

**EDUC 622: Research Methods in Education**  
**COMMUNICATIVE SCIENCES AND DISORDERS COHORT**  
**Spring 2012**  
**Friday 1:15-4:00pm**  
**Foundation Classroom Building 106**

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**Office Hours: By appointment and before/after class**

**SCHOOL OF EDUCATION MISSION STATEMENT**

The mission of the School of Education Community is to collaboratively transform public education by preparing thoughtful educators and advancing professional practices. We are committed to diversity, educational equity, and social justice, exemplified through reflective teaching, life-long learning, innovative research, and ongoing service. Our practices demonstrate a commitment to student centered education, diversity, collaboration, professionalism, and shared governance. *(adopted by COE Governance Community October, 1997)*

**COURSE DESCRIPTION**

A core course designed to introduce educational practitioners to the fields of educational research and evaluation. Explores quantitative and qualitative methods of designing and conducting research and evaluation in the context of classroom settings. Further examines measurement, assessment, common statistical techniques and method for critiquing research and program evaluation studies.

**COURSE OBJECTIVES**

During the course, students will:

- Develop a working understanding of research methods and designs;
- Enhance their practical understanding of both quantitative and qualitative research methods;
- Be able to analyze the strengths and limitations of research studies;
- Be able to summarize and interpret research studies;
- Be able to refer to appropriate sources to find the answers to clinical problems;
- Develop an elementary understanding of descriptive and inferential statistical techniques;
- Write and orally present a position paper on research in treatment in ComDis that includes an appropriate literature review; and
- Utilize correct APA style writing and citations.
- This course directly addresses **KASA STANDARD III-F: “The applicant must demonstrate knowledge of processes used in research and the integration of research principles into evidence-based clinical practice.”**

## **GENERAL CONSIDERATIONS**

### **CSUSM Academic Honesty Policy**

“Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All written work and oral assignments must be original work. All ideas/materials that are borrowed from other sources must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated with quotation marks.

Students are responsible for honest completion of their work including examinations. There will be no tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor’s attention. The instructor reserves the right to discipline any student for academic dishonesty in accordance with the general rules and regulations of the university. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class as a whole.”

### **Appeals**

Every student has the right to appeal grades, or appeal for redress of grievances incurred in the context of any course. Disputes may be resolved informally with the professor, or through the formal appeal process. For the latter, consult Dr. Prado-Olmos, Associate Dean.

### **Students with Disabilities Requiring Reasonable Accommodations**

Every student has the right to equitable educational consideration and appropriate accommodation. Students having differing ability (mobility, sight, hearing, documented learning challenges, first language/English as a second language) are requested to contact the professor at the earliest opportunity. Every effort will be made to accommodate special need. Students are reminded of the availability of Disabled Student Services, the Writing Center, technology assistance in the computer labs, and other student support services available as part of reasonable accommodation for special needs students.

Students are approved for services through the Disabled Student Services Office (DSS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

### **Graduate Writing Requirements**

The California State University maintains a Graduation Writing Assessment Requirement (GWAR) for master’s candidates. This requirement must be achieved prior to Advancement to Candidacy. A master’s candidate will satisfy the graduate writing requirement by receiving a passing score on a written product as assessed with the GWAR rubric. Toward the goal of providing opportunity for graduate students in the School of Education to satisfy the writing requirement, all papers in all graduate classes must adhere to the writing and format style guidelines detailed in the sixth edition of the Publication Manual of the American Psychological Association. This manual is a required textbook for all CSUSM College of Education graduate-level courses. **Please see webpage for the GWAR rubric.**

### **Plagiarism**

All work submitted for this course should reflect students’ efforts. When relying on supporting documents authored by others, cite them clearly and completely using American Psychological Association (APA) manual, 6<sup>th</sup> edition. Failure to do so may result in failure of the course.

## **E-mail & Online Discussion Protocol**

Electronic correspondence (e-mail and on-line discussion) is a part of your professional interactions. If you need to contact instructor or other students, e-mail is often the easiest way to do so. It is my intention to respond to all received e-mails in a timely manner. Please be reminded that e-mail and on-line discussions are a very specific form of communication, with their own form of nuances and meanings. For instance, electronic messages sent with all upper case letters, major typos, or slang, often communicate more than the sender originally intended. With that said, please be mindful of all e-mail and on-line discussion messages you send, to your colleagues, to faculty members in the School of Education, or to persons within the greater educational community. All electronic messages should be crafted with professionalism and care.

