

Course Syllabus

SPAU 3341 Audiology

Course Information

Course Number: SPAU 3341
Course Title: Audiology
Section: 001
Term: Spring 2019
Days & Times: Fridays 9:00 – 11:45 am
Location: Callier Richardson (CRA) Room 12.110

Instructor Contact Information

Professor: Scott K. Griffiths, Ph.D. 214 905-3176
e-mail: scott.griffiths@utdallas.edu
Office: Callier Dallas, Room J-221

Office Hours: Fridays 1:00 to 3:00 pm (office TBD)

Teaching Assistant Contact Information

Teaching Assistant: Kathryn Wiseman, AuD
e-mail: kathryn.wiseman@utdallas.edu
Office Hours: TBA

Course Description

This course focuses on basic acoustics and physics of sound, instrumentation and description of calibration standards for audiology practice, development and application of standard diagnostic audiology procedures, and administration and interpretation of standard audiometric tests.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Previous instruction on basic anatomy and physiology of the auditory system and introduction to hearing and speech sciences is strongly encouraged but not required before taking this course.

Student Learning Objectives/Outcomes:

This course has been designed to allow students completing it to demonstrate required knowledge and skill as outlined by the Council on Academic Accreditation. Specific knowledge and skills supported by this course include:

3.1.2A Foundations of Audiology Practice:

- Anatomy and physiology of the auditory and vestibular systems
- Normal aspects of auditory and vestibular function across the lifespan
- Effects and role of genetics in auditory function, diagnosis, and management of hearing loss effects and role of genetics in vestibular function, diagnosis, and management of vestibular disorders
- Effects of pathophysiology on the auditory, vestibular, and related body systems
- Medical and surgical interventions that may be used to treat the results of pathophysiology in these systems
- Effects of hearing loss on the speech and language characteristics of individuals across the life span and the continuum of care

- Effects of hearing impairment on educational, vocational, social, and psychological function and, consequently, on full and active participation in life activities
- Physical characteristics and measurement of simple and complex acoustic stimuli
- Physical characteristics and measurement of non-acoustic stimuli (e.g., EEG, tactile, electrical signals)
- Methods of biologic, acoustic, and electroacoustic calibration of clinical equipment to ensure compliance with current American National Standards Institute (ANSI) standards (where available) and other recommendations regarding equipment function
- Principles of psychoacoustics as related to auditory perception in individuals with normal hearing and those with hearing loss

3.1.3A Identification and prevention of hearing loss, tinnitus, and vestibular disorders

- Use of screening protocols, including clinically appropriate and culturally sensitive screening measures, to assess individuals who may be at risk for hearing impairment and activity limitation or participation restriction
- Application of psychometrics and principles of screening

In this course, students will also be able to:

3.1.4A Assessment of the structure and function of the auditory and vestibular systems

- Obtain an audiologic case history
- Perform an audiologic assessment using behavioral and physiological procedures (e.g., audiogram) on a volunteer.
- Document evaluation procedures and results

This course will address the following standards as outlined by the American-Speech-Language- Hearing Association Certification Standards (ASHA, 2012):

Standard IV-A: Foundations of Practice

- A1. Embryology and development of the auditory and vestibular systems, anatomy and physiology, neuroanatomy and neurophysiology, and pathophysiology.
- A2. Genetics and associated syndromes related to hearing and balance.
- A3. Normal aspects of auditory physiology and behavior over the life span.
- A4. Normal development of speech and language.
- A5. Language and speech characteristics and their development across the life span.
- A7. Effects of hearing loss on communication and educational, vocational, social and psychological functioning.
- A8. Effects of pharmacologic and teratogenic agents on the auditory and vestibular systems.
- 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.
- A10. Pathologies related to hearing and balance and their medical diagnosis and treatment.
- A14. Physical characteristics and measurement of electric and other nonacoustic stimuli.
- A21. Universal precautions and infectious/contagious diseases.
- A23. Principles, methods, and applications of acoustics (e.g., basic parameters of sound, principles of acoustics as related to speech sounds., sound/noise measurement and analysis, and calibration of audiometric equipment), as applicable to: a. Occupational and industrial environments, b. Community noise, c. Classroom and other educational environments, and d. Workplace environments.

Standard IV-B: Prevention and Identification

- B1. Implement activities that prevent and identify dysfunction in hearing and communication, balance, and other auditory-related systems.
- B2. Promote hearing wellness, as well as the prevention of hearing loss and protection of hearing function by designing, implementing, and coordinating universal newborn hearing screening, school screening, community hearing, and occupational conservation and identification programs.
- B3. Screen individuals for hearing impairment and disability/handicap using clinically appropriate, culturally sensitive, and age- and site-specific screening measures.

Standard IV-C: Assessment

- C3. Evaluating information from appropriate sources and obtaining a case history to facilitate assessment planning.
- C4. Performing otoscopy for appropriate audiological assessment/management decisions, determining the need for cerumen removal, and providing a basis for medical referral.
- C5. Conducting and interpreting behavioral and/or Electrophysiologic methods to assess hearing thresholds and auditory neural function.
- C10. Preparing a report, including interpreting data, summarizing findings, generating recommendations, and developing an audiologic treatment/management plan.
- C11. Referring to other professions, agencies, and/or consumer organizations.

Standard IV-D: Intervention (Treatment)

- D1. The provision of intervention services (treatment) to individuals with hearing loss, balance disorders, and other auditory dysfunction that compromises receptive and expressive communication.
- D2. Development of a culturally appropriate, audiologic rehabilitative management plan that includes, when appropriate, the following:
 - Counseling related to psychosocial aspects of hearing loss and other auditory dysfunction, and processes to enhance communication competence.
- D7. Evaluation of the efficacy of intervention (treatment) services.

