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CSD 222.50: Introduction to Audiology

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CSD 222: Introduction to Audiology

Spring 2023 | 3 credits | Online Only | CRN 32713

Contact Information

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Virtual Appointments: Please schedule

Course Catalogue Description

CSD 222 – Introduction to the principles of acoustics as a basis for understanding hearing assessment. Development of ability to interpret audiograms as well as the results from a hearing evaluation. Includes pure, tone audiometry, speech audiometry, acoustic immittance and acoustic reflex testing. Hearing screening procedures are also included.

Course Format

This course is offered in an online/web-based format. The course content is divided into weeks. Each week invites active student engagement in several types of activities, including reflecting on the readings and lectures, engaging in discussions, and completing individual assignments.

Important. Due to the compressed format and fast-paced online learning environment, fully online SLHOS courses do not follow the traditional on-campus UM academic calendar. Students are responsible for all deadlines described in individual course syllabi and course calendars. Please note Registration Deadlines for Add/Drop/Change Credit Grading for this course follows a separate Session Deadline Chart for the specific 8 Week Session I or Session II in which this course is scheduled. Session Deadline Charts are available on the [Office of the Registrar's Calendar link](#) for Spring 2023. Contact 406-243-5600 or email: registration@umontana.edu for more information.

Course Objectives

Meets the following requirements for ASHA Certification in Speech-Language Pathology and Audiology:

- III-B - Demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases.
- III-C – Demonstrate knowledge of the nature of speech, language, hearing, and communication disorders and differences and swallowing disorders, including their etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates.
- III-D - Possess knowledge of the principles and methods of prevention, assessment, and intervention for people with communication and swallowing disorders, including consideration of anatomical/physiological, psychological, developmental, and linguistic and cultural correlates of the disorders).

Upon successful completion of this course, students will be able to:

1. Describe the physical and psychological properties of sound (III-B)
2. Recall basic anatomy and physiology of the auditory system (III-B)
3. Identify basic diagnostic and screening procedures of the auditory mechanism (III-D)
4. Perform basic audiometric tests in a virtual environment (III-D)

5. Interpret basic audiometric test findings (III-C, III-D)
6. Identify site-of-lesion and specialty tests in audiology (III-D)
7. Recognize common auditory (and related) disorders (III-C)
8. Discuss basic approaches to managing auditory (and related) disorders (III-D)

Course Guidelines and Policies

Proctor Application

No proctor will be required for this course as assignments and exams will be in the form of timed exams on Moodle and essay-type papers.

Required Textbook

The text is offered in digital format (listed below). This text is easily accessible online and can also be found on Amazon.

Martin, Frederick N., Clark, John Greer. *Introduction to Audiology (13th ed.)*, Pearson, Boston. 2019
ISBN-13: 0134695046
ISBN: 9780134695044

Required readings and materials will be posted throughout the term on the course website (Moodle). In addition, several sessions will involve interaction with media. Please follow the detailed course information that will be released each week on Moodle.

Virtual Audiometer

A virtual audiometer simulator is available on the audsim.com website. This simulator offers ample opportunity for practice and guidance to build student confidence with this skill. Using the simulator is encouraged *but not required*. Additional information is available on Moodle regarding the simulator.

Assignment Submission Format

All written assignments must be submitted in either Word or .pdf format. This will allow for instructor feedback directly in the document for student review. References should be formatted in accordance with the Publication Manual of the American Psychological Association.

Absences

Students must notify Dr. Drescher of serious circumstances that result in a missed exam or final to be considered for rescheduling. Should an unforeseen event such as hospitalization or family emergency result in missing an exam, students must consult with Dr. Drescher regarding possible accommodations to be determined at the discretion of the instructor; furthermore, students may be asked to provide written verification of the circumstances.

Late assignments

Work submitted late will result in the reduction of 5 points *per day* the assignment is late. Students are encouraged to turn assignments in on-time.

Academic Honesty

Students are expected to adhere to academic conduct policies of the University of Montana as explained in Section V of your [University of Montana Student Conduct Code](#): "Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. Academic misconduct is defined as all forms of academic dishonesty, including but not limited to: (1) plagiarism, (2) misconduct during an examination or academic exercise, (3) unauthorized possession of examination or other course materials, (4) tampering with course materials, (5) submitting false information, (6) submitting work previously presented in another course, (7) improperly influencing conduct, (8) substituting, or arranging substitution, for another student during an examination or other academic exercise, (9) facilitating academic dishonesty, and (10) Altering transcripts, grades, examinations, or other academically related documents."

Plagiarism

Plagiarism is further defined in the University of Montana's Student Conduct Code as "Representing another person's words, ideas, data, or materials as one's own." Students must acknowledge the work of others using appropriate referencing procedures as described in the APA Manual. Students may be penalized for plagiarism under academic misconduct policies, which may include disciplinary sanctions, suspension, or expulsion.

Course Grading Procedures

Please review the following table for details about the course assessment information for CSD222. Additional details are given below.

