Communication Sciences and Disorders (CSD 6000)
Research Methods in Speech-Language Pathology and Audiology
(Inquiring Minds Want to Know)

Instructor: Lauren Nelson
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Office: 229 CAC
Email: lauren.nelson@uni.edu
Semester: Fall, 2013
Time/Place: Tuesday from 10 - 11:50; CAC 212

eLearning login: https://uni.edu/elearning/
Office Hours: M T W from 9:30 to 10:30 a.m.; and Th from 2 to 3 p.m. You are welcome to drop by at other times or to schedule an individual appointment.

Purpose
The primary purpose of this course is to increase graduate students' appreciation of the role of research in enhancing clinical practice in speech-language pathology. Students will be provided with sufficient information about research design, data collection and analysis, application to evidence-based practice, and preparing a research paper to become knowledgeable consumers of research, and to take the initial steps toward becoming clinician-investigators. Ideally, students will leave this course with a positive attitude toward the methods of systematic inquiry that are part of both clinical practice and research.

At the end of this course students will be able to:

1. Conduct a literature search on a clinical topic, read, evaluate, and summarize research articles, and organize a review of literature.
2. Demonstrate understanding of research principles and how these are integrated into evidence-based clinical practice
3. Identify concepts associated with evidence based practice and find, read, and evaluate clinical research reports.
4. Demonstrate knowledge of processes used in research, recognize and describe different qualitative and quantitative research designs, and understand how research designs relate to the concept of levels of evidence in evidence based practice.
5. Recognize common statistics used in communicative disorders research, and interpret basic descriptive measures, measures of association, and inferential statistics.
6. Demonstrate skill in communicating about research both in oral and written forms and use APA style in citing articles and formatting a reference list.
7. Recognize and discuss standards of ethical conduct in research with an emphasis on protection of human subjects, and appropriate attribution of ideas.

For students seeking the Certificate of Clinical Competence in Speech-Language Pathology, this course contributes toward completion of the following knowledge areas: The applicant must have (a) “…demonstrated knowledge of standards of ethical conduct” (IV-E), (b) “…demonstrated knowledge of processes used in research and the integration of research principles into evidence-based clinical practice” (IV-F), and (c) “…demonstrated knowledge of contemporary professional issues” (IV-G). Additionally, the course contributes toward completion of the following skill areas: The applicant must (a) “…have demonstrated skills in oral and written or other forms of communication sufficient for entry into professional practice” (V-A), and (b) “…adhere to the
ASHA Code of Ethics and behave professionally” (V-B).

**Formative Student Outcome Assessments**

Throughout the course students will be asked to demonstrate knowledge and skills associated with research in communication sciences and disorders. These demonstrations may include successful completion of course assignments, performance on review questions, and contributions during small group activities. Students who do not achieve satisfactory performances on these assessments will be required to complete a remediation plan before advancing to future coursework.

**Texts**


**Additional Reading**


**Course Requirements**

A. Demonstration of interest by regular participation in class discussions and activities.
B. Completing all assignments and resubmissions by December 19, 2013 at noon.
C. Completion of Individual Assignments* (All Assignments must be completed successfully for an "A" grade. Grades will be reduced proportionately for assignments that are not completed successfully.)
   1. Answering Questions: Article summary of a report of original, group research in both Question/Answer and narrative format.
   2. Electronic Literature Search: Print out of ERIC (EBSCO), PubMed, Web of Science, or ComDisDome (ProQuest) search with 25 to 50 articles; must include abstracts for at least 5 articles; be sure to document your search strategy.
   3. Selective Reference List: Reference List in APA format; at least 15 articles from a variety of sources such as books, chapters of books, journal articles, convention presentations, documents from web sites.
   4. Types of Data/Data Analysis – Qualitative: Article summary in both Question/Answer and narrative formats for one study using qualitative data.
   5. Research Design: Article summary in both Question/Answer and narrative formats for one study using a single-subject experimental design.
   6. Levels of Evidence: Article summary in both Question/Answer and narrative formats for
7. Types of Data/Data Analysis – Quantitative: Article summary in both Question/Answer and narrative format for a study using correlation, regression, t-test, or ANOVA. You must include a description of the statistical analysis.

