

SPLH 660

RESEARCH METHODS IN SPEECH-LANGUAGE-HEARING (3 CREDITS)

Fall 2009

Class Meetings: Tuesday, Thursday 11:00-12:15; Haworth 2046

Class Instructors:

Edward T. Auer, Ph.D., Assistant Professor

SPLH, Neuroscience, and Human Biology

4115 Haworth Hall (Lab Office)

Office Hours: Tuesday 12:30 –1:30

Thursday 10:00-10:50 & by appointment.

785-864-1460 auer@ku.edu

Course Description

This course provides an introduction to basic concepts of scientific methodology and statistical analysis as they apply to research and clinical practice in speech, language, and hearing. You will first gain experience with several experimental techniques through hands on learning experiences that will involve data collection and laboratory reporting. Later in the course you will be part of a research team that will implement a simple experiment. Each member of the team will write up a brief report of the experiment and the members of the team will present the team's research orally during an in-class mini-conference.

Course Objectives

At the end of this course it is anticipated that students will be:

1. Educated consumers of research findings. That is, they will be able to read, summarize and evaluate, at a basic level, scientific research articles relevant to the treatment and diagnosis of communication disorders.
2. Better critical thinkers and consumers of information.
3. Able to describe evidence-based-practice within communication disorders.
4. Educated consumers and users of basic statistics.
5. Able to write and review brief research reports and give oral presentations of research studies.
6. Able to describe ethical considerations in the conduct of research.

Course Materials

TEXT: Schiavetti, N. and Metz, D.E. (2006). *Evaluating Research in Communicative Disorders*, Fifth Edition, Boston, Allyn and Bacon

Additional readings associated with lectures and other course materials will be made available on the Blackboard course website <http://courseware.ku.edu>

Requirements

1. *ONLINE QUIZZES (30 % of grade)* Three quizzes will evaluate your understanding of key terms and concepts from lectures and readings.
2. *Weekly writing assignments (35 % of grade) (8 @ 5 points each drop 1)* These will be 1 to 2 page write-ups of the experiments conducted each week.
3. *Final Project Paper (30% of grade)*
4. *Class presentations (5 % of grade)*

Written Assignments

The required short writing assignments will involve the summarization, report and interpretation of scientific research projects. If you need assistance communicating your thoughts in written form, you may wish to consult the KU writing center (4017 Wescoe). For information on the services available visit their web site <http://www.writing.ku.edu>

Academic Misconduct

Students are expected to observe all University guidelines pertaining to academic misconduct. As stated in the University Senate Rules and Regulations (2.6.1):

“Academic misconduct by a student shall include, but not be limited to, disruption of classes; threatening an instructor or fellow student in an academic setting; giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports or other assignments; knowingly misrepresenting the source of any academic work; unauthorized changing of grades; unauthorized use of University approvals or forging of signatures; falsification of research results; plagiarizing of another's work; violation of regulations or ethical codes for the treatment of human and animal subjects; or otherwise acting dishonestly in research.”

Academic misconduct will not be tolerated and will be dealt with in accordance with University rules and regulations.

Accommodations

The staff of Services for Students with Disabilities (SSD), 135 Strong, 785-864-2620 (v/tty), coordinates accommodations and services for KU courses. If you have a disability for which you may request accommodation in KU classes and have not contacted them, please do so as soon as possible. Please also notify the instructor in writing (e-mail is acceptable) within one week of receiving this syllabus so that appropriate accommodations for this course can be discussed.

If a scheduled exam or assignment due date is in conflict with a mandated religious observance, you must notify the instructor in writing (e-mail is acceptable) within one week of receiving this syllabus so that an alternative arrangement can be made in advance of the scheduled requirement.

Grading

The University has prescribed definitions for grades. The University Senate Rules and Regulations define grades in the following way:

- 1.2.1.1 The grade of A will be reported for achievement of outstanding quality.
- 1.2.1.2 The grade of B will be reported for achievement of high quality.
- 1.2.1.3 The grade of C will be reported for achievement of acceptable quality.
- 1.2.1.4 The grade of D will be reported for achievement of minimally passing but less than acceptable quality.

This course will use the plus or minus system to describe intermediate levels of performance between a maximum of A and a minimum of F. Intermediate grades represented by plus or minus shall be calculated as .3 units above or below the corresponding letter grade.

In this course, quality of achievement will be evaluated through your performance on:

Online Quizzes (30 % of final grade)(3 @ 10% each)

Weekly writing assignments (35 % of final grade) (8 @ 5 points each drop 1)

Final Project paper 30%

1 Class presentations (5% of the final grade)

If your level of achievement during this course is falling short of your goal, you are strongly encouraged to consult with the instructor during office hours or by appointment to improve the quality of your learning of course material.

Course Schedule (subject to change)

- 8/20 Introductions and Course Overview (Chapter 1)
- 8/25-8/27 Overview of commonly used research strategies (Chapter 2)
- 9/1-9/3 Measurement (Chapter 4)
- 9/8-9/10 Descriptive statistics (Chapter 6, Chapter 9 pp. 315-334)
- 9/15-9/17 Parts of a research report (p. 215 Chapter 7, 8) (QUIZ 1)
- 9/22-9/24 Ethical issues (Chapter 4) (Belmont Report)
- 9/29-10/1 Library tools
- 10/6-10/8 Internal Validity and its threats (Chapter 5)
- 10/13 External Validity, Reliability (Chapter 5)
- 10/15 FALL BREAK
- 10/20-10/22 **Z-scores** (QUIZ 2)
- 10/27-10/29 Formal research designs/ Planning for studies
- 11/3-11/5 Null Hypothesis Testing (Chapter 9 pp. 334-378)
- 11/10-11/12 Giving scientific Presentations/ prep for data collection
- 11/17-11/19 Data collection-Final Project
- 11/24 Data collection-Final Project
- 12/1-12/3 Meta-analysis, Evidence Based Practice (QUIZ 3)
- 12/8-12/10 Final Student Presentations (Papers due)