Description of Course

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.

Instructor and Contact Information

Instructor: David S. Velenovsky, Ph.D., CCC-A
E-mail: dsv@email.arizona.edu
Phone: (520) 626-9507
Office: SLHS 524
Office hours: By appointment (if door is open, feel free to knock)

Course Format and Teaching Methods

The course format is the typical lecture format with the exception that there will be student group presentations. Additionally, students are encouraged to participate in class discussions. As I’ve said before, it’s boring if I’m the only one talking!

Course Objectives and Expected Learning Outcomes

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.

Absence and Class Participation Policy

This is a graduate course, you are expected to attend class sessions. If you are unable to attend class, then you must notify the instructor. If you miss class material, then it is your responsibility to obtain the information from your classmates. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-
The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Course Communications
Notifications regarding course policies, schedule changes or assignments will be made through email and/or notification on the course D2L website.

Required Texts or Readings

**Additional Readings:** Will be posted in D2L

Assignments and Examinations: Schedule/Due Dates shown on course schedule @ end of syllabus
The total number of points that can be earned in this course is 100, distributed as follows:
- Junk Science: 15 points
- Annotated Bibliography: 15 points
- Class Participation: 15 points
- Research Proposal: 30 points
- Presentation: 25 points

There are 34 people enrolled. The class will divide into 7 groups; 6 groups of 5 and 1 group of 4. “Junk Science”, the research proposal and presentation are group projects, the annotated bib is individual, but the bibs will be combined as references for the group’s project.

1. **Junk Science: 15 points**
   Junk science vs. real science: The first group presentation will be on “Junk Science”. Your group will investigate a treatment approach (advertised online, TV, etc. or a CEU course). Bring in what you have learned and be able to describe (1) what the treatment 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 or why not. Present in PowerPoint, ≈10 minutes/group. All group members should participate equally.

2. **Class Participation: 15 points (accrued throughout semester)**
   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: 45 points (includes annotated bib)**
   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 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. *(30 points)*

4. **Oral Presentation: 25 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. *For your presentation, you are expected to dress and present professionally. There may be guests in the audience...*

**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.

**Grading Scale and Policies**
Course grades will be awarded based on: (Points earned/100) x 100
A standard grading scale will be used:
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
E = 00-59%
University policy regarding grades and grading systems is available at http://catalog.arizona.edu/policy/grades-and-grading-system

**Requests for incomplete (I) or withdrawal (W)** must be made in accordance with University policies, which are available at http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete and http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal respectively.

**Dispute of Grade Policy** Students will have 7 days from the time the exam grades are
posted to dispute a grade.

Written Proposal Due Date:
Your written research proposal is due on the last day of class, April 30th. Groups will be given an opportunity to modify paper based on comments after presentation. Therefore, if your group is presenting on the final day of class, you will have 3 extra days to make these modifications.

Scheduled Topics/Activities: Listed at the end of this syllabus

Classroom Behavior Policy
To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Threatening Behavior Policy
The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Accessibility and Accommodations
Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Code of Academic Integrity
Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

The University Libraries have some excellent tips for avoiding plagiarism, available at http://www.library.arizona.edu/help/tutorials/plagiarism/index.html.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor’s express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may
also constitute copyright infringement.

**UA Nondiscrimination and Anti-harassment Policy**

The University is committed to creating and maintaining an environment free of discrimination; see [http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy](http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy)

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

**Additional Resources for Students**

UA Academic policies and procedures are available at [http://catalog.arizona.edu/policies](http://catalog.arizona.edu/policies)

Student Assistance and Advocacy information is available at [http://deanofstudents.arizona.edu/student-assistance/students/student-assistance](http://deanofstudents.arizona.edu/student-assistance/students/student-assistance)

**Confidentiality of Student Records**


**Subject to Change Statement**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.

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**ASHA Standard III – SPH 500**