8. Research Project Proposal (a 2-3 page proposal leading to one or more answerable research questions; must include a title, at least 10 references/citations, and a reference list in APA format)

9. Successfully complete a current research ethics training and education (one of the following options):
   a. Complete the “Responsible Conduct of Research” module through CITI. Instructions and a link to the training site are available at: http://www.uni.edu/osp/research-ethics-training
   b. Complete the “Human Subjects Course” through CITI. Instructions and a link to the training site are available at: http://www.uni.edu/osp/research-ethics-training
   c. Complete the on campus “IRB Training for Graduate Students” Wednesday, October 7, 2:00-4:00 pm, Center for Multicultural Education (CME). Register and obtain further information at http://www.uni.edu/rsp/ethics-training.
   d. Complete the on campus “Ethics in Scholarship for Graduate Students” Tuesday, October 29, 1:00-4:00 pm, Maucker Union Ballroom C. Advance registration is required at http://www.uni.edu/rsp/ethics-training.

Note: The ethics in scholarship training takes the place of our 11/12/13 class meeting.

10. Participation in a small group discussion of research proposals during finals week.

*Assignments 1 through 9 will be submitted electronically via eLearning. Assignments 1 through 8 may be resubmitted to receive credit. The resubmission is due one week from the day papers are returned.

**Course Outline**

<table>
<thead>
<tr>
<th>Week #1</th>
<th>Empirical Research: Quick Overview</th>
<th>Nelson (2013), ch. 1</th>
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<tr>
<td>8/27</td>
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<tr>
<td>Week #2</td>
<td>Literature Searching</td>
<td>Nelson (2013), ch. 4,</td>
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<td></td>
<td><strong>Assignment #1</strong>: Group study</td>
<td>pp. 61-72</td>
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<td>Week #3</td>
<td>Evidence-Based Practice/Levels of Evidence</td>
<td>ASHA (2004), Bahr (2006), Nelson (2013), ch. 6, pp. 138-142, ch. 10, pp. 221-228</td>
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<tr>
<td>9/10</td>
<td><strong>Assignment #2</strong>: Literature search</td>
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<td>Week #4</td>
<td>Preparing a Bibliography</td>
<td>APA (2010), chs. 7 &amp; 8</td>
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<tr>
<td>9/17</td>
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<td>Nelson (2013), ch. 4, pp. 72-75</td>
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<td>Week #5</td>
<td>Research Project or Thesis</td>
<td><a href="http://www.grad.uni.edu">http://www.grad.uni.edu</a></td>
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<tr>
<td>9/24</td>
<td>(Details, details!)</td>
<td><a href="http://www.uni.edu/osp">http://www.uni.edu/osp</a></td>
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<td></td>
<td>Ethical Issues</td>
<td>Nelson (2013), ch. 2</td>
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Assignment #3: Reference list

Week #6 
Asking Good Research Questions Nelson (2013), ch. 3
10/1

Week #7 - 8 
Research Design Nelson (2013), chs. 5 & 6
10/8 - 10/15

10/15 Assignment #4: Single subject research

Week #9 
Research Participants and Sampling Nelson (2013), ch. 7
10/22 Assignment #5: Qualitative study

Week #10 - 11 
Types of Data/Analyzing Data Nelson (2013), ch. 8
Correlation, Regression, and t-tests
10/29 - 11/5

10/29 Assignment #6: Randomized control group study

Week #12 Note: I am a member of the Council on Academic Accreditation in Audiology
and Speech-Language Pathology (CAA) and will be attending the council
meeting prior to the November ASHA convention. Your ethical conduct of
research training takes the place of this class.
11/12

Week #13 & 14 
Analyzing Data Nelson (2013), ch. 9, pp. 185-204
11/19 - 12/3 Analysis of Variance (ANOVA) Nonparametric statistics
Nelson (2013), ch. 9, pp. 204-215

