory / perceptual phonetics. The course will focus on understanding how speech sounds are produced in the vocal tract, the nature of sound itself, and acoustic differences distinguishing speech sounds. Students will complete several practical exercises on speech production, acoustic measurement, and speech synthesis. Students will also learn the International Phonetic Association’s description and transcription system for speech sounds. By the end of the course, students should be equipped with the skills and knowledge needed to pursue further studies in phonetics, phonology, speech therapy, and audiology; to begin reading phonetics literature beyond introductory textbooks; to conduct informal phonetic experiments; and to apply their skills and knowledge to practical areas such as learning and teaching the pronunciation of foreign languages.

Required texts:
– LING205 Lecture Notes (available from UofA bookstore for ~$10)
– LING205 Laboratory Manual (available for download from website)

See course website for a list of recommended books and other resources.

Students will need access to a computer with speakers/headphones and a microphone (available in Arts 109 & 112)
Optional Laboratory Sessions:

Several course assignments required the use of computer software. In the past, some students have required additional assistance with learning to use the software. This year, there will be several scheduled drop-in lab sessions, when the TA will be available to give advice on the technical aspects of using the software. Attendance at lab sessions is optional. Lab times will be scheduled after consultation with students.

Location: Arts 112 Times: TBA

Calculation of Course Grade – Grading System:

- 5 graded assignments 45%
- 5 quizzes 25%
- final exam 30%

Starting week two, there will be a short graded quiz on the first day of each week. Quizzes will usually be based on the material taught during the previous week.

Details of graded assignments and due dates will be announced in class and on WebCT. Assignments submitted late may receive lower grades.

Practice questions similar to those in the final exam will be provided.

<table>
<thead>
<tr>
<th>Grading In Undergraduate Courses</th>
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<tr>
<td>Descriptor</td>
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<tr>
<td>Excellent</td>
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<td>Good</td>
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<td>Satisfactory</td>
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<tr>
<td>Poor</td>
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<tr>
<td>Minimal Pass</td>
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<tr>
<td>Failure</td>
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Final course grades are determined according to the *University calendar* §23.4: Grades reflect judgments of student achievement made by instructors. These judgments are based on a combination of absolute achievement and relative performance in a class. The aim of the instructor is to give each student the grade which in his judgement fairly reflects their performance in the course. Grades will not be mechanically transformed to meet a fixed mean and standard distribution. Numerical grades given on assignments, quizzes, and exams are a tool used by the instructor to keep track of students’ performance and to provide feedback to students on their performance. Some assignments will inevitably be intrinsically harder and some easier, there are no a priori cutoffs for the correspondence between numeric grades and final letter grades.

Assessment will be based primarily on demonstrated analytical skills applied to material presented in class.

“Council has resolved that members of the Faculty are to take into consideration the *quality of expression* assessing the written work of students” (Course manual: Information for instructors, Department of Linguistics, April 2006, p. 12)

In cases of disagreement between the presentation of the instructor, and the presentation in required or recommended readings, the instructor’s presentation will be taken as the “correct” answer for grading purposes. (Students are encouraged to raise any cases of disagreement for discussion in class prior to the exam.)
**Syllabus:**
The topics to be covered, assignments, and schedule are subject to change.

<table>
<thead>
<tr>
<th>Section</th>
<th>Lecture topics</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>8 May – 11 May (10 May, last day to add or drop course)</td>
<td></td>
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</tbody>
</table>
| 1       | - Definition of Phonetics  
- Phonetics & Phonology  
- Articulatory, Acoustic, and Auditory/Perceptual Phonetics  
- Practical Applications  
- Course Goals | - start reading textbook  
- browse website  
- log on to WebCT and send message |
| 2       | - Taxonomy and Science  
- International Phonetic Alphabet  
- Anatomy of the Vocal Tract  
- Place of Articulation | - etymology of parts of vocal tract |
| 3       | - Why do we need a phonetic alphabet?  
- Plosives  
  - articulation  
    - pulmonic egressive airstream mechanism  
    - place  
    - voicing  
  - IPA symbols  
  - Larynx | - plosive transcription  
- download SIL phonetic fonts  
- download Praat  
- Tutorial on Plosives (weblink) |
| Week 2  | 15 May – 18 May (15 May first graded quiz) | |
| 4       | - Modal Voicing  
- larynx  
  - anatomy  
  - physiology / biomechanics  
  - aerodynamics  
  - acoustics  
  - perception  
    - voice onset time (VOT)  
    - vowel duration | - etymology of parts of larynx  
- articulatory experiment on final voicing (graded 10%)  
- VOT measurements |
| 5       | - Noise  
- acoustics  
- turbulent fluid flow | - noise PraatScript |
| Week 3  | 23 May – 25 May (22 May, Victoria Day, university closed; 23 May, last day to withdraw with refund) | |
| 5 cont. | - Fricatives  
- articulation  
- IPA symbols  
- sibilants  
- Non-Modal Phonation | - fricative transcription  
- muscles for different modes of phonation  
- articulatory and acoustic experiment on fricatives (graded 10%) |
| 6       | - Approximants  
- articulation  
- IPA symbols | |
### Week 4  29 May – 1 June (2 June, last day to withdraw from course)

