



Department of Communication Sciences and Disorders
California State University, Sacramento

Spring 2019

SYLLABUS & COURSE OUTLINE

Course Title:	Research in Speech-Language Pathology and Audiology
Course:	CSAD 148, Section 1
Units:	3
Dates:	Tuesday January 22nd-May 7th, 2019
Class Time:	3:00-5:50pm
Building/Room:	FLS 1049
Instructor:	Heather Thompson, Ph.D CCC-SLP
Office:	Folsom Hall 2404G
Office Hours:	Mondays & Wednesdays 11:00am-12:30pm
Contact Information:	heather.thompson@csus.edu or 916/278-6654

COURSE DESCRIPTION:

Survey of research strategies and methods in Speech-Language Pathology and Audiology. Statistical procedures and single-subject designs. Emphasis on interpreting research reports in the literature and on developing research projects. Writing research proposals and reports.

PRE-REQUISITES:

CHDV 30, DEAF 51, PSYC 2, STAT1, CSAD 110, CSAD 111, CSAD 112, CSAD 125, CSAD 126, CSAD 130, CSAD 145.

Learning Outcomes Competencies: (CSAD 148):

Mastery of each student learning outcome listed below is indicated by a grade of C or better on each component of the corresponding measures listed in the table. Students are required to track their progress towards meeting each learning outcome and must make an appointment with the instructor for any grade equal to or less than a C. The instructor will suggest strategies to help you establish competence and knowledge in these areas.

Students should track their progress towards meeting each learning outcome by listing their grades on the table below over the course of the semester.

CSAD 148 SPECIFIC STUDENT LEARNING OUTCOMES:

1. The student will demonstrate knowledge of the scientific method, science, research design and the theory and use of statistics in research.
2. The student will demonstrate knowledge of evidence-based practice, basic vs. applied research, bias, validity and reliability.
3. The student will demonstrate how to develop, conduct and interpret research.
4. The student will describe a topic conducive to experimental research and employ appropriate methods for

- conducting a literature search on that topic.
5. The student will demonstrate knowledge of human research protections and the history of their development.
 6. The student will demonstrate 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 in order to determine the value of different research studies.
 7. The student will demonstrate knowledge of evidence based practice, research design, validity and reliability.
 8. The student will demonstrate knowledge of appropriate ethics in speech/language/hearing research.
 9. The student will demonstrate the use of computer resources to improve the learning process.

Course Learning Outcomes	Course Components Indicating Competence (Tentative content arrangements)	Grade Received
1, 2, 3, 4, 5	Exam #1	
1, 2, 3, 4, 5, 6, 7	Article Reviews #1-8	
1, 2, 3, 4, 5, 6, 7	Exam #2	
1, 2, 4, 5, 6, 7	Prospectus Paper and Presentation	
5, 8	IRB Application	
1, 2, 3, 4, 5, 7, 8, 9	Final Poster	

COURSE MATERIALS:

Required Texts:

1. Orlikoff, R.E., Schiavetti, N. & Metz, D. (2015). *Evaluating Research in Communicative Disorders, 7th Ed.* Boston, MA: Pearson.
2. American Psychological Association (2009). *Publication Manual of the American Psychological Association, 6th Edition.* Washington, D.C.: American Psychological Association.* *on reserve at the library.*
3. Articles posted on Canvas
4. Articles for research project, as chosen by the student

Other Suggested Readings:

1. Green, SB. & Salkind, NJ. (2005). *Using SPSS for Windows and Macintosh: Analyzing and Understanding Data, 4th Edition.* Upper Saddle River, NJ: Pearson.
2. Schwartz, B., Wilson, J., & Goff, D. (2015). *An Easy Guide to Research Design & SPSS.* Los Angeles: SAGE. * *on reserve with the library.*

Recommended Materials:

Laptop, netbook, iPad, or other device with internet capability, 3-ring binder with dividers for organizing study materials.

COURSE REQUIREMENTS:

Electronic devices: Internet connection, access to Canvas/Web site, access to a computer and printer.