### **Things to consider:**

- Would I say in person what this e-mail specifically says?
- How could this e-mail be misconstrued?
- Does this e-mail represent my highest self?
- Am I sending this e-mail to avoid a face-to-face conversation?

In addition, if there is ever a concern with an electronic message sent to you, please talk to that person face-to-face to correct any confusion.

For more guidance see Core Rules of Netiquette at <http://www.albion.com/netiquette/corerules.html>

## **COURSE REQUIREMENTS**

### **SOE ATTENDANCE POLICY**

Due to the dynamic and interactive nature of courses in the School of Education, all students are expected to attend all classes and participate actively. At a minimum, students must attend more than 80% of class time, or they **may not receive a passing grade** for the course at the discretion of the instructor. Individual instructors may adopt more stringent attendance requirements. Should the student have extenuating circumstances, s/he should contact the instructor as soon as possible. (Adopted by the COE Governance Community on 12/19/97)

### **GRADING STANDARDS**

Consistent with requirements set forth by the School of Education and the Office of Graduate Studies and Research, the minimal acceptable grade for passing a course in the ComDis Program is a B. A review of the student's performance will need to be conducted should s/he earn less than a B in any course. Please note that CSUSM requires graduate students to maintain a cumulative GPA in all coursework towards the MA of 3.0. Should your GPA all below a 3.0, you will be placed on Academic Probation and you will have one semester to bring your GPA back above a 3.0 or you will be disqualified from the program.

Students need to pass all graded assignments with a B or better to demonstrate acquisition of skills and knowledge towards meeting the standards for practice. Students may be offered an opportunity to redo/retake a single assignment at the instructor's discretion. Any assignment requiring a make-up will receive a 20% reduction in possible points for that assignment. If a student receives less than a B on

the makeup, or receives less than a B on more than one assignment, the student will be obligated to repeat the course. Please note that CSUSM only allows for two courses to be retaken at the MA level. Should you earn less than a B in more than two courses, you will be disqualified from the program. Make-ups are intended to offer a second opportunity for students to demonstrate competence on important standards so as to avoid academic probation. Make-ups are not intended to improve grades or GPA. Please be advised that each student is expected to operate in a professional manner and present her/his best work the first time. Make-ups need to be scheduled within 1 week of receipt of the 'failed' grade.

Any scholarly, professional writing assignment will be subjected to grading based on the Communicative Sciences and Disorders Graduate Writing Assessment Rubric. All writing assignments must be submitted in both hard copy AND through the Cougar Courses container. You will be expected to adhere to the Academic Honesty Policy and use APA style referencing in all professional writing.

### Letter grade (percentage total points)

A = 93 and above	A- = 90.00-92.99	
B+ = 88.00-89.99	B = 83-87.99	B- = 80-82.99
C+ = 78.00-79.99	C = 73-77.99	C- = 70-72.99
D+ = 68.00-69.99	D = 63-67.99	D- = 60-62.99
F – 59.99 and below		

Students are expected to turn all work in when it is due. Work submitted late, but within one week of the due date will be reduced by one letter grade. Work received over one week late receives no credit. Your work will be graded on both content (detail, logic, synthesis of information, depth of analysis, etc) and mechanics (grammar, syntax, spelling, format, uniformity of citations, etc). You are entering into a professional career that requires mastery of the written language. You will be graded on such.

**Grading Emphasis:** Each written assignment will be graded approximately 80% on content and context (detail, logic, synthesis of information, depth of analysis, etc.), and 20% on mechanics (grammar, syntax, spelling, format, uniformity of citation, etc.). All citations, where appropriate, will use APA format. Consult Library Services for the *Manual of Citation of the American Psychological Association*, or [www.apastyle.org/index.html](http://www.apastyle.org/index.html)

### REQUIRED TEXTS

American Psychological Association. *Publication Manual of the American Psychological Association, 6<sup>th</sup> edition*. Washington, DC: APA.

*A Research Primer for Communication Sciences and Disorders*

Author: Meline, T.