| 7 | - Source Filter Model of Speech Production  
|   |  - summation of sine waves  
|   |  - frequency domain analysis of complex waveforms  
|   |  - glottal source  
|   |  - resonance  
|   |  - filtered source  
|   | - vowel synthesis using sine waves (graded 5%) [assigned and due before commencing this topic]  
|   | - source + filter synthesis  

### Week 5  5 June – 8 June

| 8 | - Vowels  
|   |  - articulatory acoustic relationship  
|   |  - spectra & spectrograms  
|   |  - vowel formant charts  
|   |  - IPA vowel chart  
|   |  - cardinal vowel tradition  
|   |  - monophthongs & diphthongs  
|   |  - duration  
|   |  - tense / lax advanced / retracted tongue root  
|   | - F1 & F2 measurement and acoustic vowel chart plotting (graded 10%)  
|   | - vowel transcription  

### Week 5  5 June – 8 June

| 9 | - Resonants etc.  
|   |  - Plosive (spectral aspects)  
|   |  - Validity of segmental transcription  
|   |  - Approximants (spectral aspects)  
|   |  - Nasals  
|   |  - Laterals  
|   | - resonant transcription  
|   | - VC experiment  

| 10 | - Trills  
|    | - Taps and flaps  

| 11 | - Case studies in coarticulation and phonetic detail  
|    |  - Japanese  
|    |  - English  
|    | - Sound change (graded 10%)  
|    | - Japanese and English transcription  

### Week 6  12 June – 14 June  (Final exam: 15 or 16 June, exact time TBA, check BearTracks)

| 12 | - Air Stream Mechanisms  
|    |  - egressive  
|    |  - ingressive  
|    |   - pulmonic  
|    |   - glottalic  
|    |     - ejectives  
|    |     - implosives  
|    |   - velaric  
|    |     - clicks  
|    | - general transcription practice  

| 13 | - Supralaryngeal Muscles  
|    |  - jaw  
|    |  - lips  
|    |  - velum  
|    |  - tongue  
|    | - practice exam  

| 14 | - Perception  
|    |  - anatomy  
|    |  - psychoacoustics  

| Review |
23.5.6 Absence from Exams (University Calendar §23.5.6)
When a student is absent from a term or final exam without acceptable excuse, a final grade will be computed using a raw score of zero for the exam missed.

Any student who is incapacitated because of illness, is suffering from severe domestic affliction or has other compelling reasons (including religious conviction) is advised not to sit for an exam. In such cases a student may apply for an excused absence for the missed exam. Excused absence for a missed exam is a privilege, not a right, and is granted at the discretion of the instructor (in the case of term exams) or the Faculty (in the case of final exams). Only those students who, because of incapacitating illness, severe domestic affliction or other compelling reasons (including religious conviction) have missed an exam are permitted an excused absence.

(1) Missed Term Exams Worth 20% or More: To apply for an excused absence where the cause is incapacitating illness, a student must present a University of Alberta Medical Statement Form to the instructor within two working days following the missed term exam. The University of Alberta Medical Statement Form must be signed by the treating physician and indicate that the student was seen while ill or is under continuing care for a chronic illness. In other cases, including domestic affliction or religious conviction, adequate documentation must be provided within two working days following the term exam missed. If excusing a student’s absence from a term exam, the instructor has the discretion either to waive the exam or require the student to write a make-up exam. For a waiver, the percentage weight allotted to the term exam missed is added to the percentage weight allotted to the final exam. For a make-up exam, the student is required to write an equivalent exam at a time set by the instructor. If the student does not write the assigned make-up exam at the prescribed time, a raw score of zero will be assigned for the missed term exam.

