Course Title and Number: SHS 626: Audiological Assessment and Management of Infants and Young Children

Course Credit Hours: 3 credit hours

Course Description: The nature of sound; anatomy & physiology of hearing, audiological assessment with pediatric populations and newborn screening. Developments in hearing technology, troubleshooting hearing technology.

Professor of Record: Jennifer Wiles, Au.D., LSLS Cert. AVEd

Office Location: Magnolia House Jackson, MS

Office Hours: By appointment through email, phone, or in person. Appointments may be in person or by online technology.

Phone: 601-529-4300
Fax: 601-266-5224
Email Address: jennifer.wiles@usm.edu

Format of Course: Face to face

Class Days, Times, and Location: Monday 12:30-3:30 @ Magnolia House, Jackson, MS

Drop Date: n/a

Required Text(s):

Supplementary Texts and Sources:


Additional required and optional supplementary readings, videos, and audio recordings will be provided by the instructor.

**Required Technology:**

Students will need to be proficient with using Microsoft Word, Microsoft Powerpoint, completing web searches, and scanning and uploading documents by email or Dropbox. Students will also achieve competencies in hearing technologies by demonstrating troubleshooting of hearing technologies, administration of the Ling Six Sound Test and by observation of specific audiological procedures.

**Course Objectives and Goals:**

This course will provide candidates with knowledge about the nature of sound and how sound is transferred from the surrounding environment via the ear to the brain. The etiology, types, degrees, and configurations of hearing loss will be discussed, as well as methods of auditory assessment necessary to make the previous classifications of hearing loss. Candidates will become knowledgeable of the current hearing technologies available for children with hearing loss and the research supporting early and frequent audiological management. Candidates will become proficient in completing a listening check to ensure that technology is working properly and troubleshooting basic technology problems. The necessity of collaboration between audiologists and teachers and interventionists working with children with hearing loss will be emphasized, and candidates will be provided opportunities to develop their ability to explain this information to families.

**Instructional Strategies:** The course will be delivered through face-to-face lectures. Students will participate in in-class learning activities, homework assignments, video/DVD and live demonstrations and on-line research.

**Standards Alignment:** The Deaf Education graduate curriculum is aligned with the Initial Teacher Preparation standards of the Council on Exceptional Children (CEC), which subsume the Council on Education of the Deaf (CED) candidate standards. InTASC student standards (1-10) which are aligned with CAEP standards are also subsumed. This course addresses the following CEC Initial Teacher Preparation
Standards: Standard 1: Learner Development and Individual Learning Differences; Standard 2: Learning Environments; Standard 3: Curricular Content Knowledge, Standard 4: Assessment; Standard 6: Professional Learning and Ethical Practices; Standard 7: Collaboration. The CED sub-standards and InTASC standards related to each Candidate Learning Outcome are listed in the brackets.

