Course description

This course will introduce you to scientific evidence for the perception of vowel and consonant sounds, development of speech perception abilities, and classical and modern theories of speech perception.

Course Website

- Lecture notes, book chapters, journal articles, and other reading materials will be made available on the D2L website or other websites. In addition, the D2L website may also be used for messages related to the course.

Course requirements

- **Attendance:** Students are expected to attend class. Anyone who is *chronically* absent may have their grade lowered or be dropped from the class.
- **Reading assignments:** All students are expected to read and study the course notes and any other material provided by the instructor.
- **Quizzes:** There will be five quizzes (20 pts each) given during the semester. These will be given in 35 minute blocks during a class period.
- **Paper:** All students must complete a paper (40 pts). The specific topic, additional reading material, and instructions will be made available in late February. **The paper will be due on May 9 at 12:00 pm.**

Grades

Course grades will be based on the sum of the five quizzes and the final paper (maximum pts = 140):

- Five quizzes (20 points, each) = 100 points
- Paper = 40 points

There is no pre-set grading curve for the class. Generally, a point accumulation of 90% of the maximum number of points (300) will earn an “A”, 80% = “B”, and so forth.

Students with Disabilities

If you anticipate barriers related to the format or requirements of this course, please meet with me so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please register with Disability Resources (621-3268; drc.arizona.edu) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations.
**Tentative Course Schedule** *(This schedule may be modified at the instructor’s discretion.)*

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12</td>
<td>cancelled</td>
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<tr>
<td>January 17</td>
<td>holiday - no class</td>
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<tr>
<td>January 19</td>
<td>intro, acoustics, spectra</td>
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<td>January 24</td>
<td>spectrogram, source-filter</td>
<td>A1, A2</td>
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<td>January 26</td>
<td>speech synthesis</td>
<td>A3</td>
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<td>January 31</td>
<td>vowels</td>
<td>A4-A8</td>
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<td>February 2</td>
<td>vowels</td>
<td>A9-A11</td>
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<td>February 7</td>
<td>vowels</td>
<td>A12-A13</td>
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<td>February 9</td>
<td>Quiz 1; vowels → consonants</td>
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<td>February 14</td>
<td>categorical perception</td>
<td>A14</td>
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<td>February 16</td>
<td>nonspeech analogs, trading relations</td>
<td>A15-A16</td>
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<td>February 21</td>
<td>motor theory: round 1</td>
<td>A17-A18</td>
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<td>February 23</td>
<td>motor theory: round 1</td>
<td>A19-A21</td>
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<td>February 28</td>
<td>motor theory: round 2</td>
<td>A22-A25</td>
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<td>March 2</td>
<td>Quiz 2; acoustic theory</td>
<td>A26-A27</td>
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<td>March 7</td>
<td>acoustic theory</td>
<td>A28-A29</td>
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<td>March 9</td>
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<td>March 14</td>
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<td>March 16</td>
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<td>March 21</td>
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<td>A30-A31</td>
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<td>March 23</td>
<td>acoustic theory</td>
<td>A32</td>
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<td>March 28</td>
<td>Quiz 3; theory battle</td>
<td>A33</td>
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<td>March 30</td>
<td>gesture/auditory</td>
<td>A34-A35</td>
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<td>April 4</td>
<td>gesture/auditory</td>
<td>A36-A38</td>
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<td>April 6</td>
<td>H and H</td>
<td>A39</td>
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<td>April 11</td>
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<td>A40</td>
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<td>April 13</td>
<td>Quiz 4; mirror mirror</td>
<td>A41-A42</td>
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<td>April 18</td>
<td>off the wall</td>
<td>A43</td>
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<td>April 20</td>
<td>who’s the fairest model of all</td>
<td>A44-A46</td>
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<td>April 25</td>
<td>modulation theories</td>
<td>A47-A49</td>
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<td>April 27</td>
<td>modulation theories</td>
<td>A50-A51</td>
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<td>May 2</td>
<td>word segmentation</td>
<td>A52-A54</td>
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<td>May 4</td>
<td>Quiz 5; word segmentation</td>
<td>A55-A57</td>
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<tr>
<td>May 9</td>
<td>Final Paper due, 12:00 pm</td>
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</table>
Assigned Journal Articles

Speech analysis/synthesis


Vowels - static vs dynamic


Theoretical path - Motorica


-----------------------------------Theoretical path - *Acoustica*


-----------------------------------Theoretical battle - *gestural vs auditory*


Theoretical path - modulation


Word segmentation


Notice

Any student who does not understand or accept the contents and terms of this syllabus or who has a disability or condition that compromises her/his ability to complete the course requirements must notify the instructor in writing within 2 days of receiving this syllabus. A synopsis of the University of Arizona Code of Academic Integrity is attached. All credit will be forfeited for any academic work completed for this class that violates the code.

Code of Academic Integrity

Note: This is a synopsis. The full version can be found at the website, [w3.arizona.edu/~studpubs/policies/cacaint.htm], or at the Dean of Students office, Rm. 203 Old Main.

Integrity is expected of every student in all academic work. The guiding principle of academic integrity is that a student’s submitted work must be the student’s own. Students engaging in academic dishonesty diminish their education and bring discredit to the academic community. Students shall not violate the Code of Academic Integrity and shall avoid situations likely to compromise academic integrity. Students shall observe the generally applicable provisions of this Code whether or not faculty members establish special rules of academic integrity for particular classes. Failure of faculty to prevent cheating does not excuse students from compliance with the Code.

Conduct prohibited by the Code consists of all forms of academic dishonesty, including, but not limited to: cheating, fabrication, facilitating academic dishonesty, and plagiarism as set out and defined in the Code of Conduct, modifying any academic work to obtain additional credit in the same class unless approved in advance by the faculty member; failure to observe rules of academic integrity established by a faculty member for a particular course; and attempting to commit any act prohibited by this Code. Any attempt to commit an act prohibited by these rules shall be subject to sanctions to the same extent as completed acts. The procedures for reviewing a suspected violation follow:

- **Faculty–Student Conference** – The faculty member must confer with the student within 15 working days of receiving evidence of a suspected violation.

- **Appeal to Department Head** – Students may appeal the findings made and the sanctions imposed by a faculty member to the Head of the Department in which the course was offered or the Associate/Assistant Dean in colleges with no departments. A student must deliver the written appeal to the Department Head within ten working days of the date on which he/she receives notice of the findings and sanction(s). The Department Head shall render a decision within 15 working days.

- **University Hearing Board** – If the student wishes to further pursue the matter, or if the Department Head fails to act within the 15 day period, the student may, within ten working days, appeal to a University Hearing Board by providing written notice of appeal to the Dean of Students office. The board shall convene within 30 working days of the time the student files the appeal.
Additional Journal Articles

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**Precursors to speech perception research**


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**Vowel perception and theories**


71. Fowler, C.A. (1991). Auditory perception is not special: We see the world, we feel the world, we hear the world, J. Acoust. Soc. Am., 89(6), 2910-2915.


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**Word segmentation**