Required Textbooks and Materials

Introduction to Audiology: 13th edition. (2019). Authors: Frederick N. Martin; John Greer Clark. Pearson. ISBN-13: 9780133491463

**Announcements and class lecture notes will be provided to enrolled students through their UTD email address and/or through the UTD eLearning website. Students may choose to print out PowerPoint handouts as copies will not be provided.

ASSIGNMENTS & COURSE CALENDAR

(These descriptions and timelines are subject to change at the discretion of the instructor.)

Date	Topic/Module	Readings/Events
1/18/19	Course Overview, The Profession of Audiology Sound and its Measurement (Acoustics, Psychoacoustics)	Syllabus M&C Chs 1 & 2
1/25/19	Pathways of Sound; Simple Tests of Hearing; Normal A&P	M&C Chs 3.1-3.2; 8.1; 9.1

2/1/19	Normal Anatomy and Physiology of the Ear (continued) Otoscopy & Pure-Tone Audiometry	M&C Chs 10.1, 11.1 & 3.3 to end
2/8/19	Exam I and introduction to the assignment	
2/15/19	Speech Audiometry	M&C Ch 4
2/22/19	Cross Hearing, Masking (pure tones)	M&C Ch 5.1
3/1/19	Cross Hearing (speech)	M&C Ch 5.2
3/8/19	Middle-ear assessment (immittance); Exam II Review	M&C Ch 6.1
3/15/19	Exam II	
3/22/19	Spring Break – No Class	No Class
3/29/19	AAA Convention: Recorded Lecture on OAEs & EPs	M&C Ch 6.2-6.3
4/5/18	Nonorganic Hearing Loss	M&C Ch 12
4/12/19	Pediatric Assessment Auditory Processing Disorders (Diagnosis/Treatment)	M&C Ch 7; Ch 11.2-11.3
4/19/19	Hearing Disorders and Audiological Outcomes	M&C Ch 8.2; 9.2; 10.2; 11.2
4/26/19	Tinnitus, Amplification Systems; Treatment	M&C Ch 13; 14; 15
5/3/19	Exam III	
	Final Exam – Time TBD (from 5/6 to 5/11/19)	Final Comprehensive Exam

Exams: Three standard exams and an optional comprehensive final exam will be given. Each exam will consist of matching, multiple choice, fill-in-the-blank, and/or short answer questions.

Student Assignment: Each student will be asked to complete a case history and pure-tone audiogram (air conduction/bone conduction) on one volunteer. Further detail on this assignment will be available on the e-learning site starting 2/8/19.

Grading Policies

Acquired knowledge will be assessed via four (3 regular; 1 final) exams and course assignment. All information will be presented in lectures and course readings. Knowledge will be applied and skills demonstrated via performance on exams and performance on a course assignment.

1. 90% of the Final Grade in the course will be determined by the average of three standard exams (Exam I, Exam II, and Exam III). The comprehensive Final exam is optional. If the student is satisfied with their average for the three standard exams, the student may elect not to take the final exam. The score received on the Final Exam, if taken, will replace the lowest grade received on one of the standard exams (if the score on the Final is better).

If a student is unable to attend any examination, the student must alert Dr. Griffiths immediately, and no later than 24 hours after the scheduled exam to request a make-up exam. Only excused absences due to documented sickness or approved University business will qualify for a make-up on any exam. Students are encouraged to not make “plans” after the semester until the Final Exam scheduled has been posted. If the student is unsure as to whether or not their absence will be excused, the student should discuss the situation with Dr. Griffiths in advance of the exam. Any student who arrives late for an exam, and an exam has already been turned in, that student will not be allowed to take the exam and will receive a score of zero (0).

2. 10% of the Final Grade in the course will be determined by score received on the student assignment. The assignment will be worth 100 points, and graded according to completeness and accuracy. No late work will be accepted. This assignment is due on or before 4:00 pm on Friday, 4/26/2019.

Grading System: Final grade for the course will be as follows:

Total Score of 94.0 – 100 =A
Total Score of 90.0 – 93.9 =A-
Total Score of 87.0 – 89.9 =B+
Total Score of 84.0 – 86.9 =B
Total Score of 80.0 – 83.9 =B-
Total Score of 77.0 – 79.9 =C+
Total Score of 74.0 – 76.9 =C
Total Score of 70.0 – 73.9 =C-
Total Score of 67.0 – 69.9 =D+
Total Score of 64.0 – 66.9 =D
Total Score of 60.0 – 63.9 =D-
Total Score of below 60 =F

Course & Instructor Policies

Because of the nature of this course, class participation is an essential aspect of the learning experience. Your attendance and participation in discussion is strongly recommended. Attendance will be taken at random class meetings. While class attendance is not factored into the overall course grades, it will be relevant to any subsequent request for a letter of recommendation.

Each student will be responsible for maintaining their own lecture notes and materials. Class will start promptly! Please make efforts to be on time. Please silence all cell phones.

Disruptive class behavior will be evaluated and may impact the course grade. In such instances, students will be notified in writing.

Potential Conflicts with examination dates should be discussed with the instructor in the first week of class.

Use of laptop computers during lecture is allowed; however, please refrain from using these for any non-class activities during class time. If you are found doing so, you will be asked to leave the class for that day.

Extra Credit No extra credit will be given in the course.

Field Trip Policies No field trips are anticipated.

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook*

of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures.*

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate

or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22
PO Box 830688