

## ***Course Syllabus***

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### **Course Information**

*Course Number/Section* AUD7338  
*Course Title* Research in Audiology

*Term* Fall 2016  
Thursday 3:30 p.m – 6:15 p.m.  
*Location: Class/* Callier Richardson – CR 1.212

### **Professor Contact Information**

*Professor* Carol Cokely, PhD  
*Teaching Assistant* Delaney Evans  
*Office Phone* 214-905-3125  
*Other Phone* 214-905-3116 (Dept Sec'y)  
*Email Address* cokely@utdallas.edu  
*Office Location* J208  
*Office Hours* CC: Tuesday 1-3 or by appointment  
DW: by appointment

### **Course Description**

This course will present students the basic principles for evaluating research in audiology so they can become critical consumers of the field's research, a necessary precursor to doing research. Course structure includes didactic lecture, journal-article review, data-analysis, and small-group activities. Assessment of learning outcomes will, in part, be assessed by participation in class discussion.

### **Student Learning Objectives/Outcomes**

1. Students will identify factors underlying the importance of understanding research for effective clinical practice;
2. Students will evaluate research questions, rationale, strategies and threats to the reliability and validity of scientific research;
3. Students will analyze and interpret research data, including central tendencies, causal relationships, group differences, effect size and power;
4. Students will evaluate and write the various components of a research article: introduction, method, results and discussion.

ASHA Standards 2011:

A18. Principles and practices of research, including experimental design, statistical methods, and application to clinical populations

F2. Applying research findings in the provision of patient care (evidence-based practice)

F3. Critically evaluating and appropriately implementing new techniques and technologies supported by research-based evidence

### **Required Textbooks and Readings**

*Required Texts:*

Orlikoff, R.F., Schiavetti, N. and Metz, D.E. (2015). *Evaluating Research in Communication Disorders*, 7<sup>th</sup> edition. Pearson: Boston . [referred to in syllabus as OSM]

Urdan, T.C. (2010). *Statistics in Plain English*, 3<sup>rd</sup> edition. Routledge, Taylor & Francis Group: New York.

### *Readings*

Journal articles used for class discussion will be available on K drive/e-learning one week prior to class date.

### **Projected Assignments & Academic Calendar:**

<b>Date</b>	<b>Topic</b>	<b>Reading</b>
Week 1 Aug 25	Review of course Levels of evidence Evaluating evidence	Dr. Le Prell: Dollahan; Meline & Paradiso; Moodie, et al; Nail-Chiwetalu & Bernstein Ratner Nelson: CH. 4
Week 2 Sept 1	Research questions/Introduction Section Research Strategy: variable schemes	OSM Ch. 2, 3
Week 3 Sept. 8	Research Strategy: Experimental/Descriptive Variable Schemes Experimental/Descriptive research	OSM Ch. 3 Urdan Ch. 1
Week 4 Sept 15	Central tendencies, dispersion measures Descriptive statistics In-class data analysis	Urdan Ch 2, 3 OSM Ch 7, 282-293
Week 5 Sept 22	The IRB Research Ethics	UTD Office of Research Compliance TBD
Week 6 Sept, 29	Research design Levels of measurement Reliability & Validity The Methods Section	OSM Ch. 4,5, 6
<i>Intro Section due: Sept. 26</i>		
Week 7 Oct 6	The peer review process in publication Normal distribution Hypothesis testing	Dr. Roeser OSM Ch. 7 298-300, Urdan Ch. 4, 5, 6, 7
Week 8,9 Oct 13, 20,	Analyzing relationships $r$ , $r^2$ , regression In-class data analysis	OSM Ch 7, 13 Urdan Ch. 8
<i>Methods Section due: Oct 17</i>		
Week 10	Analyzing Differences	OSM Ch. 8

Oct 27	t-test, ANOVA In-class data analysis Effect Size Power Analysis	Urdan Ch. 9, 10, 11, 12,  OSM Ch. 8 360-367
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Week 11 Nov 3	Examination
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Week 12,13 Nov 10, 17	The Results Section Analyzing relationships & Differences In-class data analysis The Discussion Section	OSM Ch 7, 8, 9
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Nov 14	<i>Planned statistical analysis &amp; Discussion sections due</i>
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Week 14 Nov. 24	No Class – Happy Thanksgiving
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Dec 1 Week 15	Work on final project/paper
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Dec 8 Week 16	Instructor available for review
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Dec 12	Final paper due
Dec 15	Final project due

**Grading Policy – total 1000 points**

In-class examination	300*
Written article, APA format	300
Take home research/data analysis –	350
Journal article review	50

\*In-class examination: Students earning less than 80 % are required to take a supplemental examination and achieve 80 % or greater by the last day of class and prior to turning in the final project. Failure to achieve 80 % on the supplemental examination by the last day of class will result in an incomplete. Any student who takes the supplemental examination may earn up to 1/3 of the points missed on the examination, and the adjusted maximum score will not exceed one full letter grade above the original score.