Year: 2010

Publisher: Allyn & Bacon ISBN-13: 978-0-13-701597-9

You can buy online access to this book for \$30.99 at:

<http://www.mypearsonstore.com/bookstore/product.asp?isbn=0137029802>

*The Handbook of Evidence-Based Practice in Communication Disorders*

Author: Dollaghan, C.

Year: 2007

Publisher: Paul H. Brookes ISBN – 13: 978-1-55766-870-7

Additional Readings as assigned

## RECOMMENDED TEXT

*The Research Methods Knowledge Base, 3e*

AUTHORS: William Trochim and James P. Donnelly, YEAR: 2006

PUBLISHER: Atomic Dog

<http://www.atomicdog.com>, ISBN - 13: 978-1-59260-291-9, ISBN - 10: 1-59260-291-6

## ASSIGNMENTS

All assignments are due on the dates indicated. It is expected that all assignments will reflect university-level composition and exposition. Use of electronic spelling and grammar checking is encouraged. Your writing should follow APA format, as appropriate. The Writing Center is available for support (Kellogg Library 1103).

1) **Preparedness:** With the exception of the first class, students should complete assigned readings for each date AHEAD of time (i.e. prior to class) and participate in class discussions based on the readings.

2) **Cumulative exam (10 points each for total of 100 points):** You will have 11 weekly quizzes on terminology and concepts introduced in the readings and class lectures. There will be NO make-up quizzes. Anything we have read/discussed up to that point is fair game, so keep on top of the readings! I will drop the lowest quiz and average together the remaining points. If your average across the quizzes is a B or better, you will not be required to take a final examination. If you miss more than 1 quiz OR you do not earn a B or better average across quizzes, you will be required to take a final examination at the end of the semester.

3) **Ongoing critical appraisal of a clinical study (6 appraisals at 10 points each worth 60 points in total):** You will be required to choose and obtain a copy of a scientific research study on the TREATMENT of a speech or language disorder. This must be an article published in a peer-reviewed journal, and must deal with a communication disorder, not other areas of practice in our field (e.g. swallowing or surgical interventions). You should keep this article with you and bring it to class for discussions so that you can refer to it if need be.

You will be asked to evaluate this study in relation to points we are discussing in class, and report in class about that aspect of the study. You will have done the required readings for each class and applied them to the analysis of your article so that you are prepared to discuss this information in small groups in class, and when called upon during full class discussions. You are expected to write out your answer ahead of time and turn it in. Topics are listed in the assignments handout. There will be 6 topics that must be completed, each worth 5% of the course grade for the cumulative 30%.

4) **Controversies in EBP (100 points for the paper; 40 points for the presentation for 140 total points):** Students will work in pairs to research a controversial issue of practice in CSD. For this assignment, we will focus on intervention.

- a) you will be matched with a classmate to complete this assignment
- b) you and your partner will each take one side to a controversy in the field
- c) you will be responsible to accumulate evidence to support your side of the controversy
- d) you will turn in a rough, but completed draft on the 9<sup>th</sup> week of class so that there is time for me to give you feedback and for you to complete a revision that responds to that feedback. This paper will be a joint position paper that systematically reviews the evidence supporting each of your sides of the controversy in a scientific fashion.

e) you and your partner will debate the issue in class at the end of the semester.

**Your final paper will contain the following sections:**

- 1) A brief Introduction to the issue – ½ - 1 page
- 2) Background and significance (why is this important and relevant) ~ 2 pages
- 3) Evidence that supports each position (up to 10 pages). This section of the paper should be analytical and should reflect a **critical review of the evidence** as carried out throughout the semester. You should consider all aspects of design: participant characteristics and selection; appropriateness of experimental design; validity and reliability of procedural measures, stimuli and instruments; appropriateness of analysis methods and supported conclusions.
- 4) Concluding remarks that recommend best practice based on the evidenced you reviewed ~ 2 pages
- 5) Bibliography – Literature cited (in APA format). You may include all levels of evidence, and should have a minimum of 2 peer-reviewed journal articles for each position from multiple authors/groups, not just a single laboratory.

Your paper should be typed in 12 font and double-spaced, with a title, page numbers, and student names on every page. Students are expected to use correct grammar and spelling. Plagiarism will NOT be tolerated.

