SLHS 500  
Introduction to Research Methods  
in Speech and Hearing Sciences  
Spring 2015

Class time: Mondays, 5:30-8:00 pm  
Class location: SLHS Room 205  
Instructor: David S. Velenovsky, Ph.D., CCC-A  
E-mail: dsv@email.arizona.edu  
Phone: (520) 626-9507  
Office: Room 515 (SLHS)  
Office hours: By appointment

Description
This course is concerned with research methods used in speech, language, and hearing sciences. The major goal of this course is to prepare students to be critical consumers of the research literature and become familiar with evidence-based practice in communication sciences and disorders. The course will focus on the types of research, research designs, and research methods that are commonly used to investigate normal and disordered human communication. Emphasis will be placed on the problems involved in asking answerable research questions and the selection of appropriate research designs.

Course Objectives
At the end of the course it is anticipated that students will be able to:
1. Demonstrate basic knowledge of research methods used in the discipline.
2. Critically evaluate published research in the discipline.
3. Describe the importance of critical thinking and writing in the discipline.
4. Demonstrate knowledge of the importance of translational research.
5. Describe the principles underlying evidence-based practice in the professions.
6. Demonstrate an ability to conduct a literature search and review.
7. Develop a written research proposal on a topic pertinent to the discipline or professions.
8. Demonstrate appropriate oral presentation skills.

Course Materials
- Assigned readings from the literature. (TBA on D2L)

There is a D2L course website at http://d2l.arizona.edu for announcements, course materials, supplementary readings, etc.
Course Requirements

The total number of points that can be earned in this course is 100, distributed as follows:

- Tests: 40 points
- Class Participation: 10 points
- Research Proposal: 40 points
- Presentation: 10 points

1. **Tests: 20 points each (40 points total)**
   
   There will be three tests over the course of the semester: two midterms and a final (see schedule), but only the two highest scores will be included in your grade. There will be no make-up tests. Tests will cover content knowledge using multiple choice-type and short answer questions.

2. **Class Participation: 10 points**

   Participation in this class is crucial in order to develop critical thinking skills. Participation marks will be awarded based on attendance, contributions to class discussions, evidence of preparation for class (e.g., completing readings or preparation for in-class activities). For some assignments, you may be required to turn in your notes. **Attendance ≠ Participation!**

3. **Written Research Proposal: 40 points**

   Students will develop a research proposal of approximately 10 pages in length (grading rubric on D2L; see below for more information on writing). The proposal should address a clinically relevant research question. Students will work in pairs or groups, and the proposal will be submitted in steps (see schedule; late work will incur a 10% grade reduction per day late).

   - **Step 1:** Formulate a question. Students will discuss their research proposals in small groups during class. Students should bring their research question and a list of potentially relevant articles. You will explain your ideas and plans to your classmates, and receive feedback. (This will count toward class participation points.)

   - **Step 2:** Produce an annotated bibliography. Each student must summarize 3 research articles relevant to their research topic. Students in the same group cannot summarize the same papers. Students may discuss the papers with their group members, but each group member will submit (and be graded on) his/her own contributions. (15 points)

   - **Step 3:** Write a research prospectus. The group will prepare a written research prospectus. The prospectus should present the rationale and logic for the proposed study, the predictions, proposed methods, and methods of analysis. (25 points)

4. **Oral Presentation: 10 points**

   Each group will orally present their research proposal to the class (same student groups as for the written proposal). Presentations should be approximately 30 minutes total, including a 25-minute presentation followed by a five-minute period for questions. This presentation will be graded on content, style, and information quality (grading rubric on D2L). While the overall presentation will determine part of the grade, group members will be graded separately based on their ability to present material clearly, answer questions, etc.
Grading
A standard grading scale will be used:
A  =  90-100%
B  =  80-89%
C  =  70-79%
D  =  60-69%
E  =  00-59%

Written Assignment
All written assignments must follow the guidelines of the publication manual of the American Psychological Association (APA), which may be found at http://www.apa.org/pubs/books/4200066.aspx. If you need extra help communicating your thoughts in the written form (i.e., writing a paper), you may wish to consult the Writing Center on campus. The Writing Center is a free resource for the UA community. At the Writing Center, a trained peer consultant will work individually with you on anything you are writing at any point in the writing process. For more information or to make an appointment, visit their website at http://thinktank.arizona.edu/tutoring/writing, or stop by any of their three locations on campus (see link for locations and hours), or call (520) 626-0530.

Students with Disabilities
If you anticipate barriers related to the format or requirements of this course, please meet with me so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please register with the Disability Resource Center (621-3268; http://drc.arizona.edu) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations. Disability accommodations will not be provided to students not registered with the DRC. Accommodations must be planned for well in advance. You must be registered with the DRC and talk to me within the first three weeks of the semester to make arrangements. We are unable to provide extended time on tests within the department. If you and the DRC determine that this is an appropriate accommodation, you must arrange to take tests at the DRC testing center. These arrangements will need to be made in the first three weeks of class.

