

Term Information

Effective Term Autumn 2022
[Previous Value](#) Summer 2012

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

We are requesting that the course be offered by Distance Learning (DL) in addition to its current approval for in-person delivery.

What is the rationale for the proposed change(s)?

The course will be made a requirement for our undergraduate BA program to align with the Embedded Literacies area on data analysis for the new Gen Ed. However, some of our MA in speech-language pathology (MA-SLP) students will need the course as part of their MA-SLP curriculum. Offering the course DL will provide us with the scheduling flexibility to accommodate all students.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

As stated above, the course will be a requirement for the Speech and Hearing Science BA degree, pending curricular approval for those changes being made to align the program with the Embedded Literacies in the new GE program (proposal coming later in the year). The course will still be a requirement for the MA-SLP program, but many students will be able to have that requirement waived if they have taken the course, or its equivalent, as undergraduates.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area Speech and Hearing Science
Fiscal Unit/Academic Org Speech & Hearing - D0799
College/Academic Group Arts and Sciences
Level/Career Graduate, Undergraduate
Course Number/Catalog 5785
Course Title Research Methods I
Transcript Abbreviation Research Methods 1
Course Description Introduction to research design and data analysis for the hearing and speech sciences. The course is designed to provide training in the areas of quantitative and qualitative data analysis techniques. It is intended to fulfill pre-requisites for students who intend to pursue graduate training in clinical speech-language pathology or audiology.
[Previous Value](#) *Introduction to research design and data analysis for the hearing and speech sciences.*
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 12 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? Yes
Is any section of the course offered 100% at a distance
[Previous Value](#) No
Grading Basis Letter Grade
Repeatable No

Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Sometimes
<i>Previous Value</i>	<i>Never</i>
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	STAT 1350 or higher
<i>Previous Value</i>	<i>Prereq: Grad standing or permission of instructor.</i>
Exclusions	
<i>Previous Value</i>	Not open to students with credit for 785.
Electronically Enforced	No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	51.0204
Subsidy Level	Doctoral Course
Intended Rank	Junior, Senior, Masters, Doctoral
<i>Previous Value</i>	<i>Masters, Doctoral</i>

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes	<ul style="list-style-type: none">• Students should successfully be able to describe different types of research and the ethical principles that underlie research.• Students should successfully be able to demonstrate understanding of quantitative and quantitative research.• Students should successfully be able to define sampling and measurement.• Students should successfully be able to identify different statistical analyses and how and when they are used in research.• Students should successfully be able to describe effect sizes and how this is used in research.• Students should successfully be able to apply their understanding of research methods to effectively read a research article.• <i>Be able to design and implement rudimentary experimental protocols in the area of human communication disorders</i>
<i>Previous Value</i>	

Content Topic List

- Types of research
- Ethical principles in research
- Experimental design
- Quantitative versus qualitative data analysis
- Statistical analysis tests

Previous Value

- [Basic designs for research in speech](#)
- [Basic designs for research in hearing science](#)
- [Statistical applications common to research in speech and hearing science](#)

Sought Concurrence

No

Attachments

- SPHHRNG 5785_online syllabus.pdf: DL version of syllabus
(Syllabus. Owner: Bielefeld, Eric Charles)
- SPHHRNG 5785 cover sheet - completed.pdf: ASC tech review cover sheet
(Other Supporting Documentation. Owner: Bielefeld, Eric Charles)
- SPHHRNG_5785_Syllabus.docx: In-person syllabus from 2020
(Other Supporting Documentation. Owner: Bielefeld, Eric Charles)

Comments

- I've added the in-person syllabus from the most recent offering in 2020. Thanks! *(by Bielefeld, Eric Charles on 11/04/2021 04:51 PM)*
- Please also upload the in-person syllabus for comparative purposes <https://ascas.osu.edu/curriculum/distance-courses> *(by Vankeerbergen, Bernadette Chantal on 11/02/2021 03:22 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Bielefeld, Eric Charles	11/02/2021 01:56 PM	Submitted for Approval
Approved	Fox, Robert Allen	11/02/2021 03:16 PM	Unit Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	11/02/2021 03:23 PM	College Approval
Submitted	Bielefeld, Eric Charles	11/04/2021 04:51 PM	Submitted for Approval
Approved	Fox, Robert Allen	11/05/2021 07:05 PM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	11/07/2021 08:09 AM	College Approval
Pending Approval	Cody, Emily Kathryn Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Hilty, Michael Vankeerbergen, Bernadette Chantal Steele, Rachel Lea	11/07/2021 08:09 AM	ASCCAO Approval



