Pediatric Audiology

Communication Sciences and Disorders 832

Spring 2017

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| Monday & Wednesday: 8:45-10:00am  Instructor Amy Hartman, AuD  Phone *608.262.6481*  Email *amy.hartman@wisc.edu*  Office Location *373 Goodnight Hall*  Office Hours *Mondays, 10:00-11:00 or by appointment* | **Course Description:** Students will learn about pre- and post-natal development of the auditory system, and how to select appropriate behavioral and physiological assessment procedures based on a child’s chronological and developmental age, including concepts of early identification. Students also will learn about hereditary and non-hereditary causes of childhood hearing loss. Students will also be familiarized with the definitions and theories related to (central) auditory processing disorders. The student will learn methods to evaluate (central) auditory processing disorders in children and adults.  **Course Objectives:**   * Describe embryological development of the human ear and discuss its relationship to childhood hearing loss. * Integrate knowledge of genetics into pediatric audiology clinical practice. * Demonstrate how childhood disorders can affect the auditory system. * Describe typical childhood development and its effects on clinical practice, including selection of correct tests, procedures used, and appropriate interventions. * Accurately measure and interpret a child’s hearing ability by eliciting an effective case history and obtaining electrophysiological and behavioral results. * Describe and justify the EHDI system and identify barriers and solutions to successful progression through this system. * Develop culturally competent, family centered, evidenced based recommendations for the pediatric audiology population. * Develop leadership skills and use them in your pediatric audiology practice.   **Required Text**:  Madell, J., Flexer, C. (2013) Pediatric Audiology: Diagnosis, Technology, and Management, 2nd Edition. Thieme Medical Publishers  Katz, J. (2014). Handbook of Clinical Audiology, 7th Edition. Lippincott Williams and Wilkins: Philadelphia, PA. |
| Instructor Jon C. Douglas, AuD  Phone *608.318.3493*  Email *jon.douglas@wisc.edu*  Office Location *324 Goodnight Hall*  Office Hours *Mondays, 10:00-11:00 or by appointment* |

**Course requirements and student evaluation:**

* Unit Quizzes - 25%
* Final - 20%
* Case Study Presentation - 15%
* VRA Lab Assignment - 10%
* CAPD Lab Assignment - 15%
* Class Participation/Assignments - 15%

**Unit Quizzes:** Unit quizzes are administered at the end of each unit on Canvas. You can complete them on your own time, but once you start, each quiz will have a time limit. You may only take the quiz once, and you can use your notes. You must take the quiz by yourself and cannot share answers with your classmates. They will mostly contain a combination of multiple choice, true/false, fill in the blank, and short answer questions, but there may be a long answer questions. See the schedule for specific quiz dates.

**Final Exam:** The final exam will be taken in class. It will contain cases, with short and long essay questions. If you are not able to attend an exam due to an illness or emergency, please contact Dr. Douglas or Dr. Hartman in advance. A doctor’s note will be required for an illness. Unexcused absences for the final exam will result in a “0” grade for the exam.

**Case Study Presentations:**Case study presentations will be given during class. See the rubric for additional information.

**Lab assignments:**

1. **VRA:** Students will participate in a lab related to the topic of Visual Reinforcement Audiometry (VRA). You will need to work on the lab in pairs outside of class time. Instructions for the lab will be provided after the VRA lecture. A rubric will be provided at a later date with additional information.
2. **CAPD:** Students will participate in a lab related to the topic of (C)APD. You will need to work on the lab and lab assignment outside of regular class time. Although you may work with a partner or in a group for parts of the lab, the lab write up should be done individually. You will be given instructions for the lab and lab assignment after spring break.

**Class participation and class activities:**Class participation is defined by class attendance and participation in class discussions and other activities that suggest reading materials have indeed been read. Class participation will contribute 15% to final course grades. The instructors will record weekly each student’s class participation on a scale of “high”, “medium” or “low” to determine what proportion of the 15% the student will receive in the final grade. Unexcused absences will result in a “0” for that day’s participation points. Class activities may include group work and discussion, small writing assignments, and/or short quizzes. These assignments will contribute to your overall class participation grade. If you have an excused absence, you may still have to complete an in class or alternate assignment to receive full participation points for the class period you have missed.

