Communication Sciences & Disorders (CSCD) 4301

PRINCIPLES OF AUDIOLOGY

Spring 2012
Tuesday & Thursday
12:30-1:50
Ritter Annex 565

Instructor: Doris Fallon Snyder, M.A., CCC-A/SLP
116 Weiss Hall
215-204-7544
dfallon@temple.edu

Office Hours: Monday 2:00 - 3:00
Tuesday 11:00 -12:00
Thursday 2:00 - 3:00
Others by appointment

Course Description: Intermediate course in the study of hearing, the assessment of hearing impairment, and hearing disorders. Knowledge of basic concepts in the physics of sound and anatomy and physiology of the auditory system is assumed (CSCD 3234 Hearing Science is pre-requisite).

The student will demonstrate through examination, class discussions, and written assignments, a basic understanding of:

- History and Scope of Practice of the field of Audiology
- Basic concepts of acoustics and anatomy & physiology of the auditory system as it relates to the measurement of hearing, as well as, how it is affected by the presence of a disorder
- Clinical methods and procedures in evaluating the auditory system, involving behavioral (pure tone and speech audiometry), and physiologic (acoustic immittance, Brainstem Evoked Response, and Otoacoustic Emissions Audiometry) measures
- Interpretation of results of audiologic assessment involving the above procedures
- The different types of hearing disorders and the associated hearing impairment
- Related disorders associated with hearing disorder or impairment and their effect on communication


Martin, Frederick and Clark, John. Introduction to Audiology (10th edition), Allyn & Bacon, Boston, 2009


All reference texts have been placed on reserve at Paley Library (Tuttleman Learning Center), as well as, (earlier editions) available for loan from instructor upon request.
**Powerpoint Outlines:**

Handouts of Powerpoint Presentations are posted on Blackboard and should be downloaded and printed prior to the lecture to assist with note taking. These handouts serve as highlights of main points of interest of material on topic. They do **NOT** contain all material of the lectures and all slides from handouts will not be discussed in lectures. They are not intended as a substitute for class attendance nor for the reading of the textbooks. These handouts may be updated during the semester, so to have the most current information; it is recommended that they not be downloaded until the week of the scheduled lecture.

**Course Requirements:**

1. **Examinations:** 200 points: two (2) examinations each worth 100 points. Information on each exam will come from assigned readings, class lectures, presentations, and discussions.

2. **Quizzes:** 100 points: each worth 10 points. Weekly online quizzes will be given to assess learning of recent material and provide framework for review and discussion of the most important information. A quiz will be available on Blackboard only on selected dates (see schedule) on concepts covered in **any** of the preceding lectures. It is the student’s responsibility to follow up on any technical problems with Computer Services. There will be **no** make up quizzes but an allowance is made for unavoidable circumstances. A total of 12 quizzes are scheduled but only the scores from the top 10 quizzes will be used to calculate the quiz score. These are **Optional** not Bonus Quizzes.

3. **Related Hearing Disorders Project:** 50 points: This is a scholarly activity intended to develop skills in research of professional literature, as well as, the production of a professional paper. All members of the class will research and compile a notebook of disorders related to or associated with hearing disorders and/or hearing impairment. This project will include:

   1. **Fact Sheets:** 25 points. Each student will research a Disorder related to or associated with hearing loss and prepare a Fact Sheet. Sign up sheets will be circulated and posted by the instructor. The fact sheets should include, but need not be limited to:
      - Description of the disorder, condition, or environmental factor
      - Medical findings, incidence, related symptoms
      - Typical audiologic findings, i.e., type and severity of loss
      - Implications for communication (**not just hearing**) and swallowing/feeding
      - Treatment and Management of the disorder
      - Treatment and Management of the communication and/or swallowing impairment related to the disorder

   A list of references must be included and must include at least one peer reviewed publication. Information from websites, public information releases, and/or newspapers or magazines (including ASHA Leader and ADVANCE) can be used judiciously but not exclusively. Grading format which is posted under Course Information on Blackboard will assess the quality and integrity of both the research and the writing.
. Related Hearing Disorder Project: (cont)

2. **Notebook on Hearing Disorders**: Completed notebook worth 25 points. Students will outline specific auditory disorders by site of pathology and organize the Fact Sheets on the Related Disorders into a Notebook and will compile a Table of Contents based upon Etiology. A template for the outline and Table of Contents will be posted on Blackboard.