SYLLABUS

SPHHRNG 5785

Research Methods I

Autumn/Spring 2022 (full term)

3 credit hours

Online

COURSE OVERVIEW

Instructor

Instructor:

Email address: (preferred contact method)

Phone number:

Office hours:

Prerequisites

Students must have completed STAT 1350 or higher.

Class Meeting Schedule:

Element 1: Asynchronous Recorded lectures, posted on Mondays at 12:00 AM EST.

Element 2: Weekly synchronous Zoom meeting for one hour. Time TBD.

Course description

Introduction to research design and data analysis for the hearing and speech sciences. The course is designed to provide training in the areas of quantitative and qualitative data analysis techniques. It is intended to fulfill pre-requisites for students who intend to pursue graduate training in clinical speech-

language pathology or audiology. Further, it was formatted to help fulfill the Embedded Literacy in data analysis that is a component of the General Education curriculum for Speech and Hearing Science.

Course learning outcomes

By the end of this course, students should successfully be able to:

- Describe different types of research and the ethical principles that underlie research
- Demonstrate understanding of quantitative and quantitative research
- Define sampling and measurement
- Identify different statistical analyses and how and when they are used in research
- Describe effect sizes and how this is used in research
- Apply their understanding of research methods to effectively read a research article

HOW THIS ONLINE COURSE WORKS

Mode of delivery: This course is 100% online. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Pace of online activities: This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Each topic will include multiple recorded lectures available on MediaSite that will be posted at 12:00 AM EST on the Monday of that week. The lectures can be consumed asynchronously at the student's pace.

There will also be a one-hour synchronous weekly meeting over Zoom during which we will discuss the learning activities and recorded lectures for that week.

Credit hours and work expectations: This is a **3-credit-hour course**. According to Ohio State policy (go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Attendance and participation requirements: Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of students' expected participation:

- **Participating in online activities for attendance: AT LEAST ONCE PER WEEK**
You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.

- **Live sessions and office hours: 1+ TIMES PER WEEK**
Attendance is expected at all live, synchronous meetings for the course. Office hours are optional.
- **Participating in quizzes and learning activities: 1+ TIMES PER WEEK**
As part of your participation in the quizzes and learning activities, each week you can expect to post or upload documents at least once as part of the week's learning activity topic.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

Required

- Patten, M.L & Newhart, M. (2018). *Understanding Research Methods: An Overview of the Essentials* (10th ed.). Routledge Taylor & Francis Group.

Course technology

Technology support

COURSE TECHNOLOGY

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743
- **Academic services offered on the OSU main campus:**
<http://advising.osu.edu/welcome.shtml>
- **Student services offered on the OSU main campus:** <http://ssc.osu.edu>.

Baseline technical skills for online courses

- Basic computer and web-browsing skills

- Navigating Carmen: for questions about specific functionality, see the [Canvas Student Guide](#).

Required Technology skills specific to this course

- Carmen Zoom, audio, and video chat
- Recording a slide presentation with audio narration
- Recording, editing, and uploading video
- Proctorio for use during the mid-term and Final exam

Required equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) or landline to use for BuckeyePass authentication

Required software

- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Full instructions for downloading and installation can be found [at go.osu.edu/office365help](https://go.osu.edu/office365help).

Carmen access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application (go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	POINTS
Weekly Quizzes (11 quizzes – 10 points each)	110
Learning Activities (9 activities – 10 points each)	90
Midterm	100
Final	100
Total	400

See course schedule below for due dates.