Top Hat: We will be using the Top Hat classroom response system in class (www.tophat.com). You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text messaging. You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>) within the Top Hat Success Center which outlines how you will register for a Top Hat account. It also provides a brief overview to get you up and running on the system.

An email invitation will be sent to you, but if don't receive this email, you can register by visiting our course website: <https://app.tophat.com/e/476887>. Our Course Join Code is 476887.

Top Hat will require a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing. Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491.

COURSE STRUCTURE:

This course will incorporate a variety of in-class learning experiences including direct instruction/lecture, active learning activities, small/whole group discussions, and multimedia viewing. Due to the breadth and depth of the course content, students will be assigned weekly readings to be completed before the class meeting. Therefore, in some aspects, this course will be a “flipped classroom.” Classes may cover related but different information than that which is presented in the assigned readings. Therefore, students must attend classes as well as complete all assigned readings. Classes will also provide students with opportunities to apply information presented in the readings by working through a group research project. All assignments and activities are carefully administered for the purpose of enhancing student learning.

EXPECTATIONS:

1. **Attendance:** Students are expected to attend class and to be prepared to participate in weekly class discussions and activities. Attendance may be taken at the start of class. Assignments **must** be turned in or taken on the scheduled dates and times. If you are absent from class, you are responsible for all material covered and to notify the instructor of an expected absence.
2. **Electronic device usage:** Electronic devices will be used to access posted Canvas resources or documents and posted materials. Accessing email and other non-course online activities is not permitted. Students are expected to conduct themselves in a manner that demonstrates respect for others and respect for diversity. Academic dishonesty of any kind will not be tolerated and will be dealt with under established University policy. If you are caught cheating on an exam, you will receive a failing grade for the class. Students who experience concerns with the assignments or course material should communicate these challenges to the instructor as soon as possible. Building rapport and effective relationships are key to becoming an effective professional. Be proactive and inform the instructor when any difficulties arise during the semester so possible solutions can be identified. Information will be posted on Canvas throughout the semester. Ensure that you access the material in a timely manner.
3. **Commitment to Integrity:** As a student in this course (and at this University) you are expected to maintain high degrees of professionalism, exhibit a commitment to active learning and participation in this class, and demonstrate integrity in your behavior in and out of the classroom.

COURSE EVALUATIONS:

At the completion of the course, each student is expected to comment on the nature of this course. This procedure allows the instructor to modify segments of the course in order to make it more applicable to future students' educational and professional growth.

GRADED COURSE ACTIVITIES:

A minimum GPA of 2.5 is necessary for major classes in order to graduate with a Bachelor's Degree in Communication Sciences and Disorders. All assignments must be completed and turned in during class, on time, and in the correct form. Late assignments, those in an incorrect form, or e-mailed assignments will receive no credit unless there is a serious and compelling reason and/or doctor's note **and** instructor approval. Late or missing assignments will negatively affect the student's grade.

GRADING:

Points you receive for graded activities will be posted to the Canvas Grade Center. Grades are typically posted within seven (7) days following the completion of an activity. Final grades will be based on the **number of points received out of the total number of points available for** exams, article reviews, project components and participation. I spent a great deal of time grading, and exam scores are determined by the scantron machine. The

grade that you obtain on the scantron and on exams and assignments is the grade that you earn. Please do not email me asking to “bump up” your grade. *Note:* For more information about grading at Sac State, visit the academic policies and grading section of the university catalog.

METHODS OF EVALUATION		
ASSIGNMENT	VALUE	DUE DATE / DATE SCHEDULED
ARTICLE REVIEWS (AR)	10 points each x 8 80 points total	Per date on the syllabus [Approximately 1 due each week]
EXAMINATIONS		
Exam #1	100 points	03/12/19
Exam #2	100 points	TBD - final exam week
RESEARCH PROJECT		
Prospectus paper & presentation	200 points	02/26/19
IRB application	100 points	03/12/19
Poster Presentation	100 points	05/07/19
Peer Evaluation	20 points	05/07/19
Class participation	100 points	All classes
Total	800 points	

