

Andrews University

Fall Semester 2018
SPPA-574 Research Methods in Speech-Language Pathology

Course Description

Research techniques and experimental design schemes, critical reviewing of current literature, oral technical reporting and writing technical supports. The process used in integrating research principles into evidence-based practice.

Course Credit

3.0

Course Pre/Co-requisites

Bachelor's Degree in communication disorders or its equivalent

Location

Bell Hall, Room: 118

Schedule

Tuesdays 9:30 AM – 12:20 PM and asynchronized online instruction via course website

Instructors

D'Jaris Coles-White, Ph.D., CCC-SLP
Professor of Speech-Language Pathology
Bell Hall 114G; Office Phone: 269-471-3479

Required Materials

Evaluating Research in Communication Disorders Robert Orlikoff, Nicholas Schiavetti, and Dale Evan Metz, ISBN-978-0-13-335201-6, Boston, MA: Pearson Education, Inc. (2015)

Additional Resources

Understanding Research and Evidence-Based Practice in Communication Disorders: A Primer for Students and Practitioners

William O. Haynes, Carole E. Johnson, ISBN-10: 0205453635 • ISBN-13: 9780205453634
Boston, MA: Pearson (2009)

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed. 4th printing). Washington DC: American Psychological Association.

Purdue University Online Writing Lab

<https://owl.english.purdue.edu/owl/resource/560/01/>

UNC Writing Center

<http://writingcenter.unc.edu>

Course Objectives and Outcomes

At the completion of this course students will be knowledgeable about the following:

- Planning feasible research studies
- Reviewing of literature
- Components of research articles and theses: overview
 - Introduction section
 - Review of literature section (appendix to thesis)
 - Method section
 - Results section
 - Discussion section
- Selecting a research question
- Scientific method, types of research
- Terms, concepts, and research methods
- Research design, group and single subject
- The editorial review & publication process
- Ethics in research – NIH Certification
- APA style
- Statistics
 - Basic notions
 - Statistical methods commonly used in ASLP research
 - Identifying differences
 - Identifying relationships
 - Non-parametric statistics in ASLP research & clinical work
 - Other statistical methods in ASLP research
 - Characteristics of good data analysis
- Students will demonstrate knowledge of processes used in research and the integration of research principles into evidence based clinical practices.

Students will:

ASHA Standard	Outcome	Implementation	Evaluation Criteria
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IV-H	Demonstrate knowledge about certification, specialty, recognition, licensure, and other relevant credentials specific to: <ul style="list-style-type: none"> • Andrews University IRB • NIH - Beginning January 1, 2013, applications for approval by the Andrews University Institutional Review Board (IRB) will require the inclusion of certificates of completion for the National Institutes of Health Online Training Tutorial, http://phrp.nihtraining.com/, for all principal and co-investigators listed on the IRB application. 	NIH - certification	85% accuracy
IV-F IV-G	Describe the basic concepts, terminology, and methodology of research on written tests and common steps in behavioral science research, and examination.	Research Proposal, Research Presentation, Quizzes, Exams Methods Section	85%
IV-C IV-G V-A	Discuss evidence based research articles in the profession as demonstrated in various class assignments, therapy activities, and assessment processes as deemed appropriate for course content.	Article Critiques/Reviews Research Proposal, Research Presentation	80%
IV-C IV-D V-A	Read critically, evaluate, and apply information published in professional journals.	Article Critiques/Reviews Research proposal Introduction Section Literature Review Methods Section	80%
IV-E	Demonstrate knowledge and understanding of ethical parameters of the profession as it relates to research	NIH - certification Research proposal	
IV-C IV-E IV-F V-A	Evaluate research articles in the profession as demonstrated in class assignments, abstracts, research proposal, and examinations	Exams, Quizzes, Research Proposal, Article Critiques/Reviews	80%
V-A IV-F	Develop a research proposal demonstrating knowledge and understanding of the processes and procedures necessary for completion of such tasks.	Research Proposal	80%

Course Policies and Procedures

- **Changes:** For the purpose of an enhanced learning experience for the students some assignments, quizzes, tests and projects may be changed or altered at the discretion of the instructor. Likewise, the class schedule is tentative and subject to change.