**Candidate Learning Outcomes from Course: The student will …**

1. Identify the major causes of hearing loss and its prevalence. (CEC/CED: DHH 1K2, DHH 4K1, DHH6K5, DHH6K7; InTASC 2, 6, 9).
2. Describe the nature of sound and how hearing is measured. (CEC/CED: DHH4K1; InTASC 6).
3. Categorize the types, degrees and configurations of hearing loss. (CEC/CED: DHH4K1; InTASC 6).
4. Interpretation of audiograms obtained by both behavioral and physiological test results. (CEC/CED: DHH1K7, DHH4K1, DHH6K2; InTASC 1, 6, 9).
5. Identify audiological assessments used with the pediatric population. (CEC/CED: DHH4K1, DHH 4S; InTASC 6).
6. Identify the major anatomical structures involved in hearing and balance and describe concepts in anatomy and physiology of hearing. (CEC/CED: DHH6K7; InTASC 9).
7. Discuss differential diagnosis of hearing loss. (CEC/CED: DHH4K1; InTASC 6).
8. Describe neonatal indicators that would place an infant at high-risk for hearing loss, screening procedures, and advantages of early identification. (CEC/CED: DHH6K7; InTASC 9).
9. Define the arguments for early identification and auditory management. (CEC/CED: DHH1K1-1K3, 1K6; InTASC 1).
10. Discuss the impact of mild and moderate hearing losses on educational achievement as well as the impact of severe and profound losses. (CEC/CED: DHH1K1-1K2, 1K7 DHH2S2, 2S4, DHH6K7 ; InTASC 1,3,9).
11. Interpret aided and unaided audiograms and determine suitability of hearing technology, based on speech acoustics. (CEC/CED: DHH2S4, DHH4K1; InTASC 3, 6).
12. Describe the various hearing technologies available to infants and children with hearing loss. (CEC/CED: DHH2S4, DHH7K1; InTASC 3, 10).
13. Specify the candidacy for pediatric cochlear implants and discuss possible family concerns. (CEC/CED: DHH2S4; InTASC 3).
14. Identify the major components typical of cochlear implants, describe the surgical procedure and general processing strategies. (CEC/CED: DHH2S4 ; InTASC 3 ).
15. Discuss the suitability and ethical issues of cochlear implants for children with a variety of histories and audiological backgrounds, based on current candidacy requirements. (CEC/CED: DHH1K1-1K3; InTASC 1).
16. Discuss the advantages of FM and Soundfield systems and classroom acoustics necessary for optimal signal to noise ratios. (CEC/CED: DHH2S4-2S5; InTASC 3 ).
17. Perform listening checks of hearing aids to determine function. (CEC/CED: DHH2S4; InTASC 3).
18. Troubleshoot amplification and sensory technology. (CEC/CED: DHH2S4, 6K2; InTASC 3, 9).
19. Explain the roles of the audiologist and teacher of the deaf/hard of hearing on IEP teams with respect to audiological management. (CEC/CED: DHH3S1, DHH6K2; InTASC 4, 9).

Evaluation Methods:

<table>
<thead>
<tr>
<th>Candidate Learning Outcomes Aligned with CEC/CED &amp; InTASC Standards</th>
<th>Assignment</th>
<th>Due Date</th>
<th>Percentage of Grade</th>
<th>Rubric Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td>3, 4, 5, 7, 8, 10</td>
<td>Observations/Practicum/Assignments</td>
<td>Weekly</td>
<td>10%</td>
<td>No</td>
</tr>
<tr>
<td>12, 17</td>
<td>Audiology Online Course with Learning Points – Earmolds and More</td>
<td>8/24/2016</td>
<td>2%</td>
<td>No</td>
</tr>
<tr>
<td>12, 17</td>
<td>Audiology Online Course with Learning Points – Making a Good Ear Mold Impression</td>
<td>8/29/2016</td>
<td>2%</td>
<td>No</td>
</tr>
<tr>
<td>10, 11, 12, 15</td>
<td>Audiology Online Course with Learning Points – Cochlear Implantation in Children Under 12 Months of Age</td>
<td>9/12/2016</td>
<td>2%</td>
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<tr>
<td>11, 12, 17, 18</td>
<td>Audiology Online Course with Learning Points – The Ponto Bone Anchored System</td>
<td>9/19/2016</td>
<td>2%</td>
<td>No</td>
</tr>
<tr>
<td>11, 12, 17, 18</td>
<td>Audiology Online Course with Learning Points – The Baha System</td>
<td>9/19/2016</td>
<td>2%</td>
<td>No</td>
</tr>
<tr>
<td>11, 13, 14</td>
<td>Parent Handout and Presentation- Part 1</td>
<td>10/24/2016</td>
<td>5%</td>
<td>No</td>
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Grading Scale:

<table>
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<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>96 - 100</td>
</tr>
<tr>
<td>A-</td>
<td>91 - 95.9</td>
</tr>
<tr>
<td>B+</td>
<td>87 - 90.9</td>
</tr>
<tr>
<td>B</td>
<td>83 - 86.9</td>
</tr>
<tr>
<td>B-</td>
<td>80 - 82.9</td>
</tr>
<tr>
<td>C+</td>
<td>77 - 79.9</td>
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<tr>
<td>C</td>
<td>73 - 76.9</td>
</tr>
<tr>
<td>D</td>
<td>65 - 72.9</td>
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<tr>
<td>F</td>
<td>BELOW 65</td>
</tr>
</tbody>
</table>

Please be advised that a “B” average must be maintained in graduate school to remain in the program.