4. **Homework Assignments**: 50 points. There will be some homework assignments (individual points will vary) throughout the semester that will collectively earn at least 50 points. To receive full credit for an individual assignment, a student must follow directions, submit the assignment on time, and the assignment must be complete. No credit will be given for assignments submitted after the class following the due date.

**Grading**: Grading will be based upon the accumulation of a possible 400 points on the above Course Requirements. There will be bonus points built into each of the items throughout the semester which will earn extra credit points but there will be no other extra credit work accepted at the end of the semester to improve a grade.

\[
\begin{align*}
A &= 372+ \text{ points} \\
A- &= 360+ \text{ points} \\
B+ &= 340+ \text{ points} \\
B &= 320+ \text{ points} \\
B- &= 305+ \text{ points} \\
C+ &= 295+ \text{ points} \\
C &= 280+ \text{ points} \\
C- &= 260+ \text{ points} \\
D &= 240+ \text{ points} \\
F &= < 240 \text{ points}
\end{align*}
\]

**Blackboard**: Blackboard, the online Learning system used at Temple, is part of the Tuportal. It is available to all Temple faculty, students, and staff, but you must open a Temple Account at Computer Services located in the TECH Center. The above syllabus, as well as Readings, Illustrations, Charts, Forms, and other class material are posted on Blackboard. All registered students will be automatically enrolled in the Blackboard Course, *Principles of Audiology*. If you are not enrolled as a User for the BB course, inform the Instructor. If you are new to Temple, a guide to using Blackboard, *Blackboard Quick Reference Guide for Students*, is available in brochure form at Computer Services and online at their website [http://www.temple.edu/cs/students/blackboard.htm](http://www.temple.edu/cs/students/blackboard.htm)
Student Responsibility:

You are expected to be punctual, attend class and participate in class discussions. There is a lot of material to cover and it is strongly recommended that students read listed text and references as well as, download and print PP outlines posted on Blackboard prior to the class. You are expected to read the sections of the texts listed for the topic and will be responsible for the material even if it is not discussed in class. Although attendance in class will not be taken, you are responsible for all material covered in lectures and discussions, as well as, completion of all course requirements. Copies of the supplemental texts used as references are available upon request from the instructor. Please be courteous to your classmates and not horde or misplace them. Tests, quizzes and examinations will only be given as scheduled unless arrangements are made in writing and approved in advance. Papers and presentations are due on the specified date and will be marked down one grade if late unless a request for an extension has been requested and approved in advance. Requests for extensions should be put in writing in my mailbox or by e-mail before the due date. No verbal or telephone requests will be accepted.

In the event that extensions were given, no assignment will be accepted after the last day of classes. Any class requirement not completed by the last day of classes will be counted as zero (0) points toward the final class grade. Grades will be submitted for all students at the end of the semester unless previous arrangements are made. Remember it is the student's responsibility to drop or withdrawal from classes. Requests to take an Incomplete in the course must comply with University Policy. Students must initiate request for an Incomplete prior to the last class of the semester and must complete a Contract for Completion of Coursework with the Instructor.

Academic Honesty:

All students are expected to be familiar with and to adhere to the University and College of Health Professions and Social Work (CHPSW) Policy on Academic Honesty. Cheating and plagiarism will not be tolerated. Plagiarism is the use and passing off, as one's own the ideas or writings of another without proper attribution. All assignments even if collaborative are to be the individual's own work. No credit will be given for any assignment or activity in which cheating or plagiarism occurs. Also, students need to be mindful of copyright laws.