5) **GWAR** – to satisfy the graduate writing requirement, you will turn in an independent version of **your** controversy paper that will be graded based on the GWAR rubric. This will not be computed into your final grade, but you must pass it as described in the rubric to meet the requirement for graduation.

## EDUC 622 SPRING 2012 - TENTATIVE SCHEDULE

DATE	TOPIC	ASSIGNMENT
Week 1 1/27	Syllabus review; Intro to Research, the Scientific Method, EBP & PICO	M: Chapters 1 & 3; D: Chapters 1 & 2 Quiz # 1 Locate article
Week 2 2/3	Language of Research; Review of APA format; Ethics; Research Designs & Evaluating Treatment Evidence	APA: Chapter 2 & 6; M: Chapter 2; D: Chapter 6 (keep this handy throughout) Quiz #2 Critical Appraisal # 1
Week 3 2/10	<b>Work with your partner on locating scientific evidence for your paper/presentation</b>	M: Chapter 12; D: Chapter 3 Controversies # 1
Week 4 2/17	Introduction to validity; Importance of evidence;	D: Chapters 4 & 5 Quiz # 3 Critical Appraisal # 2; Controversies # 2
Week 5 2/24	Measurement and sampling	M: Chapters 4 & 5 Quiz # 4 Critical Appraisal # 3; Controversies # 3
Week 6 3/2	Qualitative methods	M: Chapter 6: Damico article Quiz # 5 Critical Appraisal # 4
Week 7 3/9	Single Subject & Non-experimental Designs	M: Chapter 7 & 8 Quiz # 6 Controversies # 4
Week 8 3/16	<b>CSHA ANNUAL MEETING</b>	<b>Work on Papers</b>
	<b>SPRING BREAK – 3/23</b>	
Week 9 3/30	Hypothesis testing; Normal distributions & Inferential statistics	M: Chapter 9 & 10 Quiz #7 Draft Paper Due Critical Appraisal # 5 Controversies # 5
Week 10 4/6	<b>Workshop with instructor over draft paper</b>	Quiz#8
Week 11 4/13	Synthesizing Research & Meta-analysis	M: Chapter 11 & 12; D: Chapter 8 Quiz #9
Week 12 4/20	Appraising Evidence	D: Chapters 7 & 9 Quiz #10 Critical Appraisal # 6
Week 13 4/27	<b>Work on your debates</b>	Quiz # 11
Week 14 5/4	Debates in class	Final version of paper due along with GVAR

Week 15 5/11	Debates in class	
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**Guidelines for Critical Appraisals Assignment:**

**Critical Appraisal, Topic 1:** Give a brief (one paragraph) description/evaluation of the research question based on the introduction section of the paper and the following criteria: Are the aims of the study clear? Does the study address a novel, interesting, relevant question? What is the question? Does the author show how the question relates to the existing literature? Is the literature review adequate and fair? What is the significance of this study to the field, as stated by the authors and based on your knowledge? Do the authors state specific predictions and/or hypotheses that can be tested in a scientific manner? If so, are there any logical flaws in these? If they do not, is it clear from the introduction how the authors will evaluate their results?

**Critical Appraisal, Topic 2:** Give a brief (one paragraph) description/evaluation of the external validity of your research paper based on the Methods section of the paper and the following criteria: Classify the study in terms of its design (descriptive (e.g. survey), relational (e.g. correlation); causal (e.g. experimental); review (e.g. meta-analysis).). Describe the sample and how it was recruited. Was the sample appropriate in terms of external validity? Why or why not? Was it large enough to address the research question (i.e., was there adequate power)? Were the sampling methods appropriate? Was the method of assignment to conditions appropriate for the research question?

**Critical Appraisal, Topic 3:** Give a brief (one paragraph) description/evaluation of the construct validity (i.e. how well the actual program or measure reflects the author's/authors' ideas or theories) of your research paper based on the Methods section of the paper and the following criteria: Describe the procedures used in the study. Were they appropriate for the research question? Was subjective bias minimized? If yes, how was that done? What are the variables (independent and dependent) and how were they measured? Were they quantitative or qualitative? Did the authors do a good job of operationalizing constructs (i.e., can we reasonably generalize to the constructs based on the measures used)? Are there any "confounding variable" problems? If so, how were they dealt with (controlled through measurement and/or design; included as covariates in the analysis; ignored; acknowledged in the discussion section; etc.)? Did you agree with the authors' choice of measurement instrument(s), stimuli, and/or method? If so, say why. If not, say why not and offer an alternative. Were the scores reliable? If yes, how do you know?