Contribution to Course Grade	Assessment Item	Description of Assessment Item	Due Date
10 points	Audiology as a Profession – discussion forum	Post an original, thoughtful response to the discussion question in the forum. Interact with classmates' responses in the forum.	Due by 1/22 (11:59pm)
20 points	Properties of Sound / Anatomy & Physiology – discussion forum	Post an original, thoughtful response to the discussion question in the forum. Interact with classmates' responses in the forum.	Due by 1/29 (11:59pm)
100 points	Exam #1	Weeks 1 – 3 Content	Due by 2/5 (11:59pm)
10 points	Basic Assessment / Immittance – discussion forum	Post an original, thoughtful response to the discussion question in the forum. Interact with classmates' responses in the forum.	Due by 2/12 (11:59pm)
100 points	Pathologies Literature Review	Select a pathology that causes hearing loss. Investigate this pathology (etiology, prevalence, incidence, hearing loss and treatment), cite at least two peer reviewed journal articles in a 3-page review of the pathology.	Due by 2/12 (11:59pm)
10 points	Special Populations / Infant Screening - discussion forum	Post an original, thoughtful response to the discussion question in the forum. Interact with classmates' responses in the forum.	Due by 2/19 (11:59pm)
100 points	Exam #2	Weeks 4 – 6 Content	Due by 2/26 (11:59pm)
20 points	Advanced Assessment / Auditory Processing Disorder / Vestibular Assessment – discussion forum	Post an original, thoughtful response to the discussion question in the forum. Interact with classmates' responses in the forum.	Due by 3/5 (11:59pm)
100 points	Rehabilitation Literature Review	Select and investigate at least two treatments for hearing loss to compare and contrast. Discuss the effectiveness, current trends, and factors that contribute to the success or failure of each. Cite at least one peer reviewed journal article in a 3 – 5 page review of these treatments.	Due by 3/12 (11:59pm)
100 points	Exam #3	Weeks 7 – 8 Content	Due by 3/12 (11:59pm)
30 points	Participation	Synchronous, active participation in discussion forums is expected of all students.	Throughout course

Examinations: Exams will be based on materials from videos, course materials, websites, readings, and assignments. Exams will be timed and will be in the form of true/false, multiple choice and short answer questions.

Literature Review: To gain a better understanding of the material, each student will submit two journal review papers. The papers will cover two separate main topics: (1) pathologies of the hearing system and (2) rehabilitation of hearing loss. Beyond that, the student can choose the subtopic most interesting to him/her. Each paper will be 3 – 5 pages and will cite at least one peer reviewed journal. Further details are posted on Moodle.

Participation: Students are expected to participate in forums, discussions, written responses, and virtual activities. These activities will occur throughout the term, will be embedded in the course content, and will be *graded based on the quality of the submissions*.

Each student must post *a minimum* of one quality submission in the forum in the form of an answer to the topic question posed by the instructor (not all topics will have a forum). The submission *MUST* occur in the week the topic is assigned (prior to midnight on the SUNDAY of that week). Late submissions will not be given full credit as they do not further the discussion and do not allow other students to benefit from group insights. Students must also participate in the discussions posted by other students.

Participation in the discussion forums will be graded based on the quality, thoughtfulness, and overall contribution to the discussion. One-word responses and “cheerleading” (such as “good job”, “nice work”, etc.) are NOT considered to be a quality contribution and will not be given credit. Thoughtful interactions and discussion of the topic are helpful and will contribute to full participation credit.

For grading purposes, I will use a 10-point scale to determine the quality of your response, with 10 being the highest. Posts that clearly indicate an understanding of the material or provide additional information (such as links to articles or videos) which further students’ learning opportunities will earn the highest points. Your overall participation grade will be split as follows: 70% determined by your original posts to the discussion question and 30% determined by your interaction with others in the forum.

Grading Criteria

Students may earn a total of 600 points from exams, assignments, and participation. Rubrics accompany the assignment descriptions on Moodle. The grading scale is as follows:

- A 93% or higher
- A- 90-92%
- B+ 87-89%
- B 83-86%
- B- 80-82%
- C+ 77-79%
- C 73-76%
- C- 70-72%
- D+ 67-69%
- D 63-66%
- D- 60-62%
- F 59% or lower

Calendar

Please see the following table for an overview of course sessions, topics, and deadlines. Assignments, exams and papers will be due no later than midnight **MOUNTAIN TIME** on the SUNDAY of the week they are listed.

CSD 222 Spring 2023: Tentative Class Calendar is subject to change as needed.

