Term Information

Effective Term
Spring 2017

General Information

Course Bulletin Listing/Subject Area
Speech and Hearing Science

Fiscal Unit/Academic Org
Speech & Hearing - D0799

College/Academic Group
Arts and Sciences

Level/Career
Graduate

Course Number/Catalog
7825

Course Title
Speech Perception in the Normal and Impaired Ear

Transcript Abbreviation
Speech Perception

Course Description
SHS 7825 is a graduate seminar-format course in speech & hearing science. We will discuss the auditory processing of speech sounds and examine the ramifications of hearing loss and cochlear implantation on this processing.

Semester Credit Hours/Units
Fixed: 3

Offering Information

Length Of Course
14 Week

Does any section of this course have a distance education component?
No

Grading Basis
Letter Grade

Repeatable
No

Course Components
Lecture

Grade Roster Component
Lecture

Credit Available by Exam
No

Admission Condition Course
No

Off Campus
Never

Campus of Offering
Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites
Grad standing in Speech and Hearing Science, or permission of instructor.

Exclusions
Not open to students with credit for 820.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code
51.0202

Subsidy Level
Doctoral Course

Intended Rank
Masters, Doctoral

Requirement/Elective Designation
Required for this unit’s degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes

- Increased knowledge of the processing of spectral and temporal aspects of speech sounds. Increased knowledge of the delivery of speech cues by cochlear implants.

Content Topic List

- Introduction
- Spectral Cues in Speech Recognition
- Temporal Cues in Speech Recognition
- Spectro-Temporal Cues in Speech Recognition
- Cochlear Implants

Attachments

- 7825Syllabus_v2.doc: Syllabus
  (Syllabus. Owner: Ellawadi, Allison Bean)

Comments

- See 9-28-16 e-mail to A Ellawadi. (by Vankeerbergen, Bernadette Chantal on 09/28/2016 09:26 AM)
- 1. I am changing this to a doctoral-level course.
- 2. Reminder: ASC curriculum committees do not meet over the summer. The ASC review of this course will be during AU16 for the first time. (by Haddad, Deborah Moore on 07/11/2016 07:31 PM)

Workflow Information

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<thead>
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<th>Status</th>
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<th>Date/Time</th>
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<td>07/11/2016 06:04 PM</td>
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Course Description

SHS 7825 is a graduate seminar-format course in speech & hearing science. We will discuss the auditory processing of speech sounds and examine the ramifications of hearing loss and cochlear implantation on this processing.

Readings: Source literature as provided.

Course Objectives: Recent years have brought about changes to our understanding of speech perception, and the cues used by the auditory system to perform this task. Specifically, we now have a deeper understanding of where particularly useful information resides in frequency and how this information at different frequencies interacts. We also have a deeper understanding of the role of temporal cues in speech perception. And finally, the interaction of these cues – spectro-temporal cues – are now better appreciated. In this course, we will gain this current understanding of the cues used by the auditory system to understand speech. We will also gain an understanding of how the use of specific cues is hindered by sensorineural hearing impairment. Finally, we will gain an understanding of the cues delivered by the bionic hearing prosthesis, and how these are similar and different from those of normal hearing.

Evaluation

Exams: There will be one mid-term and one final, each worth 30% of your grade. They will be take-home exams in essay format. Dates will be determined during the first week of classes, as attempts will be made to coordinate with and accommodate the demands of other coursework.

Paper: There will be a paper due at the end of the semester, during finals week. It will be a review of a particular aspect of auditory research and will account for 20% of your grade. The instructor is willing to work with you to choose an appropriate topic and to guide the selection of appropriate background material. (~8-10 pps, ~15 refs)
Presentations: In-class presentation of literature will constitute the remaining 20% of your grade. Although one student will lead the discussion. All are expected to participate in some way. Attendance is accordingly mandatory.

The OSU Standard Grade Scheme will be employed

- 93 - 100 (A)
- 90 - 92.9 (A-)
- 87 - 89.9 (B+)
- 83 - 86.9 (B)
- 80 - 82.9 (B-)
- 77 - 79.9 (C+)
- 73 - 76.9 (C)
- 70 - 72.9 (C-)
- 67 - 69.9 (D+)
- 60 - 66.9 (D)
- Below 60 (E)

**Calendar:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<tr>
<td>Aug. 26</td>
<td>Overview of acoustics and filtering</td>
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<td>Sept. 2</td>
<td>Spectral Cues in Speech Recognition I</td>
<td>ANSI, 1997; Warren et al., 1995</td>
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<td>Sept. 9</td>
<td>Spectral Cues in Speech Recognition II</td>
<td>Warren et al., 1999; Warren et al., 2004</td>
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<td>Sept. 16</td>
<td>Spectral Cues in Speech Recognition III</td>
<td>Stickney &amp; Assman, 2001; Healy et al., 2013</td>
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<td>Sept. 23</td>
<td>Spectral Cues in Speech Recognition IV</td>
<td>ter Keurs et al., 1992; ter Keurs et al., 1993</td>
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<td>Sept. 30</td>
<td>Temporal Cues in Speech Recognition I</td>
<td>Moore, 2007; Rosen, 1992</td>
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<td>Oct. 7</td>
<td>Temporal Cues in Speech Recognition II</td>
<td>VanTassell, 1987; Turner et al., 1995</td>
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<td>Oct. 14</td>
<td><em>Fall Break – No Classes</em></td>
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<td>Oct. 21</td>
<td>Spectro-Temporal Cues in Speech Recognition I</td>
<td>Shannon et al., 1995; Shannon et al., 1998</td>
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<td>Oct. 28</td>
<td>Spectro-Temporal Cues in Speech Recognition II</td>
<td>Dorman et al., 1997; Friesen et al., 2001</td>
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<td>Spectro-Temporal Cues in Speech Recognition III</td>
<td>Dorman et al., 1998; Zeng et al., 2002</td>
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<td>Nov. 11</td>
<td><em>Veteran’s Day – No Classes</em></td>
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<td>Nov. 18</td>
<td>Cochlear Implants I</td>
<td>Loizou, 2006</td>
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<td>Nov. 25</td>
<td><em>Thanksgiving – No Classes</em></td>
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<td>Dec. 2</td>
<td>Cochlear Implants II</td>
<td>Fu et al., 2002; Kreft et al., 2004</td>
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**Reading List**


**Academic Misconduct:** No deviations from complete academic honesty will be tolerated.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct at [http://studentlife.osu.edu/csc/](http://studentlife.osu.edu/csc/).

**Diversity:** Our department and our university have a long legacy of embracing inclusion, diversity, community, and openness. Our challenge is to ensure that we continue to be proactive in our efforts to nurture and realize these values. Therefore, we will continue to make every effort to welcome students of different backgrounds, cultures, and opinions and work to maintain an environment that is respectful of this diversity. University policies and other resources may be found here: [http://www.studentaffairs.osu.edu/bias/](http://www.studentaffairs.osu.edu/bias/)

**Students with Disabilities:**

Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone [614-292-3307](tel:614-292-3307), slds@osu.edu; slds.osu.edu.