

Instructor

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Course Website

<https://bb7pilot.ohio.edu/>

Class Meetings

Tuesday and Thursday 8:10 ~ 10:00 am
Grover Center – W111

Office Hours

Speak with the instructor any day after class. Also, feel free to communicate with the instructor any time by email to set up a meeting.

Course Overview: The goal of this class is to prepare you to be critical consumers of published research. By the end of the course you will know how to critically assess published research. You also will be able to design appropriate group-design and single-subject research studies.

ASHA Knowledge Areas Addressed in this Course: Students will acquire & demonstrate knowledge in the following specific area:

Standard III-F.

(1) Processes used in research and the integration of research principles into evidence-based clinical practice.

Knowledge Competencies and Learning Objectives: From the above knowledge area, the following are the specific learning objective for this course:

Learning Objective 1: Obtain and demonstrate knowledge of group design research methodologies at an emerging level or better.

Learning Objective 2: Demonstrate ability to critically evaluate published group design research studies at an emerging level or better.

Learning Objective 3: Obtain and demonstrate knowledge of single subject design research methodologies at an emerging level or better.

Learning Objective 4: Demonstrate ability to create a single subject design study at an emerging level or better.

ASHA Evidence Sources:

Exams: Achieve a 70% average (at minimum) on both exams to demonstrate emerging knowledge.

Written Critique: Score at least 70% on written critique to demonstrate emerging ability to evaluate published research.

Presentations: Attain 70% average (at least) on presentations to demonstrate emerging knowledge of group design and single subject design research studies

Validation: Meeting these minimal performance targets will provide evidence that you will meet ASHA's 2005 knowledge standards for certification in Speech-Language Pathology and Audiology in the above knowledge areas.

Course Materials

Text: Single Subject Research: Applications in Educational and Clinical Settings. Richards et al. (1999).

Other reference: Clinical Research Methods in Speech-Language Pathology and Audiology. Irwin et al. (2008)

PowerPoint Slides/Overheads: You may print all of my PowerPoint (PPT) slides and nearly all of my Overheads for the group design portion of this class by going to the course website.

About the Group Design Portion of this Class:

Note 1: Because there is no text book for this portion of the class, the PPT slides serve as your text. For this reason, many of the slides contain considerable information. This information will be the basis of the exam (and perhaps a resource beyond this class). So, please, appreciate the materials for their intended purpose.

Note 2: All slides reflect MY organization of the material. My organization likely will not match how you might organize the material. Therefore, use the slides as an overall guide to studying and learning the material. You are free (and even encouraged) to organize the materials as you wish to better suite your cognitive style.

Note 3: Because classroom teaching is a dynamic process, it is inevitable that I will spend time emphasizing/ augmenting certain material and not emphasizing other material. So, you need to be flexible in appreciating the variable depth and breadth I may offer to certain of the content but not all the content.

Course Requirements

1. **Obtain IRB Certificate** (5% of grade): To become IRB approved, do the following. Go to: (a) OU homepage; (b) click on *Offices* at top menu; (c) click on *VP Research*; (d) click on *Research Compliance*; (e) scroll down and click on *CITI training (Collaborative Institutional Training Initiative)*; (f) click on *citiprogram.org* link (under CITI Program Instructions), which will take you to the test site. After completing the training you can print off a little certificate indicating you've been trained.

Note: This is part of the training process wherein you will gain much knowledge about research ethics. Also, to be eligible to work in anyone's lab in HSLs you must have gone through IRB training and receive a certificate documenting you've been trained. Make sure you submit your training certificate to me by midterm.

2. **Single Subject Research Design (SSD) Lectures** (100 pts, 10% of grade): Each student will prepare a brief presentation on a specific topic related to single subject research design. The presentation will be in PowerPoint (PPT) and be **no longer than about 30 minutes** on one of the chapters from the Richards et al. book. Your presentation should cover the main points in the chapter(s). The purpose of the assignment is to encourage your actively learning the material as you read, distill, organize, and present the material. These lecture materials will be important to everyone, as each of you will design a SSD study to address a clinical case (see Assignment 5 below). The product you submit to me will be your PPT presentation on your chapter (you may follow the general structure of my PPT slides on group design, if you wish). **In your presentation, provide sufficient examples of concepts and/or different experimental SSDs that will illustrate the concepts/designs, including plots.** Giving examples will be helpful. **YOU MUST** email me its PPT slides at least 24 hours before your presentation so I can post them on the web so that your classmates can print them off before your talk. If I don't get your slides 24 hours before your talk, you will be responsible for making the necessary hardcopies for the class.

