Course Information
Time: Thursdays, 1:00 p.m. – 4:00 p.m.
Location: Green 4.208
Course Credits: 3

Professor Contact Information
Instructor: Andrea Warner-Czyz, Ph.D.
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Office hours: By appointment

Course Description
This course will explore the many different areas and issues related to cochlear implantation. Topics to be covered include signal processing, candidacy determination, medical considerations, steps in programming, audiologic (re)habilitation techniques, ethical issues, and speech perception and speech production outcomes in children and adults. Information will be presented and learned through lectures, guest speakers, video presentations, hands-on activities, assignments, and interactions with users of cochlear implants. Future technologies and assistive devices will be discussed. This course is intended to be an interactive course, with regular student participation.

This course is designed with an emphasis on independent critical thinking and learning activities.

Student Learning Objectives/Outcomes
1. Students will be able to list the criteria for consideration for cochlear implantation in both adults and children. They will demonstrate ability to perform pre- and post-cochlear implantation evaluations and select appropriate test batteries, rehabilitative, and treatment options (Standard IV-E).
2. Students will discuss the types and use of FDA-approved cochlear implant devices (Standard IV-E).
3. Students will analyze controversial issues such as Deaf Culture and their role in cochlear implantations (Standard IV-E).

For Doctorate of Audiology students, this class will provide knowledge relevant to your certification in audiology in the following areas:

1. Standard IV-A, Sections B3, B4, B5, B6, B9, B11, B13, B15, B16, B17, and B21.
2. Standard IV-C, Section C3. The applicant must be competent in the prevention and identification of auditory and vestibular disorders.
3. Standard IV-D, Sections D2, D3, D7, D8, D10, and D11. The applicant must be competent in the evaluation of individuals with suspected disorders of the auditory, balance, and communication systems.
Required Textbooks and Materials
Required and supplemental readings will be posted online at eLearning or made available for students to photocopy or print online. The readings are meant to supplement and expand upon information presented in class and must be read to complete the course’s annotated bibliography requirement.

Recommended Course Materials

Assignments & Academic Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>8/27/2015</td>
<td>History of cochlear implants (CI); Deaf culture</td>
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<tr>
<td>9/3/2015</td>
<td>CI candidacy; CI anatomy and function</td>
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<tr>
<td>9/10/2015</td>
<td>Cochlear implant signal processing</td>
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<td>9/17/2015</td>
<td>Programming and follow-up in CI</td>
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<tr>
<td>9/24/2015</td>
<td>Surgical Considerations; Social work and psychology</td>
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<tr>
<td>10/1/2015</td>
<td>Speech perception</td>
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<td>10/8/2015</td>
<td>Binaural hearing and CI</td>
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<tr>
<td>10/15/2015</td>
<td>No class – CI 2015 Symposium on Cochlear Implants in Children</td>
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<tr>
<td></td>
<td>Audiology online courses due</td>
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<td>10/22/2015</td>
<td>Music perception and appreciation</td>
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<td>Take-home midterm due</td>
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<tr>
<td>10/29/2015</td>
<td>Speech and language outcomes</td>
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<td>11/5/2015</td>
<td>Audiologic (re) habilitation and Auditory-Verbal Therapy; Coupling the CI with external devices</td>
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<td>CI-related session papers due</td>
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<td>11/12/2015</td>
<td>Special applications of CI technology and special populations</td>
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<tr>
<td>11/19/2015</td>
<td>Quality of life</td>
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<tr>
<td>11/26/2015</td>
<td>No class – Thanksgiving</td>
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<tr>
<td>12/3/2015</td>
<td>Group presentations</td>
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<tr>
<td>TBD</td>
<td>Final exam*</td>
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Readings

**Introduction to cochlear implants**

**Deaf Culture**
NAD position statement on cochlear implants (2000).

**Cochlear implant candidacy**

**Cochlear implant equipment and signal processing**

**Programming and follow-up**

**Surgical considerations**

**CI team referrals**
Speech perception outcomes


Binaural hearing


Music perception and appreciation


Speech and language outcomes


Geers, A.E. & Hayes, H. (2011). Reading, writing, and phonological processing skills of adolescents with 10 or more years of cochlear implant experience. Ear and Hearing, 32 (1), 49S-59S.