Descriptions of major course assignments

Weekly Quizzes

Description: The weekly quizzes are designed to assess your understanding of the content being covered each week. They will be available to complete asynchronously between 12:00 AM Monday and 5:00 PM Friday of each week.

Academic integrity and collaboration: You must complete the quizzes yourself, without any external help or communication. Each quiz may be taken up to 2 times.

Learning Activities

Description: The learning activities are designed to provide you with the opportunity to apply the information that you have learned. For example, in week 7 you will select a research article (from the articles provided on Carmen) and describe the sampling method used in that research article. This will enable you directly see how sampling is used in current research studies in the field of speech and hearing research. These assignments will be uploaded to Carmen for grading (there are no discussion posts for this class).

Academic integrity and collaboration: You must complete the learning activities yourself, without an external help or communication.

Mid-term and Final Exams

Description: The exams are designed to assess your understanding of the cumulative content being covered over the duration of the course and apply it examples of research activities in speech, language, and hearing. They will be available to complete asynchronously during a 12-hour window on the exam date. Proctorio lockdown browser will be used to restrict access to external websites or notes.

Academic integrity and collaboration: You must complete the exams yourself, without any external help or communication. Proctorio lockdown browser will be used to restrict access to external websites or notes.

Late assignments

Late submissions will not be accepted. Please refer to Carmen for due dates.

Grading scale

372-400: A
 360- 371: A-
 348-359: B+
 336-347: B
 320-335: B-
 312-319: C+
 292-311: C
 280-291: C-
 270-279: D+
 240-269: D
 0-239: E

Instructor feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-4357(HELP)** at any time if you have a technical problem.)

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails within **48 hours on days when class is in session at the university**.

OTHER COURSE POLICIES

Academic integrity policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university’s *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)

Student Services and Advising

University Student Services can be accessed through BuckeyeLink. More information is available here: <https://contactbuckeyelink.osu.edu/>

FOR UNDERGRAD COURSES: Advising resources for students are available here: <http://advising.osu.edu>

FOR GRADUATE COURSES: Please contact the Graduate Program Coordinator at sphhrng@osu.edu, the Graduate Studies chair at roup.2@osu.edu, the Speech-Language Pathology program oversight committee chair at bean.61@osu.edu, or the Audiology program oversight committee chair at bielefeld.6@osu.edu

Copyright for instructional materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu

Commitment to a diverse and inclusive learning environment

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Land Acknowledgement

We would like to acknowledge the land that The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and Cherokee peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greenville and the forced removal of tribes through the Indian Removal Act of 1830. I/We want to honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous peoples of this land.

More information on OSU's land acknowledgement can be found here:

<https://mcc.osu.edu/about-us/land-acknowledgement>

Your mental health

As a student you may experience a range of issues that can cause barriers to learn, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, on-demand resources are available

at go.osu.edu/ccsondemand. You can reach an on-call counselor when CCS is closed at 614- 292- 5766, and 24-hour emergency help is also available through the 24/7 National Prevention Hotline at 1- 800-273-TALK or at suicidepreventionlifeline.org. The Ohio State Wellness app is also a great resource available at go.osu.edu/wellnessapp.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Canvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)
- Collaborative course tools

COURSE SCHEDULE

Refer to the Carmen course for up-to-date assignment due dates.

Week	Dates	Topics, Readings, Assignments, Deadlines
1	8/23- 8/26	Topic: Introduction to Research Methods