**Grading Scale:**

All grades will be awarded based upon the percentage score earned. Because UW – Madison and UW – Stevens Point have different grading scales, grades will be assigned based upon the home campus of the student using the table below:

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| **UW – SP**  **Letter Grade** | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | F |
| **Percentage** | 100-92 | 91.9-90 | 89.9-88 | 87.9-82 | 81.9-80 | 79.9-78 | 77.9-72 | 71.9-70 | 69.9-68 | 67.9-60 | <60 |
| **UW – Madison Letter Grade** | A | A-B | | B | B-C | | C | C-D | | D | F |

**Academic Misconduct:**

This information is taken from “*Academic Misconduct Rules and Procedures Guide for Students”* prepared by the Office of the Dean of Students, 75 Bascom Hall (August, 1998). “*UWS 14.03 Academic Misconduct Subject to Disciplinary Action (I) Academic misconduct is an act in which a student:*

*(a) seeks to claim credit for the work or efforts of another without authorization or citation;*

*(b) uses unauthorized materials or fabricated data in any academic exercise;*

*(c) forges or falsifies academic documents or records;*

*(d) intentionally impedes or damages the academic work of others;*

*(e) engages in conduct aimed at making false representation of a student’s academic performance*

*(f) assists other students in any of these acts.”*

“Plagiarism means presenting the works or ideas of others without giving credit. You should know the principles of plagiarism and the correct rules for citing sources…If you are unsure about the proper ways to give credit to sources…consult the Writing Center.”

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison’s community of scholars in which everyone’s academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to https://www.students.wisc.edu/doso/academic-integrity/.

**Writing Center:**

The Writing Center on the Madison campus is located in 6171 Helen C. White Hall. The website is <http://www.wisc.edu/writing/>. See website for hours and locations. Telephone 263-1992. The Writing Center has several experienced instructors available to help students develop and organize ideas, offer constructive criticism and advice for revisions. The major purpose of The Writing Center is to teach students to be more effective writers. The Writing Center also offers information on how to accurately site resources.

## Course Accessibility and Accommodations:

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility.

Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations, as part of a student’s educational record is confidential and protected under FERPA.

Online information:

* Access and Accommodations Resource Coordinators
  + <http://www.wisc.edu/adac/facstaff/coord.html>
* Equity and Diversity Resource Center
  + <http://oed.wisc.edu/>
* Disability Resource Guide
  + <https://fpm-www3.fpm.wisc.edu/ada/Default.aspx>
* McBurney Disability Resource Center
  + <http://www.mcburney.wisc.edu/>
* Madison ADA Policies
  + <http://www.wisc.edu/adac>

## Religious Observances and Personal Emergencies:

This information is taken from a memo dated 7/22/2005 written by Peter Spear, Provost and Vice Chancellor for Academic Affairs, David Musolf, Secretary of the Faculty, and Lori Berquam, Interim Dean of Students. “*A listing, though not exhaustive, of religious holidays is available on the website:* [*http://www.interfaithcalendar.org*](http://www.interfaithcalendar.org)*. A student’s claim of a religious conflict should be accepted at face value. A great variety of valid claims exist for religious groups and there is no practical, dignified, and legal means to assess the validity of individual claims. State law mandates that any student with a conflict between an academic requirement and any religious observance must be given an alternative means of meeting the academic requirement. The law also stipulates that students be given a means by which the can conveniently and confidentially notify an instructor of the conflict…Three guidelines have been developed to provide clarity for both students and instructors: (1) Announce early in the semester that students may notify the instructor within the first two weeks of class of the specific days or dates on which he or she requests relief. Including this information on your course syllabus is another appropriate method to make sure your students are informed of the policy; (2) Make-ups may be scheduled before or after the regularly scheduled requirement; and (3) It is understood that instructors may set reasonable limits on the total number of days claimed by any one student.”*

**Canvas:**

You can log onto the Canvas site at canvas.wisc.edu or learnuw.wisc.edu. The majority of lectures will be available on the Modules section of Canvas. Additional readings for class will also be placed on this page. Please check the Announcements section for messages on a weekly basis. Note that most of the documents on Canvas are timed to become available automatically before each class. We will not email you when materials become available, it will be your responsibility to check. It will also be your responsibility to bring copies of the materials to class if you wish. Printed copies of the lectures will not be provided. If you have questions about how to access the site or any of its components, please email the instructors.