Contract of Courtesy
The following contract applies to the instructor and students alike, and is intended to create an open, respectful, and fun learning environment.
(1) Please turn off all cell phones and pagers during class. If you must take a call for emergency purposes, please do so by placing your phone’s ringer on silent or vibration and leave the room immediately to answer your phone.
(2) Please be on time and don’t leave early.
(3) Please do not hold side conversations or engage in other types of disruptive behavior (e.g., packing your bag before the end of class).
(4) Please appreciate and respect guest speakers (including your fellow students during presentations).
(5) Please be attentive during class (despite the slightly unfortunate class time…)
(6) Please do not eat noisy food during class (e.g., chips, carrots, candy with wrappers).
**Academic Integrity**

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, work submitted for grading must be the product of independent effort unless otherwise instructed. *Academic dishonesty* (including cheating and committing or facilitating plagiarism, intentional or accidental) *will not be tolerated and will result in sanctions*. Sanctions may range from failing the assignment, through failing the class with a permanent notation on your transcript (most likely case), to expulsion from the University (see [http://deanofstudents.arizona.edu/codeofacademicintegrity](http://deanofstudents.arizona.edu/codeofacademicintegrity) for full policy document). Plagiarism includes the use (exact use or revised) of any materials or ideas that are not your own. Plagiarism may be avoided by properly citing the source of any such material or ideas that are not your own (see [http://deanofstudents.arizona.edu/academicintegrityforstudents](http://deanofstudents.arizona.edu/academicintegrityforstudents) for further information and helpful tips). The instructor has the right to use web-based anti-plagiarism search tools. All students are expected to know and abide by the Code of Academic Integrity, which can be found at [http://deanofstudents.arizona.edu/codeofacademicintegrity](http://deanofstudents.arizona.edu/codeofacademicintegrity). All credit will be forfeited for any academic work completed for this class that violates the code.
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings and activities</th>
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<tbody>
<tr>
<td>1/26</td>
<td>Requirements &amp; overview; Research &amp; EBP</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 1</td>
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<td><strong>In-class activity 1:</strong> Pre-class quiz</td>
<td><strong>In-class activity 2:</strong> Form groups of 3</td>
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<td>2/02</td>
<td>Research and EBP</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 1</td>
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<td><strong>In-class activity 1:</strong> Be prepared to discuss Adams (1990).</td>
<td><strong>For next time:</strong> Each group: Pick a research article, read, and bring to class. Be prepared to identify the question(s) and hypotheses. Should pertain to your project</td>
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<td><strong>For next time:</strong> Each group: choose a treatment approach to investigate that would be labeled as “junk science” to discuss.</td>
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<td>2/09</td>
<td>The <em>Introduction</em> section: Research questions, hypotheses, literature review</td>
<td><strong>In-class activity 1:</strong> Each group: <em>Formulate research question</em> bring to class</td>
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<td>Research strategies: Types of research, variables</td>
<td><strong>In-class activity 2:</strong> Junk science vs. real science. You will be assigned to investigate a treatment approach or CEU course. Bring in what you have learned and be able to describe (1) what it is (exactly), (2) how much it costs for you and/or clients, (3) whether you think it is worth it and (4) (most importantly) why.</td>
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<td>2/16</td>
<td>Research design I: Group vs. single-subject designs, validity</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 4</td>
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<td><strong>Test 1 (1st hour)</strong></td>
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<td>2/23</td>
<td>Research design II: Treatment research</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 5</td>
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<td><strong>In-class activity:</strong> Read and bring in a treatment research paper</td>
<td>(e.g., one you will use for the annotated bibliography). Be prepared to discuss the paper, including (1) summarizing the topic of the article (in 1-2 sentences), (2) identifying independent and dependent variables, (3) whether it is group or single subject design, and (4) other design features described in the readings. It is acceptable (expected, even) for you to look through the paper during class.</td>
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<tr>
<td>3/02</td>
<td>The <em>Method</em> section: Who, what, how?</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 6</td>
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<td><strong>DUE:</strong> Annotated Bibliography</td>
<td><strong>In-class activity:</strong> Read at least one of the articles and be prepared to discuss the methods, including (1) who the participants are, (2)</td>
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</table>
what procedures and materials are used, (3) what the dependent and independent variables are, and (4) what, if any, problems there are with the design/methods.

3/09 The Results section: Data analysis
Orlikoff, Schiavetti & Metz Chapters 7 & 8

**In-class activity:** Discuss proposal rationale & methods. Each group come to class prepared to discuss their proposal’s question, hypotheses, rationale, and general methods.

3/16 No class SPRING BREAK

3/23 The Discussion section
Orlikoff, Schiavetti & Metz Chapter 9

**Test 2 (1st hour)**

3/30 Clinical Decision Making
Orlikoff, Schiavetti & Metz Chapter 10
Morris & Agin (2009)

**In-class activity 1:** Read and be prepared to discuss Morris & Agin (2009).

4/06 Exam 2
Discussion TBA review of submitted article and response

**In-class activity:** TBA

4/13 Student presentations

4/20 Student presentations

4/27 Student presentations

5/04 Student presentations / Course debriefing
Last Day of Class Papers due. HOWEVER, groups who present on the 27th will have a grace period (to May 3rd) in case they want to revise based on feedback given during the presentation.

5/14 Final Exam Wednesday, 1:00 to 3:00 PM
### ASHA Standard III – SPH 500

<table>
<thead>
<tr>
<th>Learner Outcomes</th>
<th>Assessment Method</th>
<th>Standard III</th>
<th>IV</th>
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<td></td>
<td></td>
<td>A  B  C  D  E  F  G  H  B1  B2</td>
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### Correlates

- Anatomical/physiological: x
- Acoustic: x
- Psychological: x
- Developmental: x
- Linguistic: x
- Cultural: x