- **Correspondence and Email Policy:** I will be available to answer any questions you may have about the course. However, in order to keep my email inbox from being “bloated” with countless emails please use the “virtual student union” on the course website. I will be checking for posts and will respond within a 24-hour period Monday – Friday and within a 48-hour period on weekends and holidays. You may email or text me (678-901-7788) to schedule appointments or to inform me of an emergency. Accordingly, please do not use email or text to tell me that you’re running late to class because I will more than likely not receive them in time. **If you know you will be out of class ahead of time, please inform me in writing prior to your absence (e.g., note in my mailbox).** Lastly, do not email any assignments. The course website will be set-up to handle assignments (e.g., Assignment drop-box).
- **All assignments have due dates that should be adhered to.** After due dates have passed a daily deduction of 5% will be applied to the final of the assignment. After 3 days (72 hours) the assignment will no longer be accepted.
- **Written Work:** All assignments must be submitted following APA guidelines. APA style requires a specified title page, 12 – point font, double spaced, one inch margins all around, and appropriate headers, and page number. Each written document must follow APA 6th edition style and Andrews University.
- **Technology Requirements:** Each student is required to have access to and a working knowledge of technology such as PC or MAC. Each student is also required to have working knowledge and understanding of Andrews University online learning management system – Moodle ©.
- **Grades:** Grades are earned based on performance on assessments (e.g., exams and graded course assignments). No extra credit will be given. The instructor reserves the right to curve exams based on item analysis of individual questions. Grades will not be rounded. See Grading Scale below.

Teaching Strategies

- Lectures
- Interactive Teaching (e.g., Think-Pair-Share, Minute Papers, Lecture Reactions)
- Problem-Based Learning
- Article Critiques/Reviews

Teaching Philosophy

Class meetings will involve discussion and participation by all members of the class (not just me). This type of active participation is both a better way to learn and a lot more interesting (and fun) than simply listening to lectures. To facilitate learning, it is important for you to prepare as much as possible for class meetings by conscientiously **completing the reading assignments before the start of class.**

Preparation for and participation during classes are intended to be learning activities. That means that your comments in class are not expected to always be correct. Making mistakes is part of the learning process. Some of this material is difficult and a certain degree of confusion, uncertainty, or misinterpretations is to be expected (in addition, *in some cases there won't be 'right' or 'wrong' answers*, just points of view). So, don't be afraid to be wrong.

Note that during class meetings we probably will not have time to discuss all of the reading material.

Therefore, I will focus our class time on some material from the text, but also present more in-depth descriptions of the concepts discussed in the text. Note that, **you are responsible for all information in the assigned readings (even if not discussed during class meetings) and in class (even if not mentioned in the readings)**. Exams will include questions from the reading and lecture. Therefore, if you feel confused or uncertain about any information (whether discussed in class or not) it is your responsibility to let me know so that I can clarify that material for you. This can be done in class or by coming to see me during office hours. Occasionally, some questions that need further explanation will be answered on the next class period. **I strongly encourage** you to talk with me individually throughout the semester if you have any questions concerning course material or about how you are doing in the class. **If you are having problems in the course, do not wait too long to talk with me, come early in the semester while there is still time to improve.** Of course, you are also welcome to come speak with me even if you are not having difficulties but are just interested in the material and would like further information. If you cannot make my posted office hours, I will be glad to make an appointment for another time. To make an appointment, just see me in class or email.

Course Assignments

NIH Training Tutorial and Certificate (25-points): Beginning January 1, 2013, applications for approval by the Andrews University Institutional Review Board (IRB) will require the inclusion of certificates of completion for the National Institutes of Health Online Training Tutorial, <http://phrp.nihtraining.com/>, for all principal and co-investigators listed on the IRB application. Each student will complete this process and submit a copy of their certificate. This will be graded as a pass/fail and will count towards participation.