Explanations of Assignments:

Observations/Practicum/Assignments: Observations/practicum will be scheduled at Magnolia Speech School and the University of Mississippi Medical Center to give an opportunity to see how assessment and management of children who have hearing loss can vary across settings, as well as to give the opportunity to see children who have hearing loss in audiological assessments and management. Observations will focus on hearing aid programming, cochlear implant mapping, and speech perception assessment. Small assignments will be given periodically to ensure that students are able to understand class discussion. An example would be interpreting an audiogram at home to review in the next class.

Audiology Online Courses with Learning Points: Audiology Online is an online continuing education provider that can be accessed at [www.audiologyonline.com](http://www.audiologyonline.com). Several courses will be assigned to complete to help reinforce and enhance topics covered in class in regards to current technology available for children with hearing loss. Students will watch each course and answer questions provided by the instructor.

Parent Handout and Presentations: Students will be assigned two topics in which they are to complete a 1 page parent handout. Topic 1 will be on an assigned type of hearing technology. Topic 2 will be on an assigned type of hearing loss. Following completion of the handouts, the students will present each handout to the class and instructor.

Exam 1: Exam 1 will assess knowledge of audiological technology.
Exam 2: Exam 2 will assess knowledge of auditory anatomy and physiology, ability to interpret audiograms, genetics of hearing loss, common syndromes and environmental causes of hearing loss, and different classifications of hearing loss.

Comprehensive Final: In addition to the topics assessed on exam 1 and exam 2, the final exam will also cover methods of assessment of auditory function and differential diagnosis of hearing loss.

Professional Education Unit Policies and Conceptual Framework:
All policies of The University of Southern Mississippi’s Professional Education Unit can be found online at https://www.usm.edu/education-psychology/unit-policies. The Unit is responsible for developing and revising Unit policies and procedures to reflect changes in University requirements, accreditation standards, and applicable federal, state, and authoritative sources. In the event of a conflict between another Unit-created document (paper or electronic) and the updated policies and procedures, the policies and procedures listed on this website will prevail. The Unit’s conceptual framework can be found at that link as well.

Class Policies:
Students are expected to actively participate in all class discussions and activities and to complete all assignments.
- Students are expected to be prepared for class sessions by reading assigned materials and viewing assigned videos/DVDs prior to that week.
- Students are expected to be on time and participate in class discussions and activities.
- Students are expected to turn off cell phones, not text or communicate electronically (e.g. email) during class and to respect others.

Remediation Statement:
According to SHS department policy, students who make a grade of “C” or lower on any examination or project must come to the instructor’s office to discuss study habits and the reasons for poor performance. A remediation plan will be developed, which may include extra readings and/or additional assignments to ensure the acquisition of the requisite skills.

Course Communication:
You may contact your instructor via phone or email, or by setting up an appointment. If you have questions, please feel free to ask about how to complete assignments.

Policy on Attendance and Makeup Work:
Regular attendance, preparation and participation is essential for achievement in this course. Attendance and regular work in all components of this course is required and expected. Any class re-scheduling will be at the discretion of the instructor.
• Students are expected to take examinations and quizzes when they are scheduled, and to submit assignments on the date these assignments are due during the class period.
• Late submission of assignments should be rare. Late assignments will be accepted only on or before the next regularly scheduled class period. Assignments submitted late will be penalized by 25%.
• Make-up examinations will be given only under the most merited circumstances and may be oral or written or both oral and written.
• Requests for an Incomplete (I) grade, are discouraged, and will not be approved except in the most merited circumstances.

Academic Honesty Statement:
When cheating is discovered, the faculty member may give the student an “F” on the work involved or in the course. If further disciplinary action is deemed appropriate, the student should be reported to the Dean of Students. In addition to being a violation of academic honesty, cheating violates the Code of Student Conduct and may be grounds for probation, suspension, and/or expulsion. Students on disciplinary suspension may not enroll in any courses offered by The University of Southern Mississippi.