Academic Scholarship:

It is the student's responsibility to remain in good academic standing within the University and the College of Health Professions and Social Work (CHPSW). This is a required course in the Speech Language Hearing major for which Undergraduate students in the CHPSW must earn a C or above to fulfill the requirements of the major.

Sexual Harassment:

Temple University Policy Statement on Sexual Harassment and Sexual Assault

Temple University is committed to providing a learning and working environment that emphasizes the dignity and worth of every member of its community, free from discriminatory conduct. Sexual harassment and sexual assault, in any form or context, are inimical to this and will not be tolerated. Sexual harassment and assault subvert the mission and the work of the University, and can threaten the career, educational experience, and well-being of students, faculty, and staff. University policies on sexual assault and harassment, which include procedures for filing complaints, are available upon request by contacting Ms. Sandra A. Foehl, Associate Vice President for Affirmative Action, Office of Affirmative Action, 109 University Services Building, (215) 204-7303 (TTY: 204-6772). http://www.temple.edu/affirmative_action
Academic Rights and Responsibilities:

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link: http://policies.temple.edu/getdoc.asp?policy_no=03.70.02.

Students with Disabilities:

Students in need of academic accommodations or resources because of a disability must identify their needs at the start of the semester and work through Disability Resources and Services, 100 Ritter Annex, 215-204-1280(voice), 215-204-1786 (TTY), drs@temple.edu.

Counseling Services for Students:

If you are a student of Temple University, Tuttleman Counseling Services offers you support for your emotional, educational or vocational concerns. Assistance is confidential and free of charge. A wide range of assistance is available including counseling, support groups, literature, and educational programs and outreach events. Services include Psychology and Psychiatric Services, Campus Alcohol and Substance Awareness (CASA), Conflict Education Resource Team (CERT), Sexual Assault Counseling and Education (SACE). Call 215-204-7276 or stop by on the 5th floor of 1810 Liacouras Walk. Appointments are available from 8:30-5:00 on Mondays through Fridays with a Walk-in Clinic from 10:00-2:00 on the same days.

TENTATIVE* COURSE SCHEDULE

* The following Schedule is a Plan Not a Promise of the topics to be covered over the course of the semester. Topics for specific dates are subject to change depending on the progress of class discussions and questions. Dates for quizzes and examinations will NOT be changed (except in the case of unexpected emergencies) but the material covered in a test will only reflect information discussed in class up to that date. Any other changes in class assignments will involve postponements. Deadlines will not be moved up.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topic(s)</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1/17</td>
<td>Introduction to course</td>
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</tbody>
</table>
| 1/19    | History and Overview of Profession | Stach, Clinical Audiology, An Introduction, Chap. 1  
Martin & Clark, Introduction to Audiology, Chap. 1 |
| 1/24    | Quiz 1 due                |                                               |
|         | Fundamentals of Normal Hearing Acoustics | Gelfand, Essentials of Audiology, Chapter 1  |
| 1/26    | Fundamentals of Normal Hearing Anatomy & Physiology | Gelfand, Chapter 2  
(Review Gelfand, Chapter 3) |
| 1/30    | Last Day to Drop a Class  |                                               |
## COURSE SCHEDULE (continued)