Letter Grade	Percentage	Performance
A	93-100%	Excellent Work
A-	90-92%	Nearly Excellent Work
B+	87-89%	Very Good Work
B	83-86%	Good Work
B-	80-82%	Mostly Good Work
C+	77-79%	Above Average Work
C	73-76%	Average Work
C-	70-72%	Mostly Average Work
D+	67-69%	Below Average Work
D	60-66%	Poor Work
F	0-59%	Failing Work

Student Rights and Academic Responsibilities:

Student Standards of Academic Performance and Students Standard of Behavior can be found in detail at: <http://www.csus.edu/umannual/student/stu-0100.htm>. Particulars regarding academic misconduct and ethics are also described.

Plagiarism: Taken directly from <http://www.csus.edu/umannual/student/stu-0100.htm> “Plagiarism, as a form of cheating, is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person’s contribution. Regardless of the means of appropriation, incorporation of another’s work into one’s own requires adequate identification and acknowledgement. Plagiarism is doubly unethical because it deprives the author of rightful credit and gives credit to someone who has not earned it. Acknowledgement is not necessary when the material used is common knowledge. Plagiarism at Sacramento State includes but is not limited to:

- The act of incorporating into one’s own work the ideas, words, sentences, paragraphs, or parts thereof, or the specific substance of another’s work without giving appropriate credit thereby representing the product as entirely one’s own. Examples include not only word-for-word copying, but also the “mosaic” (i.e., interspersing a few of one’s own words while, in essence, copying another’s work), the paraphrase (i.e., rewriting another’s work while still using the other’s fundamental idea or theory); fabrication (i.e., inventing or counterfeiting sources), ghost-writing (i.e., submitting another’s work as one’s own) and failure to include quotation marks on material that is otherwise acknowledged; and

- Representing as one's own another's artistic or scholarly works such as musical compositions, computer programs, photographs, paintings, drawing, sculptures, or similar works."

Note: Any form of academic dishonesty, including cheating and plagiarism, may be reported to the office of student affairs.

POLICIES:

1. **Attendance:** Professional attendance is required. Report absences to Dr. Thompson in person or by email prior to class meeting. Practice attending now as attendance (and promptness) at scheduled meetings is a professional behavior that you will need to develop and maintain.
2. **You are responsible for all materials covered in your absence.** This means that you are responsible for obtaining any materials from a missed class from a classmate or from Canvas when available online.
3. **Class meetings and participation:** It is expected that students will complete all readings prior to class. Teaching strategies will include lecture, discussion, observation, and functional assignments. Active listening and critical thinking are expected in this course.
4. **Cellphones/Recording/Electronic Devices:** Please silence all cellphones and other communication devices prior to class. To facilitate your own learning (practice in note-taking) and out of respect for your fellow classmates (to allow all students to feel comfortable actively participating in class discussion), please do not audio or video record lectures. If you require an accommodation and require additional support in note-taking, please see Dr. Thompson.
5. **Exams:** Examinations must be completed on the scheduled day. There will be one midterm held in class and one final exam held during the final exam period. Examinations will be based on class lectures, assigned readings, class activities/homework, and class discussion. Exams may be composed of multiple choice, true/false, matching and/or short answer questions. Exams may require the use of a scantron. Be sure to erase thoroughly on the scantron. There is no "leeway" for accidental pencil marks. I do not bring extra scantron forms to class. If you do not have a scantron form and a classmate doesn't have an extra, you cannot take that examination and you will have earned a "zero" on that exam. You may not leave class to retrieve a scantron.

During exams, all bags/materials and supplies must be placed at the front of the classroom with cellphones turned off. To ensure a fair testing environment, you may not wear smartwatches during the exam. Please secure these in your bag or leave at home. Students are not permitted to take biological breaks during the exam as I am unable to proctor students who leave the room.