Plagiarism Self-Study (25 points): Students will complete the self-study Plagiarism lesson. See the course website for further details.

Annotated Bibliography (75 – points): Students will write a concise annotation that summarizes the central theme and scope of the book or article in communication disorders to correspond to your research proposal. Include one or more sentences that (a) evaluate the authority or background of the author, (b) comment on the intended audience, (c) compare or contrast this work with another you have cited, or (d) explain how this work illuminates your bibliography topic. For additional help see this link: <http://guides.library.cornell.edu/annotatedbibliography>

Research Topic and Questions (25 – points): Students will think of a topic related to communication sciences and disorders and develop research questions for the proposed topic selected. See the course website for rubric and further details.

Introduction (50 – points): Students will write a complete introduction for the proposed topic selected. See the course website for rubric and further details.

Literature Review (50 – points): Students will write a comprehensive literature review with at least 3 peer-review journal articles) in an integrative, critical fashion, i.e., synthesis of the current understanding of a particular topic. Students will also include a bibliography. The literature review and bibliography must be writing with the current APA style.

Methods Section (75 – points): Students will write a complete methods section for the proposed topic selected. See the course website for rubric and further details.

Examinations (200 – points; 100 – points each): A mid-term and comprehensive final will be given.

Quizzes (100 – points). There will be ten, MANDATORY weekly online pre-class quizzes. Each quiz is worth, 10-points and will cover chapters in the textbook, the corresponding online modules and resource materials for each chapter. Completion of these quizzes is your ENTRY TICKET to class each week. Failure to take the pre- class quiz will also reduce the total number of participation points you can earn during in class activities.

Research Proposal Assignment (100 – points): Students will complete a proposal for an experiment that is original (or a partial replication) experiment relevant to topics in communication disorders. The student may “propose” a project from any area of communication disorders. Correlational or observational studies are acceptable but studies with at least one variable to manipulate are highly encouraged. Your proposal should be between 7-12 pages and showcase skills in developing and exhibiting the major components of a full-length, publishable research paper. Topics / research questions / hypotheses related to the field of communication disorders should be selected early in the semester. Papers will be double-spaced, word processed in MS Word™ in accordance with current APA style <http://www.apastyle.org/learn/tutorials/basics-tutorial.aspx>. Format for the research proposal is on the course website.

Presentation of research proposal (100 – points): Students will conduct presentations of their research proposal papers to the class. Presentations are expected to be formal in nature, resembling a presentation to a scholarly body. The use of multimedia technology is expected such as computer-projected MS PowerPoint™ or Excel™. Further details will be covered in handouts.

Final Exam Schedule

http://www.andrews.edu/academics/exam_schedule.html

Attendance Policy

Regular attendance at all classes, laboratories and other academic appointments is required of each student. Class Absences. Whenever the number of absences exceeds 20% (10% for graduate classes) of the total course appointments, the teacher may give a failing grade. Merely being absent from campus does not exempt the student from this policy. Absences recorded because of late registration, suspension, and early/late vacation leaves are not excused. The class work missed may be made up only if the teacher allows. If you are tardy 3 times that is the equivalent of one absence.

Academic Honesty

Honesty in all academic matters is a vital component of personal integrity. Breaches in academic integrity principles are taken seriously. Acts of academic dishonesty as described in the University *Bulletin* are subject to incremental disciplinary penalties with redemptive intent. Such acts are tracked in the office of the Vice President for Academic Administration. Repeated and/or serious offenses will be referred to the Committee on Academic Integrity for further recommendations on penalties.

Disability Accommodation

If you qualify for special assistance under the American Disabilities Act, please contact the Student Success office at Nethery Hall 100 or disabilities@andrews.edu.

Professionalism

To prepare students for the professional world, certain behaviors/activities are not allowed in the classroom.