Week	Dates	Topics, Readings, Assignments, Deadlines
		Readings: Part 1 (pgs. 1-11) Assessment: Carmen quiz must be completed by 11:59pm on 8/26
2	8/29-9/2	Topic: Types of Research Readings: Part 1 (pgs. 12-28) Assessment: Carmen quiz must be completed by 11:59pm on 9/2
3	9/5-9/9	Topic: Ethical Principles in Research Readings: Part 1 (pgs. 32-38) Learning Activity: Complete the OSU CITI Training
4	9/12-9/16	Topic: Basic Concepts in Quantitative Research Readings: Part 3 (pgs. 69-86) Assessment: Carmen quiz must be completed by 11:59pm on 9/16
5	9/19-9/23	Topic: Basic Concepts in Qualitative Research Readings: Part 6 (pgs. 159-180) Assessment: Carmen quiz must be completed by 11:59pm on 9/23
6	9/26-9/30	Mid-term – must be completed by 11:59pm on 9/30
7	10/3-10/7	Topic: Sampling Readings: Part 4 (pgs. 87-120) Learning Activity: Describe the sampling used in the assigned research article Assessment: Carmen quiz must be completed by 11:59pm on 10/7
8	10/10-10/14	Topic: Measurement Readings: Part 5 (pgs. 121-158) Learning Activity: Describe the measurement used in the assigned research article Assessment: Carmen quiz must be completed by 11:59pm on 10/14
9	10/17-10/21	Topic: Designing Experimental Research Readings: Part 7 (pgs. 181-200) Learning Activity: Describe the research design used in the assigned research article

Week	Dates	Topics, Readings, Assignments, Deadlines
		Assessment: Carmen quiz must be completed by 11:59pm on 10/21
10	10/24-10/28	<p>Topic: Analyzing Data – Understanding Statistics</p> <p>Readings: Part 8 (pgs. 201-227)</p> <p>Learning Activity: Describe the statistics used in the assigned research article</p> <p>Assessment: Carmen quiz must be completed by 11:59pm on 10/28</p>
11	10/31-11/4	<p>Topic: Analyzing Data – Understanding Statistics</p> <p>Readings: Part 8 (pgs. 201-230)</p> <p>Learning Activity: Describe the statistics used in the assigned research article</p> <p>Assessment: Carmen quiz must be completed by 11:59pm on 11/4</p>
12	11/7-11/11	<p>Topic: Analyzing Data – Understanding Statistics</p> <p>Readings: Part 8 (pgs. 231-244)</p> <p>Learning Activity: Describe the statistics used in the assigned research article</p> <p>Assessment: Carmen quiz must be completed by 11:59pm on 11/11</p>
13	11/14-11/18	<p>Topic: Analyzing Data – Understanding Statistics</p> <p>Readings: Part 8 (pgs. 245-258)</p> <p>Learning Activity: Describe the statistics used in the assigned research article</p> <p>Assessment: Carmen quiz must be completed by 11:59pm on 11/18</p>
14	11/21-11/25	<p>Topic: Effect Size & Meta-Analysis</p> <p>Readings: Part 8 (pgs. 259-269)</p>
15	11/28-12/2	<p>Topic: Effect Size & Meta-Analysis</p> <p>Readings: Part 8 (pgs. 269-279)</p> <p>Learning Activity: Describe the effect size used in the assigned research article and interpret what it means</p> <p>Assessment: Carmen quiz must be completed by 11:59pm on 12/2</p>
16	12/4-12/6	Review
		Final

Learning Activity Grading Rubric: Sampling

The learning activities are designed to provide you with the opportunity to apply the information that you are learning in class to effectively read current research in the area of speech and hearing science.

Description	Points	Grading Breakdown
Identify the article that you have selected for the assignment	1	1 point – the student identifies the article 0 points – student does not identify the article they have selected
Identify the sampling used in the research article and describe how the sampling used in the research article enables the researchers to answer their research question	3	3 points – the student correctly identifies the sampling used and provides a clear connection by using at least 2 examples of how the sampling enabled the researchers to answer the research question 2 points – the student correctly identifies the sampling used and provides a clear connection by providing 1 example of how the sampling enabled the researchers to answer the research question 1 point – the student correctly identifies the sampling used but does not provide a clear connection of how the sampling enabled the researchers to answer the research question 0 points – the student does not correctly identify the sampling used
Describe the strengths and limitations of the sampling used by the researchers	4	4 points – the student provides 2 examples of the strength of the sampling used in the research study and 2 examples of limitations 3 points – the student provides 2 examples of a strength and 1 example of a limitation (or vice versa) 2 points – the student provides 1 example of a strength and 1 example of a limitation 1 point – the student only provides 1 example of a strength or limitation 0 – the student does not provide any appropriate examples of strengths or limitations
Your paper should be professionally written	2	2 points – the paper is well written with no grammatical or spelling errors 1 point – the paper is well written with minimal grammatical and/or spelling errors 0 points – there are numerous spelling and grammatical errors throughout the paper.