Participation in class discussions and activities are expected. Participation includes answering questions posed by instructor or other students, asking pertinent questions, and making pertinent comments. Students who do not contribute to class over 2 or more class meetings will be contacted by instructor in an attempt to improve student's performance in this area. Students who fail to participate will receive a deduction of up to 50 points of the total number of points earned for the semester.

- A 90 – 100 %

- B 80 - 89.9 %
- C 70 - 79.9 %
- F <70 %

## Course Policies

### *Course Grade Policies*

Per the AuD program handbook, C grades (including C+ or poorer) do not demonstrate adequate competency in the topic area and remediation or repetition of the course will be required; remediation/repetition plans require programmatic approval. Remediation of content does not result in a grade change for the course; the only way to have a course grade changed on your transcript is to repeat the course. You may be required to repeat coursework if your GPA does not meet University standards.

Per University policy: "If, at the end of a semester, a student's cumulative grade point average is below 3.0, the student will be placed on academic probation. The student must earn sufficient grade points during the next two semesters of registration to raise the cumulative grade point average to at least 3.0 exclusive of incomplete (X) grades. Failure to achieve this 3.0 cumulative grade point average will result in immediate dismissal from the University. A student must have a GPA of at least 3.0 to be eligible to graduate with a master's or doctoral degree."

<https://catalog.utdallas.edu/2015/graduate/policies/registration-and-enrollment#academic-good-standing>

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<https://catalog.utdallas.edu/2015/graduate/policies/grades#grades-and-grade-point-average>

### *Make-up exams*

Request for make-up exam must be made in writing and will be given only in extenuating circumstances.

### *Late Work*

Late work will not be accepted without prior agreement from the instructor.

### **Assignments:**

#### **Protecting Human Research Participants**

due Sept. 12

<https://phrp.nihtraining.com/users/login.php>

The National Institute of Health (NIH) Office of Extramural Research provides on-line training for individuals who engage in research with human participants. You must turn in the certificate of completion.

#### **Written research article: Independent Research**

300 points

Write paper as if it is a submission for a journal article, using APA format. Use checklists in OSM as guides to required content for each section noted below. Students may seek input from research mentor regarding content; however, mentor should not edit work.

Introduction [100 points]

Due: Sept 26

Methods (NOT including stat. analysis) [100 points]

Due: Oct. 17

Planned Statistical analysis [50 points]

Due: Nov 14

[This portion should include a list of appropriate descriptive and inferential statistics. For each statistic, be sure to clarify which variables are included and its purpose relative to your research question(s).]

Discussion [50]

Provide summary of potential threats to internal and external validity

Due: Nov 14

Revised paper due: Dec 12; The first drafts (with comments) must be attached. Total points will reflect your final product.

**Take-Home Analysis of Research/Data** – 350 points – due Dec. 15

Students will be provided with a research problem and data set. Work is to be completed independently, and data analysis should be accurate and thorough. Students shall draw reasonable conclusions supported by data analysis. The Results and Discussion shall be provided in journal-article format, APA style. Class time will be devoted to this project.

(25 points) Provide the research question(s) as they might appear in the final paragraph of a journal article *Introduction*. [Limit 1 paragraph]

(75 points) Provide a description of the methods as they might appear in a *Methods* section of a journal article using at least the following subheadings: Participants; Procedures. [Limit: 2 pages, double-spaced]

(75 points) Illustrate the data in ways that contribute to the understanding of the data as they might appear in *Results* section of a journal article. Be sure to appropriately label all figure, graphs, and tables, and include legends. (Minimum: 2 figures, 1 table).

(25 points) Complete data analyses that provide information about important group differences and relationships among variables:

Provide appropriate annotation to data analysis so it's clear what you have done.

For each analysis you include, provide a 1-2 sentence summary that details the test used, the outcome (hypotheses decision), and how it is important relative to your research question(s).

(100 points) Provide a written summary of the data, the analyses, interpretation from the researcher's perspective, and include illustrations appropriately placed as they might appear in a Results and Discussion section of a journal article. Be sure to include descriptive, inferential and effect-size statistics using appropriate reporting format. (Limit 4 pages double spaced).

(50 points) Written from the perspective a peer reviewer, provide a summary that addresses strengths of the project and potential threats to the validity of the work. (limit 1 page double spaced)

**STRONG SUGGESTION:** Use existing peer-reviewed journal articles and OSM Evaluation Sheet as content guides. Deficiencies in writing (spelling, organization and grammar) will be reflected in deduction of up to 50 points.