**2017 SCHEDULE: (subject to change)**

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| Date | **Topic** | **Reading Assignment (due before class)** |
| **UNIT I: Embryology and Genetics** | | |
| W:01/18 | Introduction to CS&D 832 – Pediatric Audiology  Embryology for Audiologists  Jon Douglas, Au.D. | - Hearing Development – Embryology of the Ear (Canvas)  - Embryologic Chart (Canvas) |
| M:01/23 | Embryology for Audiologists: Abnormalities  Jon Douglas, Au.D. |  |
| W:01/25 | Genetics for Audiologists  Jon Douglas, Au.D. | - Basic Concepts in Genetics (Canvas) |
| M:1/30 | Genetics for Audiologists  Jon Douglas, Au.D. |  |
| **UNIT I Quiz: Due Sunday, February 5th at 10pm CST** | | |
| **UNIT II: Causes of Childhood Hearing Loss** | | |
| W:02/01 | Genetics and Hearing Loss - nonsyndromic  Jon Douglas, Au.D. | - Madell & Flexer, Chapter 3  - Genetics of Hearing Loss (Canvas) |
| M:02/06 | Genetics and Hearing Loss – non-syndromic & syndromic  Jon C. Douglas, Au.D | - Guidelines for Audiologists on the Benefits and Limitations of Genetic Testing (Canvas) |
| W:02/08 | Genetics and Hearing Loss – non-syndromic & syndromic  Causes of Childhood Hearing Loss: Environmental Factors  Jon C. Douglas, Au.D | - Madell & Flexer, Chapter 2, 4, &12 |
| M:02/13 | Causes of childhood hearing loss: Environmental factors  Jon C. Douglas, Au.D. |  |
| W:02/15 | Causes of childhood hearing loss: Environmental factors  Jon C. Douglas, Au.D. |  |
| **UNIT II Quiz: Due Sunday, February 19th at 10pm CST** | | |
| **UNIT III: Pediatric Hearing Assessment** | | |
| M:02/20 | Developmental Milestones  Pediatric Case History  Jon C. Douglas, Au.D.  Amy Hartman, Au.D. | - Madell & Flexer, Chapter 1  - Milestone Moments (Canvas)  - Katz, Chapter 23  - Katz, Chapter 29  - Madell and Flexer, Chapters 6, 7, 8, & 14 |
| W:02/22 | Pediatric Case History  Behavioral evaluations – BO & VRA  Jon C. Douglas, Au.D.  Amy Hartman, Au.D. | - Madell and Flexer, Chapters 9, 10, & 11  - Guidelines for the Audiologic Assessment of Children, ASHA (Canvas)  - Audiologic Guidelines for the Assessment of Hearing in Infants and Young Children, 2013 (Canvas) |
| M:02/27 | NO CLASS - EHDI, Work on VRA Lab |  |
| W:03/01 | Behavioral evaluations  Amy Hartman, Au.D. | - Guidelines for Audiologic Screening (Canvas) |
| M:03/06 | Behavioral evaluations  Amy Hartman, Au.D. |  |
| W: 03/08 | Clinical Applications of Electrophysiology with Children  Amy Hartman, Au.D. | - Madell and Flexer, Chapter 12, 13, 15  - Katz, Chapter 14 |
| **Unit III Quiz: Due Sunday, March 12th** | | |
| **Unit IV: Communication Opportunities and Recommendations** | | |
| M: 03/13 | Clinical Applications of Electrophysiology with Children  Amy Hartman, Au.D. |  |
| W: 03/15 | Early Intervention & Newborn Hearing Screening  Amy Hartman, Au.D. | - Madell and Flexer, Chapters 5 & 27  - NIH Consensus Statement (Canvas)  - NIH Healthy People, 2010 (Canvas)  - JCIH 2007 Position Statement (Canvas)  - Supplement to the JCIH 2007 Position Statement (Canvas) |
| 03/20 03/22 | **Spring Break** | |
| **Unit V: EHDI** | | |
| M:03/27 | Communication Opportunities  Jon C. Douglas, Au.D. | - Madell and Flexer, Chapter 26, 28, 29, 30,  - Wisconsin Sound Beginnings  - Special Education Eligibility  - WESP-DHH  - Wisconsin School for the Deaf  - Wisconsin Hands and Voices |
| **Unit IV & V Quiz: Due Sunday, April 2nd** | | |
| **Unit VI: Special Considerations** | | |
| W:03/29 | Special Considerations: ANSD  Jon C. Douglas, Au.D. | - Guidelines for Auditory Neuropathy (Canvas) |
| M:04/3 | Special Considerations: CAPD  Amy Hartman, Au.D. | - ASHA, 2005  - Madell and Flexer, Chapter 16  - Geffner, D. & Ross-Swain, D., 2007,  Chapters 1,2 and 3  - Bellis, 2003, Chapter 4 |
| W:04/5 | NO CLASS – AudiologyNOW, Work on CAPD Lab |  |
| M:04/10 | Special Considerations: CAPD  Amy Hartman, Au.D. | - Geffner, D. & Ross-Swain, D., 2007,  Chapter 4  - Bellis, 2003, Chapters 5, 6 and 7 |
| W:04/12 | Special Considerations: CAPD  Amy Hartman, Au.D. | Unilateral Hearing Loss, Best Practice Guidelines, 2011 (Canvas) |
| M: 04/17 | Special Considerations: Mild and Unilateral Hearing Loss  Amy Hartman, Au.D. | Unilateral Hearing Loss, Best Practice Guidelines, 2011 (Canvas) |
| **Unit VI Quiz: Due Sunday, April 23rd** | | |
| W: 04/19 | Case Study Presentations |  |
| M:04/24 | Case Study Presentations |  |
| W:04/26 | Case Study Presentations |  |
| M:05/01 | Case Study Presentations & Wrap Up/Final Prep |  |
| W:05/04 | **FINAL EXAM** |  |

