Class time: T, Th 9:30 a.m. -10:50 a.m., Cresap 101

Professor: Ann Bradlow
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Office hours: By appointment

COURSE DESCRIPTION: This course covers topics in acoustic phonetics and speech perception. In the first half of the course, the acoustic theory of speech production is introduced and the acoustic correlates of speech sounds are presented. We also cover acoustic-phonetic features of connected speech. In the second half of the course, we turn our attention to the perception of speech signals. We address such topics as phonetic categorization, speech perception and linguistic experience, and the role of speech perception in phonology.

REGISTRATION REQUIREMENTS: Ling 350 and Ling 450-1, or permission of the instructor.

TEACHING METHOD: Lecture, discussion, presentations, laboratory work

COURSE REQUIREMENTS AND GRADING:

3 Individual lab assignments (Lab 1 = 5%, Labs 2 and 3 = 10% each) 25%
2 Homework assignments (10% each) 20%
Quiz 20%
1 Group lab project 15%
Final paper 20%

Active class participation is essential in the second half of the quarter (preparation and presentation of papers). It will not be graded unless there is notable trouble in this area in which case up to 5% will be subtracted from the final paper grade.

CLASS MATERIALS (REQUIRED):
Paperback: 232 pages
Publisher: Wiley-Blackwell; 3 edition (August 15, 2011)
ISBN-10: 1405194669

Additional text book resources for acoustic and auditory phonetics:
Tentative list of supplemental readings (may change as we go along…):

Vowel spaces:

Voicing categories:

Connected speech/Coarticulation:

Categorization/Categorical Perception:

Speech Perception: Beyond phoneme-level perception – Talker variability

Speech Perception and production Development:
## Schedule (subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Work Due</th>
<th>Reading</th>
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<tr>
<td>1</td>
<td>4/1</td>
<td>Introduction&lt;br&gt;Basics (acoustics, filters, audition)</td>
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<td>Johnson, chaps 1, 4</td>
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<td></td>
<td>4/3</td>
<td>Digital Signal Processing</td>
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<td>2</td>
<td>4/8</td>
<td>Acoustic Theory of Speech Production</td>
<td>Lab 1: Recording Speech</td>
<td>Johnson, chap 3</td>
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<td>4/10</td>
<td>Vowels&lt;br&gt;(including Praat formant measurement)</td>
<td>HW 1: Basic Acoustics</td>
<td>Johnson, chap 2</td>
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<td>3</td>
<td>4/15</td>
<td>Vowels &lt;br&gt;(including Praat formant measurement)</td>
<td>HW 2a: Acoustic Theory of Speech Production</td>
<td>Johnson, chap 6</td>
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<tr>
<td>4</td>
<td>4/22</td>
<td>Consonants</td>
<td>HW 2b: Acoustic Theory of Speech Production</td>
<td>Johnson, chaps 7, 8, 9</td>
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<td></td>
<td>4/24</td>
<td>Vowel space practicum</td>
<td>Lab 2: Vowel Spaces (due Friday, 4/25)</td>
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<td>5</td>
<td>4/29</td>
<td>Vowel spaces</td>
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<td>Articles 1, 2, 3</td>
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<td>5/1</td>
<td>Catch-up and review</td>
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<td>6</td>
<td>5/6</td>
<td>Quiz 1: Acoustic Phonetics &lt;br&gt;(in Cresap 101 at the usual class time)</td>
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<td>5/8</td>
<td>Connected speech practicum</td>
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<td>7</td>
<td>5/13</td>
<td>Voice Onset Time (VOT)</td>
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<td>Articles 4, 5, 6</td>
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<td>5/15</td>
<td>Lab 4 planning</td>
<td>Lab 3: Voicing Categories</td>
<td>Articles 7, 8</td>
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<td>8</td>
<td>5/20</td>
<td>Categorization/Categorical Perception</td>
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<td>Articles 9, 10 or 11</td>
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<td>5/22</td>
<td>Speech Perception: Beyond phonemes – Talker Variability</td>
<td>Lab 4 progress report and further planning</td>
<td>Articles 12, 13, 14</td>
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<td>9</td>
<td>5/27</td>
<td>Speech Perception: Development</td>
<td>Final paper: 1 page abstract/plan</td>
<td>Articles 15, 16, 17</td>
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<td>5/29</td>
<td>Papers (In-class practicum)</td>
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Final paper due – Tuesday, June 10th