**Journal Article Review- 50 points due: TBD**

You will serve as a peer reviewer for an article submitted for publication for publication. You will be provided with the article and guidelines for review and recommendations regarding publication. In the latter half of the semester, assignments will be emailed to you from the *International Journal of Audiology*. Once contacted, you will have three weeks to complete the review.

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**Sharing Confidential Information**

Students considering sharing personal information in email, in person, or within assignments or exams should be aware that faculty members and teaching/research assistants are required by UT Dallas policy to report information about sexual misconduct to the UT Dallas Title IX Coordinator. Per university policy, faculty have been informed that they must identify the student to the UT Dallas Title IX Coordinator. Students who wish to have confidential discussions of incidents related to sexual harassment or sexual misconduct should contact the Student Counseling Center (972-883-2527 or after hours 972-UTD-TALK or 972-883-8255), the Women's Center (972-883-8255), a health care provider in the Student Health Center (972-883-2747), the clergyperson (or other legally recognized religious advisor) of their choice, or an off-campus resource (i.e., rape crisis center, doctor, psychologist). Students who are sexually assaulted, harassed, or victims of sexual misconduct, domestic violence, or stalking, are encouraged to directly report these incidents to the UT Dallas Police Department at 972-883-2222 or to the Title IX Coordinator at 972-883-2218. Additional information and resources may be found at <http://www.utdallas.edu/oiec/title-ix/resources>.

**Technical Support**

If you experience any issues with your UT Dallas account, contact the UT Dallas Office of Information Technology Help Desk: [assist@utdallas.edu](mailto:assist@utdallas.edu) or call 972-883-2911. UT Dallas provides eLearning technical support 24 hours a day/7 days a week. The services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service. Please use this link to access the UTD eLearning Helpdesk: <http://www.utdallas.edu/elearning/eLearningHelpdesk.html>. Field Trip Policies, Off-Campus Instruction and Course Activities  
Off-campus, out-of-state, foreign instruction/travel, and course-related field trip activities are subject to state law and University policies and procedures regarding travel and risk-related activities.

Detailed information regarding this policy, in accordance to Texas Education Code, Section 51.950, can be accessed at the UT Dallas Policy Navigator, <http://policy.utdallas.edu/utdbp3023>, and at <http://www.utdallas.edu/administration/insurance/travel>. Additional information is available from the office of the school dean.

**Student Conduct and Discipline**

The University of Texas System (Regents' Rule 50101) 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 UT Dallas online catalogs (<http://catalog.utdallas.edu>).

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 Student Code of Conduct, UTDSP5003 (<http://policy.utdallas.edu/utdsp5003>). Copies of these rules and regulations are available to students in the Office of Community Standards and Conduct, where staff members are available to assist students in interpreting the rules and regulations (SSB 4.400, 972-883-6391) and online at <https://www.utdallas.edu/conduct/>.

A student at the University neither loses their 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 its 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 demonstrates a high standard of individual honor in his or her scholastic work.

**Academic Dishonesty:** Academic dishonesty can occur in relation to any type of work submitted for academic credit or as a requirement for a class. It can include individual work or a group project. Academic dishonesty includes plagiarism, cheating, fabrication, and collaboration/collusion. In order to avoid academic dishonesty, it is important for students to fully understand the expectations of their professors. This is best accomplished through asking clarifying questions if an individual does not completely understand the requirements of an assignment.

Additional information related to academic dishonesty and tips on how to avoid dishonesty may be found here: <https://www.utdallas.edu/conduct/dishonesty/>.

### **Copyright Notice**

It is the policy of the University of Texas at Dallas to adhere to the requirements of the United States Copyright Law of 1976, as amended, (Title 17, United States Code), including ensuring that the restrictions that apply to the reproduction of software are adhered to and that the bounds of copying permissible under the fair use doctrine are not exceeded. Copying, displaying, reproducing, or distributing copyrighted material may infringe upon the copyright owner's rights. Unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject students to appropriate disciplinary action as well as civil and criminal penalties. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. For more information about the fair use exemption, see <http://copyright.lib.utexas.edu/copypol2.html>. As a UT Dallas student, you are required to follow UT Dallas' copyright policy (UTDPP1043 at <http://policy.utdallas.edu/utdpp1043>) and the UT System's policy, UTS107 at <http://www.utsystem.edu/board-of-regents/policy-library/policies/uts107-use-copyrighted-materials>.

### **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. All official student email correspondence will be sent only to a student's UT Dallas email address and UT Dallas will only consider email requests originating from an official UT Dallas student email account. This allows the University to maintain a high degree of confidence in the identity of each individual's corresponding via email and the security of the transmitted information. The University of Texas at Dallas furnishes each student with a free email account that is to be used in all communication with university personnel. The Office of Information Technology provides a method for students to have their UT Dallas mail forwarded to other email accounts. To activate a student UT Dallas computer account and forward email to another account, go to <http://netid.utdallas.edu>.