Examinations must be completed on the scheduled day. In the case of a documented medical emergency during a midterm, the student will be required to provide documentation of the illness, and a make-up exam will be available, possibly in essay format, scheduled the week prior to dead week. **It is the responsibility of the student to contact Dr. Thompson prior to the exam, demonstrate documentation of the medical emergency through a paper copy of a doctor's note, and schedule the make-up to be taken at the testing center or in a location deemed appropriate by the professor.** Scheduling conflicts such as work or volunteering or family holidays/travel are ineligible for exam make-ups. The final exam will be scheduled according to the registrar's office. Please take this into consideration when booking travel plans at the end of the semester.

6. **Study Guides:** This course material requires the application of concepts learned throughout other aspects of the speech-language pathology and audiology program. Students are encouraged to develop their own personal study guide for this class to best support their learning. Students may wish to develop charts to compare/contrast key terms and definitions. Students are also encouraged to think about and develop an understanding of how a given term applies to the research project. To help, a list of important terms is presented at the end of each chapter.

UNDERSTAND WHEN YOU MAY DROP THIS COURSE

It is the student's responsibility to understand when he/she need to consider discontinuing from a course. Refer to the Sac State Course Schedule for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons include: (a) documented and significant change in work hours, leaving student unable to attend class, or (b) documented and severe physical/mental illness/injury to the student or student's family. Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if there is a compelling extenuating circumstance. All incomplete course assignments must be completed by the department's policy.

EQUAL ACCESS

California State University-Sacramento, Department of Communication Sciences and Disorders, seeks to provide equal access to its programs, services, and activities for people with disabilities. If you have a documented disability and verification from the Office of Services to Students with Disabilities (SSWD), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to SSWD and meet with a SSWD counselor to request special accommodation before classes start. **Sacramento State Services to Students with Disabilities (SSWD)** offers a wide range of support services and accommodations for students in order to ensure students with disabilities have equal access and opportunity to pursue their educational goals. Working collaboratively with students, faculty, staff and administrators, SSWD provides consultation and serves as the information resource on disability related issues to the campus community. SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) or (916) 278-7239 (TDD only) or via email at sswd@csus.edu.

STUDENT RESOURCES:

The Student Tech Center (STC)

Go to: www.csus.edu/stc

Students are allowed one free printed poster per assignment per semester. Your poster will be ready one week after the submission. You will receive an email notification when your poster is ready to pick up. You can pick up your poster in AIRC 2004. We are open between 10:00am - 7:00pm, Monday - Friday.

In Person Support

Available weekdays at the AIRC computer lab.

Computer Lab - AIRC 2004

Monday - Friday

7:30am - 4:00pm

Peer and Academic Resource Center (PARC)

Go to: <http://www.csus.edu/parc/index.html>

To assist you with your coursework 24 hours a day/7 days a week, the University provides an academic support resource called Smarthinking. Services can be accessed through Canvas. Take advantage of free tutoring to get extra help as well.

University Reading and Writing Center (URWC)

Go to: <http://www.csus.edu/writingcenter/>

The primary goal of the University Reading and Writing Center (URWC) is to provide encouraging, focused, and non-judgmental one-to-one tutorials in reading and writing for any undergraduate or graduate student at CSUS. In a collaborative and supportive environment, our peer tutors offer help with reading and writing at all points in the process, from initial planning and organizing through developing and revising a paper or understanding difficult texts. The URWC is supported by Academic Affairs and partners with Associated Students, Inc.

Reference Department - California State University Sacramento Library

The Reference Department provides research help to students, faculty, staff, and community members. Staff are

available to help students how to figure out how to get started, what kind of information is needed, and where to go to find the best sources for research projects. Telephone: 916-278-5673, stop by the Reference Desk (2nd Floor of the library), send an email or chat with librarians online <http://library.csus.edu/research-help>.