Plagiarism Statement:
Students are expected to adhere to the highest standards of academic honesty as outlined in the USM Student Handbook. Any information that is copied from another source must be noted as such in student materials. Page number or Internet reference must appear in the text, and full bibliographic references must appear in the reference section of the paper/assignment. Sources must be in quotes and include author(s), year of publication, or other reference notes as required by the college department format (e.g. APA, Chicago). Other forms of academic dishonesty include but are not limited to buying papers, copying paragraphs/pages of text/whole papers off the Internet, copying another student’s answers, etc. Academic dishonesty will result in the grade of a “0” on the assignment, and/or in the course, and/or the student may be reported to the Vice President for Academic Affairs for further action.

ADA Statement:
Students with disabilities requiring assistance, and who qualify under Section 504 and/or the American with Disabilities Act (ADA), should contact the Coordinator for the Office of Disability Accommodations for information on appropriate policies and protocols.

Address: The University of Southern Mississippi
Office for Disability Accommodations
118 College Drive # 8586
Hattiesburg, MS 39406-0001
Voice Telephone: (601) 266-5024 or (228) 214-3232
Fax: (601) 266-6035

Individuals with hearing impairments can contact ODA using the Mississippi Relay Service at 1-800-582-2233 (TTY) or email the ODA office at ODA@usm.edu
Resources for Student Success:
As a student at The University of Southern Mississippi, you have access to individualized assistance with writing and speaking assignments for any course through the University’s Writing Center and Speaking Center on both the Hattiesburg and Gulf Coast campuses. The centers offer personalized assistance at any stage of the writing or speaking process. Whether you want help brainstorming for topic ideas, developing an outline, conducting research, or learning proofreading or presentation skills, the centers can help you become a more effective writer and speaker. The Speaking Center also offers practice rooms for recording presentations and working with delivery aids (PowerPoint and Internet access are available).

The centers are centrally located in Cook Library on the Hattiesburg campus (first floor just past Starbucks) and in Gulf Park Library on the Gulf Coast campus. For more information or to schedule an appointment, please call, come by, visit online, or join us on Facebook (USM Writing Center or Southern Miss Speaking Center).

- Speaking Center - 601.266.4965, Cook Library 117, www.usm.edu/speaking-center
- Writing Center - 601.266.4821, Cook Library 112, www.usm.edu/writing-center
- Gulf Coast Speaking & Writing Center - 228.207.0150, Gulf Park Library, www.usm.edu/gulfcoast/learning-commons

Course Schedule: (Tentative flow of topics)
1. Behind the Ear Hearing Aid Parts and Function
2. Earmold Styles, Features, and Modifications
3. Troubleshooting Hearing Aids
4. Cochlear Implants Parts and Function
5. Cochlear Implant Troubleshooting
6. Cochlear Implant Surgical Process and Mapping
7. Bone conduction hearing technologies
8. Auditory Brainstem Implants
9. FM Systems and Classroom Acoustics
10. Frequency Transposition Aids
11. Frequency Compression in Hearing Aids
12. Tactile Aids
13. The Nature of Sound
14. Audiograms
15. Classification of Hearing Loss
16. Anatomy and Physiology of the Auditory System
17. Genetics, Syndromes, and Environmental Causes of Hearing Loss
18. Otitis Media
19. Auditory Neuropathy
20. Minimal Hearing Loss
22. Physiological Assessments of Infant and Child Auditory Function
This syllabus and schedule are subject to change at the discretion of the instructor to accommodate instructional and/or student needs. It is the student’s responsibility to keep abreast of such changes, which will be communicated via email.

**Technological issues**
Please maintain a working email address via which the instructor may contact you and via which you can send and receive attached Word and PDF documents. Please check your email at least once each weekday (except during school holidays). The instructor will respond to all emails within twenty-four hours (except on weekends and during school holidays). If you have not received a response from an email within twenty-four hours, please resend it.

Email, internet access, or other technological problems are not an acceptable excuse for late assignments or for being ill-prepared for class. In the event of a technological challenge you cannot overcome, please contact the instructor by text or phone.

Please store back-up copies of all course files in a location separate from your personal computer.