**KASA Statements associated with CS&D 832:**

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|  | **Knowledge Area** | **Type of Documentation/**  **Experience** |
| A1. | Embryology and development of the auditory and vestibular systems, anatomy and physiology, neuroanatomy and neurophysiology, and pathophysiology. | Exam |
| A2. | Genetics and associated syndromes related to hearing and balance. | Exam |
| A3. | Normal aspects of auditory physiology and behavior over the lifespan. | Exam |
| A4. | Normal development of speech and language. | Exam |
| A5. | Language and speech characteristics and their development across the life span. | Exam |
| A9. | Patient characteristics (e.g., age, demographics, cultural and linguistic diversity, medical history and status, cognitive status, and physical and sensory abilities) and how they relate to clinical services. | Exam, presentation |
| A10. | Pathologies related to hearing and balance and their medical diagnosis and treatment. | Exam |
| A12. | Principles, methods, and applications of psychoacoustics. | Exam |
| A16. | Effects of cultural diversity and family systems on professional practice. | Exam |
| A26. | Principles and applications of counseling. | Exam, presentation |
| A29. | Consultation with professionals in related and/or allied service areas. | Exam, presentation |
| B1. | Implement activities that prevent and identify dysfunction in hearing and communication, balance, and other auditory-related systems. | Exam |
| B4. | Screen individuals for speech and language impairments and other factors affecting communication function using clinically appropriate, culturally sensitive and age-and site-specific screening measures. | Exam |
| C3. | Evaluating information from appropriate sources and obtaining a case history to facilitate assessment planning. | Exam, presentation |
| C5. | Conducting and interpreting behavioral and/or electrophysiologic methods to assess hearing thresholds and auditory neural function. | Exam, presentation |
| C7. | Conducting and interpreting otoacoustic emissions and acoustic immitance (reflexes). | Exam |
| C8. | Evaluating auditory-related processing disorders. | Exam, lab |
| C9. | Evaluating functional use of hearing. | Exam |
| C11. | Referring to other professionals, agencies, and/or consumer organizations. | Exam, presentation |
| D12. | Interpret results of the evaluation to establish type and severity of disorder. | Exam |