Quality of Life


Therapy and education options

Special populations and special applications

Putting it all together

Grading Policy

**Exams (40%)**
The real value of a test is the preparation, learning, and critical thinking ability that develops out of preparing for a test. The tests are designed with an eye toward everyday clinical decision making. There will be two exams. The format will be a combination of the following: Multiple choice, true/false, matching, labeling diagrams, fill-in-the-blank, short answer, short essay, and application (i.e., case studies). The midterm exam will be a take-home test; the final exam will be taken at the testing center on main campus.

* The Registrar’s office determines final exam dates and schedules. Exam schedules will be available after census day and will posted in Orion and announced in class and on the course eLearning page.

**Individual projects (30%)**
The purpose of these assignments is to allow students to think critically and independently on cochlear implants outside of class and to share this information with others. Each project should be the original work of the student. Copying and pasting large amounts of information from other sources will not be accepted. Small quotes from other sources of information, with proper citations, are acceptable. All postings must include proper grammar, spelling, punctuation, language, and a clear organization of thoughts. Links to outside sources and images may be included.

- **Current research in cochlear implants.** Cochlear implants represent a constantly changing field, with new research emerging daily. Please sign up to share one 10-minute presentation on current research in cochlear implants (we will have a sign-up sheet the first day of class).

- **Audiology Online courses.** Complete 3 recorded, live, or text-based courses on Audiology Online (http://www.audiologyonline.com) related to cochlear implants. One of these courses must relate to counseling individuals with cochlear implants; the other two can cover topics related to your specific interests (e.g., music, binaural hearing, therapy). Complete the multiple choice tests at the end of each course. Print these tests to show completion and passing scores. Also, please write a short summary (one paragraph) of the Audiology Online course plus a paragraph detailing your impressions of the course and how you might use the information gained in future clinical practice. This should comprise no more than one page total. If you are unsure as to whether an offering on the
Audiology Online website meets the criteria for the assignment, please email the instructor before you begin the assignment. Due 10/15/2015.

- **Observe a cochlear implant-related session.** This could include watching cochlear implant surgery; observing speech-language therapy; viewing audiological testing and MAPping; attending a CI support group; etc. Write a one-page summary about your experience. Due 11/05/2015.

**Group projects and presentation (20%)**
The class will be divided into small groups (2-4 students each) to select a topic to research. Create a two-page handout, brochure, or newsletter including information about candidacy, considerations, expectations for speech perception, speech and language, quality of life, etc., and resources for one of the age groups listed below. We are open to other topics; just clear with the instructors ahead of time. Present a 15-minute class lecture with a 5-minute question and answer period. Due 12/03/2015.

- Traveling with cochlear implants
- Social media and cochlear implants
- Fashion and cochlear implants
- Transitioning to college with cochlear implants
- Transitioning to employment with cochlear implants
- Cochlear implant camps
- Dating with cochlear implant
- Alerting devices for cochlear implants
- Cultural aspects with cochlear implants

**Participation (10%)**
Your participation grade will be based upon in-class participation, minute papers, summaries, etc. Active participation includes but is not limited to contributions to topic discussions, asking questions, answering questions, giving presentations, and making connections to other topics within the class, in other classes, or within the field. In addition, students will write a summary for some classes (determined by the instructor) and submit it by the following Tuesday. These summaries vary in style (chart, summary, list, etc.) and enhance understanding of topics by allowing students to explain ideas or concepts in their own words. These summaries also allow the instructor to determine topics requiring additional explanation.

**Course & Instructor Policies**

No make-up assignments or additional assignments for extra credit will be given in the event of student absence from the class that cannot be documented as an emergency or death in the family. Regular attendance and active participation in discussion are strongly encouraged. Students may use technology during class to take notes or accomplish tasks pertaining to class discussion. Abuse of technology during class time (e.g., checking email, social media, etc.) is unacceptable and will result in revoking the student’s privilege to use technology for the remainder of the semester in this course.

**UT Dallas Syllabus Policies and Procedures**

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.

Please go to [http://go.utdallas.edu/syllabus-policies](http://go.utdallas.edu/syllabus-policies) for these policies.
The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.