Week	Dates	Topic and Readings	Assignments & Due Dates
01	1/16/23 – 1/22/23	<p>Content:</p> <ul style="list-style-type: none"> • Course Introduction • Introduction to the Profession of Audiology <p>Reading: Martin & Clark Chapter 1: The Profession of Audiology</p>	<p>Discussion Forum #1</p> <p>Due 1/22 by 11:59pm</p>
02	1/23/23 – 1/29/23	<p>Content:</p> <ul style="list-style-type: none"> • Properties of Sound • Anatomy & Physiology <p>Readings:</p> <ul style="list-style-type: none"> • Martin & Clark Chapter 2: Sound and Its Measurement • Martin & Clark Chapter 3.1: Basics of How the Ear Works and the Hearing Losses that May Disrupt Sound Reception 	<p>Discussion Forum #2</p> <p>Due 1/29 by 11:59pm</p>
03	1/30/23 – 2/5/23	<p>Content:</p> <ul style="list-style-type: none"> • Hearing Loss • Common Pathologies <p>Readings:</p> <ul style="list-style-type: none"> • Martin & Clark Chapter 8: The Outer Ear • Martin & Clark Chapter 9: The Middle Ear • Martin & Clark Chapter 10: The Inner Ear 	<p>EXAM #1</p> <p>Due 2/5 by 11:59pm</p>
04	2/6/23 – 2/12/23	<p>Content:</p> <ul style="list-style-type: none"> • Basic Assessment • Immittance <p>Readings:</p> <ul style="list-style-type: none"> • Martin & Clark Chapter 3.2: Testing Hearing • Martin & Clark Chapter 3.3: Air and Bone Conduction Hearing Tests • Martin & Clark Chapter 4: Speech Audiometry • Martin & Clark Chapter 6.1: Acoustic Immittance 	<p>Discussion Forum #3 & Pathologies Lit Review</p> <p>Due by 2/12 at 11:59pm</p>
05	2/13/23 – 2/19/23	<p>Content:</p> <ul style="list-style-type: none"> • Special Populations • Infant Screening <p>Readings:</p> <ul style="list-style-type: none"> • Martin & Clark Chapter 7: Pediatric Hearing Loss Identification and Assessment • Martin & Clark Chapter 12: Nonorganic Hearing Loss 	<p>Discussion Forum #4</p> <p>Due by 2/19 at 11:59pm</p>
06	2/20/23 – 2/26/23	<p>Content:</p> <ul style="list-style-type: none"> • Interpretation <p>Readings: None required</p>	<p>EXAM #2</p> <p>Due by 2/26 at 11:59pm</p>
07	2/27/23 – 3/5/23	<p>Content:</p> <ul style="list-style-type: none"> • Advanced Assessment • Auditory Processing Disorder • Vestibular Assessment <p>Readings:</p> <ul style="list-style-type: none"> • Martin & Clark Chapter 11: The Auditory Nerve and Central Auditory Pathways • Martin & Clark Chapter 13.1: Disturbances of Balance 	<p>Discussion Forum #5</p> <p>Due by 3/5 at 11:59pm</p>
08	3/6/23 – 3/12/23	<p>Content:</p> <ul style="list-style-type: none"> • Tinnitus • Management Basics <p>Readings:</p> <ul style="list-style-type: none"> • Martin & Clark Chapter 13.2: Tinnitus and Its Management • Martin & Clark Chapter 14.2: Types of Hearing Aids • Martin & Clark Chapter 14.3: Implantable Hearing Assistance 	<p>EXAM #3 & Rehabilitation Lit Review</p> <p>Due 3/12 by 11:59pm</p>

Student Resources

Please see the course Moodle shell for a list of campus resources available to help students be successful across UM courses. UM provides a wide range of supports for tutoring, financial, and personal development.

Place of Course in Program

Purpose

The purpose of this three-credit course is to provide students with a working knowledge of the profession of audiology. This includes common test practices and treatment options. The students will be able to understand the hearing mechanism, various types of hearing loss and will be able to interpret basic auditory tests. Students will have the option to perform simulated audiograms using the virtual audiometer. The course fulfills the introduction to audiology course requirement for a major in Communicative Sciences and Disorders.

Conceptual Framework for Learning Community and Diversity

As part of the Phyllis J. Washington College of Education and Human Sciences, this course provides a) lectures and materials that outline the profession of audiology, b) information and assignments that will allow you to integrate your understanding of the hearing mechanism with pathologies of hearing loss, c) assignments that foster your confidence with interpretation of basic audiologic tests, d) forums and discussions will allow you to cooperate with your colleagues regarding course topics. Additional information is available regarding our [Conceptual Framework](#).

Mission of Communicative Sciences and Disorders Program

The mission of the Department of Communicative Sciences and Disorders is to prepare students for progressive, collaborative, and research-minded careers in speech-language pathology, audiology, and related fields through rigorous academic and clinical training. We strive to be innovative in the use of technology and program delivery to provide services to traditionally underserved regions and populations. Through our emphasis on typical and atypical speech, language, cognition, swallowing, and hearing function, students gain knowledge and skills along with ethical and culturally competent values that foster a commitment to lifelong learning and civic engagement.

The University of Montana acknowledges that we are in the aboriginal territories of the Salish and Kalispel people, a number of whom are within our community today. Today, we honor the path they have always shown us in caring for this place for the generations to come.