11/19 Assignment #7: Data analysis

11/25 - 11/29 Thanksgiving Break

12/3 Assignment #8: Proposal paper

Week #15 
Reporting Research APA (2010); Nelson (2013, pp. 229-236)
12/10 Reporting Research

12/10 Assignment #9: Ethics Training

Finals Week Note: Students in small discussion
12/16 - 12/20 10-11:50 a.m. or arranged groups may arrange to meet with
Participate in Discussion Group the instructor earlier in finals week
Thursday, December 19,
12/19

Course Grading

I hope that everyone intends to complete all assignments successfully. If you do this and receive
credit for class participation, you will receive an "A" for the course. Just in case, the grading
scale for assignments follows:
Successfully Complete All Assignments  A
Successfully Complete 9 Assignments  B
Successfully Complete 8 Assignments  C
Successfully Complete 7 Assignments  D
Successfully Complete fewer than 6 Assignments  Fail

Successful completion of an assignment means that you submitted the assignment on time and if needed, completed a revision and resubmission. The resubmissions are due one week after your assignments are returned, keeping in mind that all revisions must be complete by December 19th at noon.

In addition to completing all of the assignments, you also need to participate in class. Participation will be documented by course attendance and opportunities to respond to review questions. If you seldom or never speak in class, I will encourage you privately to look for opportunities to participate and also try to call on you a little more often. I genuinely expect everyone to meet the requirements for participation without much problem, although a ½ grade reduction for low participation is possible. For example, if you completed all assignments, but did not have an acceptable level of in class participation, your grade would be an “A-”.

*NOTE ABOUT ARTICLE SUMMARIES:

All article summaries will be submitted in two formats. An example of the question/answer and narrative formats will be given in class (Silverman, 1998, pp. 7-9). The narrative format is similar to those found in literature reviews in research papers. For your article summaries, please use empirical research articles. I encourage you to use articles from the ASHA journals Journal of Speech-Language-Hearing Research, American Journal of Speech-Language Pathology, and Language, Speech and Hearing Services in Schools, and other significant professional journals such as Journal of Voice, Journal of Fluency Disorders, Journal of Communication Disorders. Please use relatively current volumes (i.e., 2000 forward). I am willing to accept articles from older journals and other sources if you check with me ahead of time and include a copy of the article with your summary. Articles are easy to find on the internet, but you need to be careful. If the report is not from a respected professional journal, the quality of the material could be questionable.

Statement about Academic Ethics

It is expected that student work for this course will be consistent with the University of Northern Iowa Policy on Academic Ethics/Discipline (See below). If you have any questions, access the policy on Academic Ethics on the university website or see me for more information.

The culture of The University of Northern Iowa is characterized by a long-standing commitment to student learning and to excellence in teaching. This commitment has been established through the development of an open, ethical and caring community that promotes diversity, honesty, integrity, respect, fairness, trust and civility among its members. This community has created a culture based on core values that include intellectual vitality, intellectual and academic freedom, the well-being of its members
and service to others.

In order to realize its commitments and values, all members of the UNI community must demonstrate academic integrity and ethical behavior and foster academic integrity and ethical behavior in others. Those who violate UNI’s standards of academic ethics must be held responsible for their misconduct. Those who observe violations of academic ethics have a responsibility to address it. (http://www.uni.edu/policies/301)

**Statement about Disability Services and Accommodations**

The University of Northern Iowa is an Affirmative Action Equal Opportunity Institution. Students with disabilities and other special needs may request instructional accommodations through the Office of Disability Services (ODS). In order for a student with a disability to receive special instructional accommodations, he or she must be registered through the Office of Disability Services. Students who wish to register with the ODS should set up a consultation appointment by calling (319) 273-2676 (voice) or (319) 273-3011 (TTY) or by stopping in the office at 103 Student Health Center (Upper Level).

**Statement about the Academic Learning Center**

I encourage you to utilize the Academic Learning Center’s free assistance with writing, math, science, college reading, and learning strategies. UNI’s Academic Learning Center is located in 008 ITTC. Visit the website at http://www.uni.edu/unialc/ or call 319-273-2361 for more information and to set up an appointment.

**Reference**