**Critical Appraisal, Topic 4:** Give a brief (one paragraph) description/evaluation of the internal validity of your research paper based on the Methods section of the paper and the following criteria: Did the authors use the correct design for investigating cause-effect relationships? Why or why not? Did they control for threats to internal validity? Briefly describe the design used. If you can think of a better design, explain it.

**Critical Appraisal, Topic 5:** Give a brief (one paragraph) description/evaluation of the conclusion validity of your research paper based on the Results and Discussion sections of the paper and the following criteria: Describe how the data were analyzed. What are the units of analysis? What statistical tests were used (descriptive and/or inferential)? What do the statistics show? Was there a significant relationship between the variables? Were the analysis methods appropriate for investigating relationships between variables? Why or why not?



**Critical Appraisal, Topic 6:** Give a brief (one paragraph) description/evaluation of the significance and integration of your research paper based on the Results and Discussion sections of the paper and the following criteria: Does the study add to an already existing literature? Does it support or challenge existing theories? How large are the effect sizes? Confidence intervals? Is the evidence compelling, suggestive, or equivocal? Do the benefits of the program/treatment/etc. outweigh the costs? Do you see any ethical issues regarding this study? What is your overall evaluation of how this study contributes to the field? How would you integrate the findings of this study into clinical practice?

### **Guidelines for Controversies in EBP Assignment:**

**Controversies # 1:** Work with your partner to develop a preliminary list of references, in APA format, relevant to your topic (due 2/17). I recommend you start with a systematic review of the literature and/or meta-analysis, if available, but do not limit yourselves to that. You should be reading and citing many primary sources on this topic. You don't have to have read all of these papers at this time, but you should at least read the abstracts and determine whether they are relevant enough to your topic.

**Controversies # 2:** Start looking at the studies you are collecting for the Controversies topic and think about their external validity. You should be working on your own for this part. Was random sampling used in these studies? If not, then what controls were put into place to ensure that the treatment group and the control/comparison group(s) were equivalent at the beginning of the study (i.e., before the treatment)? If you were not able to locate any experimental studies, then what are some of the limitations on generalizability from the studies you were able to find to other members of the clinical population? Were the sample sizes studied large enough to make any generalizations?

**Controversies # 3:** Look at the studies you are collecting for your Controversies topic and think about the construct validity of the dependent AND independent variables. You should be working on your own for this part. For each study, discuss whether the evidence is based on what you think to be appropriate measures. Discuss any limitations of the instruments used for pre- and/or post-testing. Also discuss any limitations of the instruments/materials/procedures used for treatment. Discuss the construct validity and reliability of each of these. Were the conclusions supported of the studies weakened by problems with the measures used? Were any 3<sup>rd</sup> variables overlooked? If you would like feedback on this section, please put your impressions in written form and you can turn them in to me.

**Controversies # 4:** Continue looking at the studies you are collecting for your Controversies topic and thinking about the internal validity of each study. You should be working on your own for this part. For each study, discuss whether the evidence is based on what you think to be appropriate designs. How were any threats to internal validity addressed, and if they were not addressed, then note those examples. Remember, for internal validity, you are only discussing studies that purport to show cause/effect. Discuss any limitations of the designs used. You should be applying concepts discussed in the readings. If you would like feedback on this section, please put your impressions in written form and you can turn them in to me.

**Controversies # 5:** Continue looking at the studies you are collecting for your Controversies topic and thinking about the conclusion validity of each study. You should be working on your own for this part. For each study, discuss whether the conclusions are based on the use of appropriate analysis techniques. Discuss what statistical tests were used, and whether you think there are any problems with using those statistics based on the sample size (e.g., small sample sizes often yield results even when a relationship between two variables does exist in the population), the distribution of scores (e.g.,

if scores are not normally distributed, then the use of inferential statistics can be problematic), etc. Remember, conclusion validity can be weak even when a study has good external, internal, and construct validity. You should be applying concepts discussed in the readings. If you would like feedback on this section, please put your impressions in written form and you can turn them in to me.