#### **Class Attendance**

Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. Absences may lower a student's grade where class attendance and class participation are deemed essential by the instructor. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

#### **Withdrawal from Class**

The administration at UT Dallas has established deadlines for withdrawal from any course. These dates and times are published in the Comet Calendar (<http://www.utdallas.edu/calendar>) and in the Academic Calendar (<http://www.utdallas.edu/academiccalendar>). It is the student's responsibility to handle withdrawal requirements from any class. In other words, a professor or other instructor cannot drop or withdraw any student unless there is an administrative drop such as the following:

Have not met the prerequisites for a specific course

Have not satisfied the academic probationary requirements resulting in suspension

Office of Community Standards and Conduct request

Have not made appropriate tuition and fee payments

Enrollment is in violation of academic policy

Was not admitted for the term in which they registered

It is the student's responsibility to complete and submit the appropriate forms to the Registrar's Office and ensure that he or she will not receive a final grade of "F" in a course if he or she chooses not to attend the class after being enrolled.

#### **Student Grievance Procedures**

Procedures for student grievances are found in university policy UTDSP5005 (<http://policy.utdallas.edu/utdsp5005>). In attempting to resolve any student grievance regarding disputes over grades, application of degree plan, graduation/degree program requirements, and thesis/and dissertation committee, adviser actions and/or decisions, evaluations, and/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 originated.

#### **Incomplete Grade Policy**

As per university policy, incomplete grades may be given, at the discretion of the instructor of record for a course, when a student has completed at least 70% of the required course material but cannot complete all requirements by the end of the semester. An incomplete course grade (grade of 'I') must be completed within the time period specified by the instructor, not to exceed eight (8) weeks from the first day of the subsequent long semester. Upon completion of the required work, the symbol 'I' may be converted into a letter grade (A through F). If the grade of Incomplete is not removed by the end of the specified period, it will automatically be changed to F.

#### **AccessAbility Services**



It is the policy and practice of The University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with your professor and allow one week advance notice. Students who have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact OSA for a confidential discussion. OSA is located in the Student Services Building, SSB 3.200. They can be reached by phone at 972-883-2098, or by email at [studentaccess@utdallas.edu](mailto:studentaccess@utdallas.edu).

### **Religious Holy Days**

The University of Texas at Dallas will excuse a student from class or other required activities, including examinations and travel time for the observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, of the Texas Tax Code.

Students are encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment.

Excused students will be allowed to take missed exams or complete assignments within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the President of UT Dallas or from the President's designee. The chief executive officer or designee must take into account the legislative intent of Texas Education Code 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

### **Resources to Help You Succeed**

The Office of Student Success operates the Student Success Center (SSC, <http://www.utdallas.edu/studentssuccess>), which offers assistance to students in the areas of writing, mathematics, communication, multiple science fields, reading, study skills, and other academic disciplines. These services are available through individual and small group appointments, workshops, short courses, and a variety of online and instructional technologies. All students enrolled at UT Dallas are eligible for these services.

The Math Lab gives short-term and semester long support for a variety of introductory and advanced mathematics courses. Students may drop in to visit with a math tutor on a regular basis. Comet card is required.

The Writing Center offers a collaborative learning environment for one-to-one and small group assistance with general and advanced writing assignments and overall writing skills. Scheduling an appointment is strongly recommended, but walk in appointments are possible if a tutor is available.

The Peer Tutoring program offers free tutoring assistance in multiple locations for many of the historically challenging undergraduate subjects at UT Dallas. Tutoring sessions, offered every weekday on a drop-in basis, are one-on-one or in a small group format. The sessions are designed to meet students' individual questions and needs related to course/subject concepts. All peer tutors are current UT Dallas students who made an A-

or better in the course and have a strong faculty/staff recommendation. Students should check the Student Success Center website each semester for subject offerings and session times.

The Peer-Led Team Learning (PLTL) program provides an active, engaged learning experience for students who meet in small groups once a week with a Peer Leader who helps guide them through a potentially difficult gateway course. Students that attend sessions regularly typically earn a half to a whole letter grade higher than students that do not participate in the PLTL program.

Supplemental Instruction (SI) provides free, peer-facilitated weekly study sessions for students taking historically difficult courses. SI sessions encourage active, collaborative learning based on critical thinking and transferable study skills. SI leaders attend lectures, take notes, and read assigned material just like the enrolled students. Students should check the SSC website for subject and session times.

The Communication Lab (CommLab) offers one-on-one and group consultations where you will gain practical feedback for improving oral and group presentations.

Success Coaches are available for individual student appointments to discuss study skills, time management, note taking, test taking and preparation, and other success strategies.

The Student Success Center's main office is located in the McDermott Library Building and can be contacted by calling 972-883-6707 or by sending an email to [ssc@utdallas.edu](mailto:ssc@utdallas.edu).

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