- Cell Phones, Personal Laptops, and Recording devices: Cell phones should be turned off before entering the classroom. Picture-taking during class is not allowed. Recording devices are allowed only if pre-approved by instructor, and if approved, under no circumstance are recordings—visual or verbal—to be posted on a public website.

Laptops should not be used for surfing the web or watching movies during class. It is disrespectful and unprofessional to use these devices inappropriately during class.

- Late Assignments are unacceptable unless prearranged with instructor.
- Tardiness
- Eating in class: Please do not bring food or beverages to class. Water is permitted.

Presentation is important. Your attention to detail, demeanor, and attire factor into how you are perceived as a professional. Active participation in class discussions and critiques is an essential part of learning. Without participating and expressing opinions and thoughts, it is impossible to clarify your goals and develop a personal style.

Emergency Protocols

Andrews University takes the safety of its students seriously. Signs identifying emergency protocol are posted throughout buildings. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting that specific location. It is important that you follow these instructions and stay with your instructor during any evacuation or sheltering emergency.

Evaluation of Student Performance

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|----------------------------------|------------|
| • Examinations | 200 points |
| • Quizzes | 100 points |
| • NIH self-study and certificate | 25 points |
| • Plagiarism self-study | 25 points |
| • Research Topic and Questions | 25 points |
| • Annotated Bibliography | 75 points |
| • Introduction | 50 points |
| • Literature Review | 75 points |
| • Methods Section | 75 points |
| • Research Proposal Assignment | 100 points |
| • Presentation of Proposal | 100 points |

Total Points possible	850 points
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Grading Criteria

Examination	25%
Quizzes	12%




NIH self-study and certificate	3%
Plagiarism self-study	3%
Annotated Bibliography	9%
Introduction	6%
Literature Review	9%
Methods Section	9%
Research Proposal Assignment	12%
Presentation of Proposal	12%


Grading Scale



A	100 – 94%
A-	<94 and \geq 90%
B+	<90 and \geq 87%
B	<87 and \geq 84 %
B-	<84 and \geq 80%
C+	<80 and \geq 77%
C	<77 and \geq 74%
C-	<74 and \geq 70%
D	<70 and \geq 65%
F	<65%


Note: “<” less than and “ \geq ” greater than or equal too



Date	Topic	Readings/Activities/Assignments
Week 1: 8/26 – 9/1		
Aug 28	Introductions, Review syllabus, course schedule and assignments	
Week 2: 9/2 – 9/8		
Labor Day – September 3rd		
Sept 4	What is Research/Scientific Method Ethical Considerations NIH Training Explained Choosing a Research Topic	Module 1: Introduction to Research and the Role of EBP Assigned Reading: Chapter 1 Orlikoff, et al., (2015) See Course Website for module lesson, assignments, module quiz, and additional information. Quiz 1: Module 1 Due 9/4 by 8:00 AM

Date	Topic	Readings/Activities/Assignments
		<p>Plagiarism Self-Study Lesson Due 9/4 by 11:00 PM</p> 
Week 3: 9/9 – 9/15		
Sept 11	<p>Sections of the Research Article</p> <p>Introduction Section</p> <p>Selecting and Stating Research Problems</p> <p>Crafting Scientific and Answerable Questions</p> <p>Research Hypothesis vs Null Hypothesis</p>	<p>Module 2: The Introduction Section of the Research Article</p> <p>Assigned Reading: Chapter 2 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 2: Module 1 Due 9/10 by 11:00 PM</p> <p>NIH Training Tutorial and Certificate Due 9/11 by 11:00 PM</p> 
Week 3: 9/16 – 9/22		
Sept 18	<p>Literature Review Section</p> <p>Planning and Conducting a Search, Endnotes and Other Library Resources/Tools for conducting research Guest Speaker: TBN Instruction Librarian, Andrews University</p>	<p>Reviewing the Literature and Searching the Databases</p> <p>Assigned Reading: Chapter 2 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Research Topic and Question(s) and/or Statement of the Problem Due 9/22 by 11:00 PM</p> 
Week 4: 9/23 – 9/29		