Product to Turn in to Me: YOU MUST give me a hardcopy of your PPTs on or before the day of your talk. I will grade the hardcopy as I listen to the presentation and return it to you the same day.

Note: You must be present to hear others' presentations, as this information will be used in your next assignment. As part of being supportive of your colleagues and showing professional courtesy you will be required to be at all the presentations. If you miss any lectures I will deduct 2 pts from your final course grade.

3. Single Subject Design Research Study: (100 pts, 7.5% of grade): You will complete one clinical issue/problem for which you will develop an appropriate single subject design study to address the issue. You will prepare a brief (~ 15 min or so) PPT presentation of your research plan. The plan must include: (a) statement of the clinical problem; (b) very clear and specific description of your SSD (provide a clear rationale for your SSD, if there are several possible designs, provide a clear rationale for your design over other designs); (c) very clear and specific description of the methods, including your selection of target behavior(s), and of your treatment plan (i.e., what steps are included in your plan (as best you can determine based on your clinical knowledge of the problem up to this point in your development, including basic steps in TX, criteria for measuring target behavior); and (d) a very specific but brief plan on how you will evaluate the effectiveness of your treatment. I do not want to give you a specific format on how you should organize and present your plan. I will leave this up to you. Just make certain that it is logical, orderly, and makes sense.

Product to Turn in to Me: ***YOU MUST give me a hardcopy of you talk on the day of your presentation. I will grade your hardcopy as I listen to your talk during class and return it to you with your grade on it.***

Note: As part of being supportive of your colleagues and showing professional courtesy you will be required to be at all the presentations. If you miss any lectures I will deduct 2 pts from your final course grade.

4. In-Class Activities: Design a Group Design Study (100 pts, 7.5% of grade): You will create a Group-Design study to test the clinical question raised by the SLP or audiologist and present a brief description of the group's study approach. The presentation will be very brief (10 min or less). The whole class will then evaluate your design.

5. In-Class Review of Group Design Research Papers (100 pts, 7.5% of grade): You will be assigned one (1) paper to read, critique, and report on in class. A PDF of each paper can be found in the course website. You will give a brief verbal synopsis and critique of each paper to the class. The main purpose of this assignment is to provide you some experience in critiquing published papers before you have to do your own review. While you will be responsible for your assigned paper, you also need to read the other papers so you can contribute some thoughts on those papers as well when they are critiqued. To help you organize your thinking and analysis of each paper, a critique sheet and a formal Review Checklist Sheet (provided to reviewers from the journal *Applied Psycholinguistics*) are provided for you.

Present a very brief (10 min or so) low-tech presentation of your critique of its assigned papers (i.e., just a few slides that include basic info about Purpose, Method/Design, Results, Conclusions, and Critique Statements about the paper) to the rest of the class to familiar them with the study. Your critique/analysis of the paper, however, can be verbally presented. There is no need to create a bunch of slides detailing your critique. **You will turn in the critique sheet that represents view of the paper you read and critiqued along with the ppt on or before the day of your presentation.**

6. Exam (50% of grade). The exam will cover the group design portion of this class.

7. Article Critique (100 points, 12.5% of grade): In keeping with one of the primary aims of the course, you will submit 1 complete critique of a published research article of a group design study. The purpose of the exercise is to encourage you to think critically and to coherently express your thoughts. The critique will be done on 1 paper selected from 3 papers located in the course website. You need only choose one (1) paper from the set of 3 to complete the assignment. I've included a specific critique sheet for this assignment in this folder. You must complete this form for the assignment. Download the form and modify the spaces between the headings and subheadings as you need in order to provide sufficient information and detail to address each of the major headings and subheadings. **DO NOT** read/critique a paper that is not one of the 3 papers in this folder. If you do, you will need to do the assignment over again on one of the appropriate papers.

Note 1. The critique you turn in must be *authentic and original*. You might discuss the paper with others who are reviewing the same paper BUT your written critique/product must be original and unique to you, not the result of a collaborative effort (I'll be able to tell).

Note 2. Your critique must be emailed to me. You may submit it on or before the due date (see syllabus for due date).

Classroom Rules:

- (1) Turn off all electronic devices (i.e., phones, blackberries, etc.) – we have zero tolerance for this.
- (2) Conduct yourself in a professional manner, following the checklist of generic abilities given to you and discussed during your clinical orientation. Show respect to everyone in the class. No side conversations.

Course Grade: Your course grade will be derived by totaling the value associated with each weighted exam and assignment and giving it a percent value. While I do not give credit for class attendance, I do note those who play an active role in class, observations I use to help me calculate a final grade (*so, be active*). I also take into account “generic professional” behavior (*so, be professional and respectful*). **I offer no extra credit assignments**, as I am, for many reasons, strongly opposed philosophically to doing that.