DETAILED CLASS ASSIGNMENTS/REQUIREMENTS & ACTIVITIES

<p>Attendance/ In-Class Participation in group activities</p>	<ul style="list-style-type: none"> ● Students are expected to attend each class meeting. ● Students should bring a computer or other device (e.g., mobile technology) that is capable of connecting to the internet. ● Sign in to each class using Top Hat Go to: www.tophat.com Join Code: 476887 ● Each class meeting will include small-group activities and/or discussions. ● Students will work together in small, randomly-assigned groups throughout the semester. Small group random-assignments will be provided to students at the beginning of the semester. ● Documents for group work will be posted online. Students are required to print and bring these documents to class. ● Make-up participation points for a missed class are determined at the discretion of the instructor and will be in the form of a special project/assignment. ● Students will complete peer review forms on their group members at the end of the semester.
<p>Article Review (AR) Assignments</p>	<ul style="list-style-type: none"> ● Students will complete eight (8) Article Review (AR) assignments. Students may begin working on the assignment in small, assigned groups during class time, but will complete the assignment at home. ● Assignment documents and forms are available on Canvas. Students are required to print and bring hard copies of the documents to class. ● Each student will submit a hard copy to the instructor on the assigned due date including all documents and grading rubric. Specific assignment information will be available on Canvas.
<p>Examinations</p>	<ul style="list-style-type: none"> ● During the semester, students will complete two (2) exams. Examinations may consist of the following formatted questions: fill-in-the blank, descriptions, matching, and/or multiple choice ● Students are required to bring pen/pencil and the appropriate scantron form (883E) ● Students are encouraged to refer to their assigned readings, in-class notes and activities as a study guide. ● Students are strongly encouraged to complete all textbook/assigned readings, make notes on the textbook, and study lecture notes and textbook notes thoroughly.
<p>Group Research Project</p>	<ul style="list-style-type: none"> ● Students will be randomly-assigned into small groups. Each group will determine an area of inquiry, formulate a research question, and write a prospectus, which will be presented in class and handed in on the assigned date. Specific instructions will be posted on Canvas. ● Each group will present their research and outcomes during a formal poster presentation on May 7th, 2019 during the 5th Annual Communication Sciences and Disorders Undergraduate Research Symposium. ● Presentation format, grading rubric, and assigned schedules will be posted on Canvas. Students are required to (a) submit an electronic version of the poster presentation to the instructor by the assigned due date and (b) print a poster of the findings for the poster presentation scheduled for May 7th, 2019.

TENTATIVE LECTURE AND ASSIGNMENT SCHEDULE (subject to change)

Date	Topic	Readings/Assignments
Jan 22	<p>Review syllabus/assignments/class Structure/expectations; Random Assignment</p> <p>Research and practice in Communicative Disorders Knowledge Acquisition; Pursuing Research in Higher Education</p> <p>Research and practice in Communicative Disorders Scientific Method The Nature of Research in CSD The Editorial Process in Publishing The Challenge of Cyberspace</p>	<p>Orlikoff et al. (2015) Ch 1 pgs. 1-34 <i>Assign groups; exchange contact information; discuss interests</i> https://www.asha.org/Research/EBP/Framing-the-Clinical-Question/</p> <ol style="list-style-type: none"> 1. Obtain randomly-assigned group assignments from instructor. 2. Change seats and sit with group members. 3. Decide on a research topic, research question, and divide up the work.
Jan 29	<p>How to conduct a literature search The Introduction Section of the Research Article Nature of Technical Writing</p> <p>Components of Introduction General Statement of the Problem Rationale for the study Review of the Literature Research questions and hypotheses Limitations of the Study Article Review #1</p>	<p>Orlikoff et al. (2015) Ch 2 pgs 35-71. <i>Review literature and narrow down topics that are of interest to you</i></p> <p>Review library website at: http://library.csus.edu/services-for-students <i>Understand how to find articles, organize a literature search</i></p>
Feb 5	<p>Review of statistics Research Strategies in Communicative Disorders Quantitative Research Variables in Empirical Research Experimental Research</p>	<p>Due: AR #1, submit beginning of class (hard copy, stapled) Due: Topics for Prospectus, submit at beginning of class (stapled, hard copy) Orlikoff et al. (2015) Ch 3 pgs 72-89. <i>Refine project idea in light of feedback from instructor. Develop research questions and hypotheses.</i></p>
Feb 12	<p>Research Design in Communicative Disorders Descriptive Research, Qualitative Research Mixed Methods, Quantitative Design, Group Designs, Single Subject Design</p> <p>Validity Issues in Research Design Pilot Research In-class work on research project</p>	<p>Orlikoff et al. (2015) Chs 3-4 pgs 89-165. Due: AR #2, submit at beginning of class (hard copy, stapled) Due: Research Question, submit at the beginning of class (stapled, hard copy) <i>Decide on methodology and learn how you will answer your research question</i> <i>Start writing prospectus paper</i></p>
Feb 19	<p>Experimental Designs for Studying Treatment Efficacy Treatment Efficacy Pre, quasi and true experiments Levels of Experimental Evidence</p> <p>The Methods Section of the Research Article Components of Method Section Participants, Materials, Procedures</p>	<p>Due: AR#3, submit at beginning of class (hard copy, stapled) Orlikoff et al. (2015) Ch 5 & 6 pgs 168 -270. <i>Narrow down your methodology and work on troubleshooting</i></p>
Feb 26	<p>Prospectus Presentations</p>	<p>Due: AR#4 submit at beginning of class (hard copy, stapled) Due: Prospectus Papers, Presentation and</p>