Learning Activity Grading Rubric: Measurement

The learning activities are designed to provide you with the opportunity to apply the information that you are learning in class to effectively read current research in the area of speech and hearing science.

Description	Points	Grading Breakdown
Identify the article that you have selected for the assignment	1	1 point – the student identifies the article 0 points – student does not identify the article they have selected
Identify the measurements used in the research article and describe how the measures used in the research article enables the researchers to answer their research question	3	3 points – the student correctly identifies the measurements used and provides a clear connection by using at least 2 examples of how the measures enabled the researchers to answer the research question 2 points – the student correctly identifies the measurement used and provides a clear connection by providing 1 example of how the measures enabled the researchers to answer the research question 1 point – the student correctly identifies the measurement used but does not provide a clear connection of how the measures enabled the researchers to answer the research question 0 points – the student does not correctly identify the measurements used
Describe the strengths and limitations of the measurements used by the researchers	4	4 points – the student provides 2 examples of the strength of the measurements used in the research study and 2 examples of limitations 3 points – the student provides 2 examples of a strength and 1 example of a limitation (or vice versa) 2 points – the student provides 1 example of a strength and 1 example of a limitation 1 point – the student only provides 1 example of a strength or limitation 0 – the student does not provide any appropriate examples of strengths or limitations
Your paper should be professionally written	2	2 points – the paper is well written with no grammatical or spelling errors 1 point – the paper is well written with minimal grammatical and/or spelling errors 0 points – there are numerous spelling and grammatical errors throughout the paper.

Learning Activity Grading Rubric: Research Design

The learning activities are designed to provide you with the opportunity to apply the information that you are learning in class to effectively read current research in the area of speech and hearing science.

Description	Points	Grading Breakdown
Identify the article that you have selected for the assignment	1	1 point – the student identifies the article 0 points – student does not identify the article they have selected
Identify the research design used in the research article and describe how the research design used in the research article enables the researchers to answer their research question	3	3 points – the student correctly identifies the research design used and provides a clear connection by using at least 2 examples of how the research design enabled the researchers to answer the research question 2 points – the student correctly identifies the research design used and provides a clear connection by providing 1 example of how the research design enabled the researchers to answer the research question 1 point – the student correctly identifies the research design used but does not provide a clear connection of how the research design enabled the researchers to answer the research question 0 points – the student does not correctly identify the research design used
Describe the strengths and limitations of the research design used by the researchers	4	4 points – the student provides 2 examples of the strength of the research design used in the research study and 2 examples of limitations 3 points – the student provides 2 examples of a strength and 1 example of a limitation (or vice versa) 2 points – the student provides 1 example of a strength and 1 example of a limitation 1 point – the student only provides 1 example of a strength or limitation 0 – the student does not provide any appropriate examples of strengths or limitations
Your paper should be professionally written	2	2 points – the paper is well written with no grammatical or spelling errors 1 point – the paper is well written with minimal grammatical and/or spelling errors 0 points – there are numerous spelling and grammatical errors throughout the paper.

Learning Activity Grading Rubric: Understanding Statistics

The learning activities are designed to provide you with the opportunity to apply the information that you are learning in class to effectively read current research in the area of speech and hearing science.