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topic(s)</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1/31</td>
<td>Quiz 2 due</td>
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<td></td>
<td>Hearing Science Wrap up</td>
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<tr>
<td>2/02</td>
<td>Instrumentation and Test Environment</td>
<td>Gelfand, Chapter 4</td>
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<tr>
<td>2/07</td>
<td>Quiz 3 due</td>
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<td>ANSI Standards</td>
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<td>2/09</td>
<td>Calibration</td>
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<td>2/14</td>
<td>Quiz 4 due</td>
<td>Gelfand, Chapter 5</td>
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<td>Pure Tone Audiometry</td>
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<td>2/16</td>
<td>Pure Tone Audiometry (cont)</td>
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<td>2/21</td>
<td>Quiz 5 due</td>
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<td>Hearing Loss and Interpretation of the PT Audiogram</td>
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<td>2/23</td>
<td>Auditory System &amp; Otologic Disorders</td>
<td>Gelfand, Chapter 6</td>
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<td>2/28</td>
<td>Quiz 6 due</td>
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<td>Conductive Pathologies</td>
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<td>Outer Ear Disorders</td>
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<td>3/01</td>
<td>Mid-Term Examination</td>
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<td>3/06</td>
<td>Spring Break</td>
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<td>3/08</td>
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<tr>
<td>3/13</td>
<td>Conductive Pathologies</td>
<td>Gelfand, Chapter 6</td>
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<td>Middle Ear Disorders</td>
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<td>3/15</td>
<td>Conductive Pathologies (cont)</td>
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<td>Middle Ear Disorders</td>
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<td>3/20</td>
<td><strong>Last Day to Withdraw from a class</strong></td>
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<td>Quiz 7 due</td>
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<td>Sensorineural Pathologies</td>
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<td>Inner Ear Disorders</td>
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<td>3/22</td>
<td>Sensorineural Pathologies (cont)</td>
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<td>Inner Ear Disorders</td>
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<td>3/27</td>
<td>Quiz 8 due</td>
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<td>Sensorineural Pathologies (cont)</td>
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<td>Inner Ear Disorders</td>
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| 3/29  | Sensorineural Pathologies (cont)  
Retrocochlear & Cortical Pathologies |          |
| 4/03  | Quiz 9 due  
Acoustic Immittance Audiometry  
Fact Sheets due | Gelfand, Chapter 7 |
| 4/05  | Acoustic Immittance Audiometry (cont) |          |
| 4/10  | Quiz 10 due  
Acoustic Immittance Audiometry (cont) |          |
| 4/12  | Speech Audiometry: Thresholds | Gelfand, Chapter 8 |
| 4/17  | Quiz 11 due  
Speech Audiometry: Performance Measures |          |
| 4/19  | Pediatric Audiology | Gelfand, Chapter 12-13 |
| 4/24  | Quiz 12 due  
Physiologic Measures of Auditory Assessment:  
Brainstem Auditory Evoked Response (BAER)  
Otoacoustic Emissions (OAE) | Gelfand, Chapter 11 |
| 4/26  | Non-Organic Hearing Loss  
Wrap Up  
Notebooks Due | Gelfand, Chapter 14 |
| 5/01  | Study Day |          |
| 5/03  | Final Examination 10:30-12:30 |          |
Successful completion of the above course indicates the acquisition of the following knowledge and/or skills to satisfy the standards of the American Speech Language Hearing Association (ASHA) for the Certificate of Clinical Competence in Speech Language Pathology (CCC-SLP).

**Standard** | **Knowledge & Skill**
---|---
III-B | The student demonstrated knowledge by discussion & examination of the basic human communication process of hearing, including the biological, neurological, acoustic, and developmental bases.
III-C | The student demonstrated knowledge by discussion, writing, & examination of the etiologies & characteristics of hearing disorders and their impact on speech & language, including the anatomical/physiological, acoustic, psychological, cultural, and developmental correlates.
III-D | The student demonstrated knowledge by discussion and examination of the principles and methods of prevention and assessment of hearing disorders, including consideration of anatomical/physiological, acoustic, psychological, cultural, and developmental correlates.
III-G* | The student demonstrated knowledge by discussion and examination of contemporary professional issues including ASHA practice policies and Guidelines, Scope of Practice in Audiology and professional organizations.
III-H* | The student demonstrated knowledge by discussion and examination of ASHA certification & state licensure in Audiology.

* not on KASA Summary form