A 100 – 94	B+ 89 – 87	C+ 79 – 77	D+ 69 – 67	F ≤ 59
A- 93 – 90	B 86 – 83	C 76 – 73	D 66 – 63	
	B- 82 – 80	C- 72 – 70	D- 62 – 60	

Note: If you are on the bubble between a lower and higher grade (i.e., 1-3 pts), I will always bump you up if you have shown: (a) Active participation in class and (c) Consistent professional/generic abilities.

Evaluating this course: The College of Health and Human Services and I strongly encourage you to complete the online evaluation of this course. I cannot encourage you strongly enough to complete the evaluation. Your feedback (*which is confidential*) is vital in providing information in helping me, the School, and the College improve the curriculum. So, please, complete the evaluation.

Copyright of Instructional Material: The lecture materials (e.g., powerpoint slides, handouts, etc.) and classroom activities associated with this class and developed by the instructor are copyrighted in the name of L. Xu on this date 3-31-09.

Academic Integrity: Academic misconduct is a Code A violation of the Ohio University Student Code of Conduct. Academic misconduct refers to dishonesty in examination (cheating), presenting the ideas or the writing of someone else as one’s own (Plagiarism), or knowingly offering false information to the University. If you are found to be involved in academic misconduct, you will receive, depending on the seriousness of the offense, an “F” on the project/test or for the class, and/or a referral to the Director of Judiciaries with the possible sanctions of suspension or expulsion. Please speak with me about any questions you may have about the above statement. In an institution of higher learning, we must all be held to the highest standards of academic integrity.

COURSE TOPICS AND AGENDA

DATE	TOPIC	MATERIALS
Mar 31 (T)	Course Overview: Expectations and Assignments	LEC 1.ppt
April 2 (Th)	Basic Research Designs: Gross Overview Independent and Dependent Variables	LEC 2.ppt
April 7 (T)	Introduction to Single Subject Design: Overview Evaluating Treatment Research: Distinguishing Science from Pseudoscience Single Subject Design Perspective (Introductory comments and issues) Group Design Perspective (Principles & Criteria) Evidence Based Practice (EBP): What is it? Why is it Important?	LEC 3.ppt AJSLP Paper
April 9 (Th)	No class. Preparation for Single Subject Research Design (SSD) Lectures	
April 14 (T)	Begin SSD Presentations Chapter 2: Methods for Changing Target Behaviors Chapter 3: Methods for Recording Behaviors Chapter 5: Overview of Withdrawal Designs	Student1 PPT Student2 PPT Student3 PPT
April 16 (Th)	Chapter 6: Application of Withdrawal Designs Chapter 7: Overview of Multiple Baseline Designs Chapter 8: Application of Multiple Baseline Designs	Student5 PPT Student6 PPT Student7 PPT
April 17 (F) 2-3 pm	HSLS Colloquium on Responsible Conduct of Research – Research Misconduct and Protection of Human Research by Ning Zhou	
April 21 (T)	Chapter 9: Overview of Alternating Treatment Designs Chapter 10: Application of Alternating Treatment Designs Chapter 13 Methods for Analyzing Data	Student8 PPT Student9 PPT Instructor PPT
April 23 (Th)	No Class – Work on SSD Case Presentation	
April 28 (T)	SSD Presentations: Cases 1-5 (Remember: you must give me a hardcopy of your PPTs before talking)	
April 30 (Th)	SSD Presentations: Cases 6-10 (Remember: you must give me a hardcopy of your PPTs before talking) IRB training and approval must be completed by this date	
May 5 (T)	Back to Group-Design Research Guest Lecture by Dr. Alex Sergeev of School of Health Sciences	
May 7 (Th)	Basic Strategies	LEC 4.ppt
May 12 (T)	Basic Designs How to Critique Group Designs: Overview Review Checklist	LEC 5.ppt

May 14 (Th)	What makes up a research study?	LEC 6.ppt
	Introduction Section	
	Method Section	
	Results Section	
May 19 (T) & May 21 (Th)	No Class. Preparation for Group-Design Study presentation and for In-Class Critique Activity: Evaluating Group-Design Studies	
May 26 (T)	What makes up a research study?	LEC 6.ppt
	Matching Stats with Design	
	Discussion Section	
May 28 (Th)	Group-Design Study presentation	
June 2 (T)	In-Class Critique Activity: Evaluating Group-Design Studies	
June 4 (Th)	EXAM: Group Designs (All PPTs with exception of SSD content)	
June 8 (M)	Email me your Written Critique by 12:00 Noon	