<table>
<thead>
<tr>
<th>Learner Outcomes</th>
<th>Assessment Method</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>B1</th>
<th>B2</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Demonstrate basic knowledge of research methods used in the discipline.</td>
<td>Test, Class participation, Proposal</td>
<td>X</td>
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<tr>
<td>Critically evaluate published research in the discipline.</td>
<td>Test, Class participation, Proposal</td>
<td>X</td>
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<td>Describe the importance of critical thinking and writing in the discipline.</td>
<td>Test, Class participation</td>
<td>X</td>
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<td>Demonstrate knowledge of the importance of translational research.</td>
<td>Test, Class participation</td>
<td>X</td>
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<tr>
<td>Describe the principles underlying evidence-based practice in the professions.</td>
<td>Test, Class participation</td>
<td>X</td>
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<td>Demonstrate an ability to conduct a literature search and review.</td>
<td>Proposal</td>
<td>X</td>
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<td>Develop a research proposal on a topic pertinent to the discipline or professions.</td>
<td>Proposal</td>
<td>X</td>
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<td>Demonstrate appropriate oral presentation skills.</td>
<td>Presentation</td>
<td>X</td>
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**Correlates**

- Anatomical/physiological: x
- Acoustic: x
- Psychological: x
- Developmental: x
- Linguistic: x
- Cultural: x
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings and activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/22</td>
<td>Requirements &amp; overview; Research</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 1</td>
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<tr>
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<td><strong>In-class activity 1:</strong> Pre-class quiz</td>
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<td><strong>In-class activity 2:</strong> Form groups of 5 or 4</td>
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| 1/29  | Research and EBP                           | Orlikoff, Schiavetti & Metz Chapter 1  
Adams (1990). The Dead Grandmother/Exam Syndrome and the Potential Downfall Of American Society  
**In-class activity 1:** Be prepared to discuss Adams (1990).  
**In-class activity 2:** Break into groups and formulate a research proposal.  
For next time: Each group; choose a treatment approach to investigate that would be labeled as “junk science” to present to class. |
| 2/05  | The *Introduction* section: Research questions, hypotheses, literature review  
Research strategies: Types of research, variables | Orlikoff, Schiavetti & Metz Chapters 2 & 3  
**In-class activity 1:** Junk science vs. real science. Your group will 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. **Present in PowerPoint** |
| 2/12  | Research design I: Group vs. single-subject designs, validity | Orlikoff, Schiavetti & Metz Chapter 4                                                                                                                             |
| 2/19  | Research design II: Treatment research     | Orlikoff, Schiavetti & Metz Chapter 5  
**In-class activity:** Each group; Discuss proposal rationale & methods. Each group come to class prepared to present their proposal’s question, hypotheses, rationale, and general methods (*PowerPoint*). Class should be prepared to give groups feedback/suggestions. |
**DUE:** Annotated Bibliography  
**In-class activity:** Read Lin et al., (2013) and be prepared to |
discuss the methods, including (1) who the participants are, (2) 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.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/05</td>
<td>The <em>Results</em> section: Data analysis</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapters 7 &amp; 8</td>
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<td><strong>In-class activity: TBA</strong></td>
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<td>3/12</td>
<td><strong>No class</strong></td>
<td><strong>SPRING BREAK</strong></td>
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<tr>
<td>3/19</td>
<td>The <em>Discussion</em> section</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 9</td>
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<tr>
<td>3/26</td>
<td>Clinical Decision Making</td>
<td>Orlikoff, Schiavetti &amp; Metz Chapter 10</td>
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<td>Morris &amp; Agin (2009)</td>
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<td><strong>In-class activity 1: Read and be prepared to discuss Morris &amp; Agin (2009).</strong></td>
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<tr>
<td>4/02</td>
<td>Research Ethics</td>
<td>Guest presenter: TBD Ethics presentation</td>
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<td><strong>In-class activity: Discussion of presentation</strong></td>
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<tr>
<td>4/09</td>
<td>Student presentations</td>
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<td>4/16</td>
<td>Student presentations</td>
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<tr>
<td>4/23</td>
<td>Student presentations</td>
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<tr>
<td>4/30</td>
<td>Student presentations / Course debriefing</td>
<td><strong>Last Day of Class/Papers due. HOWEVER, groups who present on the 24^th^ will have a grace period (to May 3^rd^) in case they want to revise based on feedback given during the presentation.</strong></td>
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