LING 113 – Experimental Phonetics
Spring 2015

MWF 9:00a-10:00a
259 Dwinelle and occasionally 52 Dwinelle

Units: 3
Prerequisite(s): LING 110

Course Description: Practical training in experimental phonetics; acoustic, physiological, and perceptual analysis of speech.

Course Requirements: Each student taking the course for credit is required to fulfill the following requirements.

- Active participation in discussions
- Complete assigned readings and consider content in relation to study questions
- Homework assignments (4 total), which will consist of summarizing the methods and conclusions from assigned readings and attempting to reproduce the results
- Lab reports (4 total), which will consist of participating in data collection for and analysis of a class-wide short project
- A term project, which will be a short experiment or an analysis of pre-existing data, unique to each student
- A writeup of the term project
- A 10-minute conference-style presentation on the contents of the term project

Point Distribution:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework assignments (4)</td>
<td>20</td>
</tr>
<tr>
<td>Lab reports (4)</td>
<td>40</td>
</tr>
<tr>
<td>Project writeup</td>
<td>25</td>
</tr>
<tr>
<td>Presentation</td>
<td>5</td>
</tr>
<tr>
<td>Participation</td>
<td>10</td>
</tr>
</tbody>
</table>

Letter Grade Distribution:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 93.00</td>
<td>A</td>
<td>73.00 - 76.99</td>
</tr>
<tr>
<td>90.00 - 92.99</td>
<td>A-</td>
<td>70.00 - 72.99</td>
</tr>
<tr>
<td>87.00 - 89.99</td>
<td>B+</td>
<td>67.00 - 69.99</td>
</tr>
<tr>
<td>83.00 - 86.99</td>
<td>B</td>
<td>63.00 - 66.99</td>
</tr>
<tr>
<td>80.00 - 82.99</td>
<td>B-</td>
<td>60.00 - 62.99</td>
</tr>
<tr>
<td>77.00 - 79.99</td>
<td>C+</td>
<td>&lt;= 59.99</td>
</tr>
</tbody>
</table>
Class schedule (subject to change depending on global interest)

**Unit 1 (1/21 – 2/13): Acoustics**
- recording speech in the lab
- measuring temporal and spectral qualities of speech
- using automated tools for speech alignment and acoustic analysis

**Unit 2 (2/18 – 3/13): Perception**
- using the Klatt synthesizer
- designing perception tasks – types, stimuli choice and creation
- understanding and interpreting perception data

**Unit 3 (3/16 – 4/17): Articulation**
- collecting and interpreting aerodynamic data
- collecting and interpreting ultrasound data

**Lab time (4/16 – 4/24):** time set aside for data collection, analysis, and presentation preparation

**Presentations (4/27 – 5/1)**

**Project writeup due:** 5/13

Each unit will follow roughly the following schedule:

- **Week 1 – Read.** Read and discuss one or two papers using the techniques targeted in the unit.
- **Week 2 – Replicate.** Learn and use techniques targeted in the unit to (attempt to) replicate the paper(s) read. Write a brief summary of the paper, including results from the replication.
- **Week 3-4 – Expand.** Working together with your classmates, apply the techniques learned (or similar techniques) to a novel question, and write up your findings in a short lab report.