		Questionnaire Groups
Mar 5	Group article critique; Class time for research project	Read article for class as posted on Canvas; <i>IRB application; Refine research project in light of feedback from presentation and paper</i>
Mar 12	Exam #1 Class time for research project	Responsible for all readings, lectures and class discussion up to 03/05/19 Due: IRB application – Obtain ethics clearance. <i>Note: Data collection cannot begin until ethics clearance has been obtained.</i>
Mar 18-22	Spring Recess - No class meeting	
Mar 26	The Results Section of the Research Article Organization of Quantitative Results Organization of Qualitative Results Quantitative Data Analysis Statistical Interference Analyzing Differences Data Display Data collection and analysis Mandatory in-class group project time	Due: AR#5 submit at beginning of class (hard copy, stapled) Orlikoff et al. (2015) Ch 7 pgs 273-323. Orlikoff et al. (2015) Ch 8 pgs 327-379. In-class small group activities. http://www.csus.edu/atc/spss/ <i>Bring copies of questionnaire for distribution in class</i>
Apr 2	Data collection and analysis Mandatory in-class group project time The Discussion and Conclusions Section of the Research Article Organization The Abstract of the Research Article Levels of evidence Best Evidence and Clinical Decision Making Application of Best Current Research Evidence Barriers to EBP Systematic Reviews	Due: AR#6 submit at beginning of class (hard copy, stapled) In-class small group activities Collect copies of questionnaire in class Orlikoff et al. (2015) Ch 9 pgs 381-418. Orlikoff et al. (2015) Ch 10 pgs 419-440. <i>Analyze data & wrap up the project</i>
Apr 9	Mandatory in-class group project time	Due: AR#7 submit at beginning of class (hard copy, stapled) Dedicated time to work on project
Apr 16	SPSS data analysis	Due: AR#8 – submit at beginning of class (hard copy, stapled) Mandatory workshop on data; Data due
Apr 23	Poster Formatting Assemble sections into word document	Be prepared to spend class time assembling the sections you will put into your poster. <i>Spend class time working on your poster</i>
April 30	Current Research in SLP	In-class small group activities Due: Final Poster submitted to IRT for printing https://www.csus.edu/atc/printing/
May 7	Undergraduate Research Symposium Symposium Symposium Debrief; Course Evaluations	Due: Poster presented during class time Due: Peer Evaluation form due in class

CSAD 148: Research in Speech-Language Pathology and Audiology

This course has been designed to be in direct support of the following American Speech-Language Hearing Association (ASHA) Knowledge and Skills Acquisition for certification in Speech-Language Pathology:

Standard IV-A

- The student will demonstrate prerequisite knowledge of statistics.

Standard IV-E, IV-G, IV-H: Contemporary Professional Issues

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: standards of ethical conduct.
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: contemporary professional issues and advocacy.

Standard IV-F: Research

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: processes used in research and integration of research principles into evidence-based clinical practice.

Standard V-A: Oral and Written Communication

- The student will demonstrate skill in oral and written or other forms of communication sufficient for entry into professional practice.