Date	Topic	Readings/Activities/Assignments
Sept 25	Quantitative Research Variables in Empirical Research Levels of Measurement Qualitative Research	<p>Module 3: Research Strategies in Communication Disorders</p> <p>Assigned Reading: Chapter 3 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 3: Module 3 Due 9/24 by 11:00 PM</p>
Week 5: 9/30 – 10/6		
Oct 2	Group designs Single-subject designs Validity issues	<p>Module 4: Research Designs in Communication Disorders</p> <p>Assigned Reading: Chapter 4 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 4: Module 4 Due 10/1 by 11:00 PM</p> <p>Annotated Bibliography Due 10/6 by 11:00 PM</p> 
Week 6: 10/7 – 10/13		
Fall Recess – October 8th - 9th		
Week 7: 10/14 – 10/20		
EXAMINATION: Midterm – October 16th (Modules 1 – 4, Chapters 1 – 4)		
Week 8: 10/21 – 10/27		

Date	Topic	Readings/Activities/Assignments
Oct 23	Treatment Efficacy Sampling Procedures Levels of Evidence	<p>Module 5: Experimental Designs for Studying Treatment Efficacy</p> <p>Assigned Reading: Chapter 5 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 5: Module 5 Due 10/22 by 11:00 PM</p> <p>Introduction Section Due 10/22 by 11:00 PM</p> 
Week 9: 10/28 – 11/3		
Oct 30	Components of the Method Section Subject Selection Criteria Materials Procedures Single Subject Design Guest Speaker: Dr. Tevni Grajales, Professor of Research and Statistical Methodology, Andrews University	<p>Module 6: Method Section of a Research Article</p> <p>Assigned Reading: Chapter 6 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 6: Module 6 Due 10/29 by 11:00 PM</p> <p>Literature Review Section Due 11/3 by 11:00 PM</p> 
Week 10: 11/4 – 11/10		
Nov 6	The Results Section Interpreting findings	<p>Modules 7: The Result Section of the Research Article: Findings</p> <p>Assigned Reading: Chapter 7 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 7: Module 7 Due 11/5 by 11:00 PM</p>

Date	Topic	Readings/Activities/Assignments
Week 11: 11/11 – 11/17		
Nov 13	Analyzing data (descriptive statistics and inferential statistics)	<p>Modules 8: The Result Section of the Research Article: Statistical Inference</p> <p>Assigned Reading: Chapter 8 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 8: Module 8 Due 11/12 by 11:00 PM</p> <p>Method Section Due 11/17 by 11:00 PM</p> 
Week 12: 11/18 – 11/24		
Nov 20	Disseminating Research Discussion Section	<p>Modules 9: The Discussion and Conclusion Section of the Research Article</p> <p>Assigned Reading: Chapter 9 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 9: Module 9 Due 11/19 by 11:00 PM</p>
Thanksgiving Break – November 21st - 25th		
Week 13: 11/25 – 12/1		
Nov 27	Blending Patient Values/Preferences, Scientific Evidence and Clinical Expertise Critically Evaluating EBP The IRB process Guest Speaker: Mordekai Ongo, Research Integrity & Compliance Officer Andrews University	<p>Module 10: EBP</p> <p>Assigned Reading: Chapter 10 Orlikoff, et al., (2015)</p> <p>See Course Website for module lesson, assignments, module quiz, and additional information.</p> <p>Quiz 10: Module 10 Due 11/26 by 11:00 PM</p> <p>Research Proposal Due by 11/29 by 11:00 PM</p>

Date	Topic	Readings/Activities/Assignments
		
Week 14: 12/2 – 12/8		
Dec 4	In Class Research Proposal Presentations	Research Proposal Presentations PPT Due 12/4 by 9:00 AM 
Last Day of Classes - Thursday, December 6th		
Week 15: 12/9 – 12/14		
FINAL EXAMINATION- Tuesday, December 11th 9:30AM – 12:20PM (Modules 5-10)		