(2) Missed Final Exams: A student who has missed a final exam because of incapacitating illness, severe domestic affliction or other compelling reason (including religious conviction) may apply for a deferred exam. A deferred exam will not be approved if a student

a. has not been in regular attendance where attendance and/or participation are required, and/or,
b. excluding the final exam, has completed less than half of the assigned work.

Students with two or more deferred exams outstanding from a previous term may be required to reduce the number of courses in which they are registered. Students needing to apply for a deferred exam must present themselves at their Faculty’s Undergraduate (Graduate) Office. Such an application must be supported by a University of Alberta Medical Statement form in the case of incapacitating illness. The University of Alberta Medical Statement Form must be signed by the treating physician and indicate that the student was seen while ill or is under continuing care for a chronic illness. In other cases, including severe domestic affliction or religious conviction, adequate documentation must be provided to substantiate the reason for an absence. The application and documentation pertaining to the absence must be presented to the Faculty within two working days following the scheduled date of the exam missed or as soon as the student is able, having regard to the circumstances underlying the absence.

Students with special needs (University Calendar §25.2):

Students with disabilities or special needs that might interfere with their performance should contact the professor at the beginning of the course with the appropriate documentation. Every effort will be made to accommodate such students, but in all cases prior arrangements must be made to ensure that any special needs can be met in a timely fashion and in such a way that the rest of the class is not put at an unfair disadvantage.

Exam arrangements: SSDS (Specialized Support and Disability Services) and the student, with the approval of the course instructor, determine exam accommodations. Assessments and/or documentation of the need for accommodation are required. At the beginning of each term, the student meets with instructors to review the exam arrangements which will be used. They provide a “Letter of Introduction” from SSDS verifying the nature of the accommodations required due to the disability. A few weeks before each exam, the student completes an “Exam Schedule” form, for SSDS, outlining scheduled exam dates, times, etc. The student then takes an “Exam Instructions and Authorization” form to the instructor. The instructor is asked to complete the form and enclose it with the exam and arrange to have it delivered or mailed to SSDS. In administering exams, SSDS follows university protocol and only makes accommodations as required due to the disability. Exams are usually set to overlap with the time the professor has set in the class exams.

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at www.ualberta.ca/secretariat/appeals.htm) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

(GFC 29 SEP 2003)

EXCERPTS FROM THE CODE OF STUDENT BEHAVIOUR (University Calendar Appendix A) (UPDATED EFFECTIVE MAY 27,2004)

30.3.2(1) Plagiarism
No Student shall submit the words, ideas, images or data of another person as the Student’s own in any academic writing, essay, thesis, project, assignment, presentation or poster in a course or program of study.

30.3.2(2) Cheating
30.3.2(2)a No Student shall in the course of an examination or other similar activity, obtain or attempt to obtain information from another Student or other unauthorized source, give or attempt to give information to another Student, or use, attempt to use or possess for the purposes of use any unauthorized material.
30.3.2(2)b No Student shall represent or attempt to represent him or herself as another or have or attempt to have himself or herself represented by another in the taking of an examination, preparation of a paper or other similar activity. See also misrepresentation in 30.3.6(4).
30.3.2(2)c No Student shall represent another’s substantial editorial or compositional assistance on an assignment as the Student’s own work.
30.3.2(2)d No Student shall submit in any course or program of study any unauthorized material.

30.3.2(2)e No Student shall submit in any course or program of study any academic writing, essay, thesis, report, project, assignment, presentation or poster containing a statement of fact known by the Student to be false or a reference to a source the Student knows to contain fabricated claims (unless acknowledged by the Student), or a fabricated reference to a source.

30.3.6(4) Misrepresentation of Facts
No Student shall misrepresent pertinent facts to any member of the University community for the purpose of obtaining academic or other advantage. See also 30.3.2(2) b, c, d and e.

30.3.6(5) Participation in an Offence
No Student shall counsel or encourage or knowingly aid or assist, directly or indirectly, another person in the commission of any offence under this Code.

The Truth In Education (T*I*E) project is a campus wide educational campaign on Academic Honesty. This program was created to let people know the limits and consequences of inappropriate academic behavior. There are helpful tips for Instructors and Students. Please take the time to visit the website at: http://www.ualberta.ca/tie