Description	Points	Grading Breakdown
Identify the article that you have selected for the assignment	1	1 point – the student identifies the article 0 points – student does not identify the article they have selected
Identify the statistical analyses used in the research article and describe how the statistical analyses used in the research article enabled the researchers to answer their research question	3	3 points – the student correctly identifies the statistical analyses used and provides a clear connection by using at least 2 examples of how the statistical analyses enabled the researchers to answer the research question 2 points – the student correctly identifies the statistical analyses used and provides a clear connection by providing 1 example of how the statistical analyses enabled the researchers to answer the research question 1 point – the student correctly identifies the statistical analyses used but does not provide a clear connection of how the statistical analyses enabled the researchers to answer the research question 0 points – the student does not correctly identify the statistical analyses used
Describe why the statistical analyses used by the authors for the analysis was appropriate based on the data the authors collected	4	4 points – the student provides 4 examples of why the statistical analyses used by the authors were appropriate based on the data the authors collected 3 points – the student provides 3 examples of why the statistical analyses used by the authors were appropriate based on the data the authors collected 2 points – the student provides 2 examples of why the statistical analyses used by the authors were appropriate based on the data the authors collected 1 point – the student only provides 1 example of why the statistical analyses used by the authors were appropriate based on the data the authors collected 0 – the student does not provide any appropriate examples of why the statistical analyses used by the authors were appropriate based on the data the authors collected
Your paper should be professionally written	2	2 points – the paper is well written with no grammatical or spelling errors 1 point – the paper is well written with minimal grammatical and/or spelling errors 0 points – there are numerous spelling and grammatical errors throughout the paper.

Learning Activity Grading Rubric: Effect Sizes

The learning activities are designed to provide you with the opportunity to apply the information that you are learning in class to effectively read current research in the area of speech and hearing science.

Description	Points	Grading Breakdown
Identify the article that you have selected for the assignment	1	1 point – the student identifies the article 0 points – student does not identify the article they have selected
Define p-value and effect size and describe what each one measures	4	4 points – the student provides a comprehensive definition of p-value and effect size and gives an example of what each one measures. 3 points – the student provides a comprehensive definition of p-value and/or effect size but only gives an example of what one measures 2 points – the student provides a comprehensive definition of p-value and effect size but does not give an example of what each one measures 1 point – the student provides a comprehensive definition of p-value or effect size and does not give an example of what each one measures 0 – the student does not provide a comprehensive definition of p-value or effect size
Identify the effect size reported in the research article and interpret the results (i.e., what does that effect size mean)	4	4 points – the student provides 2 examples of effect sizes reported in the research article and correctly interprets what each one means 3 points – the student provides 2 examples of effect sizes reported in the research article and correctly interprets what one means 2 points – the student provides 1 example of an effect sizes reported in the research article and correctly interprets what it means 1 point – the student provides 1 example of an effect sizes reported in the research article but does not correctly interpret what it means 0 – the student does not provide an examples of an effect sizes reported in the research article
Your paper should be professionally written	2	2 points – the paper is well written with no grammatical or spelling errors 1 point – the paper is well written with minimal grammatical and/or spelling errors 0 points – there are numerous spelling and grammatical errors throughout the paper.

SYLLABUS
SPEECH & HEARING SCIENCE 5785
RESEARCH METHODS
AUTUMN 2020

COURSE OVERVIEW

Instructor

Instructor: Rebecca McCauley

Email address: mccauley.90@osu.edu (Please use this rather than the email in Carmen)

Phone number: 802-999-3128

Office hours: By arrangement—talk to me!

Office Location: Zoom

Zoom meeting times: as scheduled, 3:30-4:20 PM Tuesday, Thursday

Course description

The purpose of this course is to help students understand the value of evidence-based practice to clinical decision making and the importance of ethical, psychometric, and behavioral research concepts to basic and clinically applied research as well as to evidence-based practice.

Course learning outcomes

By the end of this course:

- Students should successfully be able to describe different types of research and the ethical principles that underlie research
- Students should successfully be able to demonstrate understanding of quantitative and quantitative research
- Students should successfully be able to define sampling and measurement
- Students should successfully be able to identify different statistical analyses and how and when they are used in research
- Students should successfully be able to describe effect sizes and how this is used in research
- Students should successfully be able to apply their understanding of research methods to effectively read a research article

Course materials

- No required text. All readings will be available on Carmen.
- A list of these appears at the end of the syllabus.

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

Technology skills necessary for this specific course

- Recording a slide presentation with audio narration
- Recording, editing, and uploading video

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

Necessary software

- Microsoft Office 365 ProPlus All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
 - Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
 - Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.

Grading, assignments, and faculty response expectations

Grades

Assignment	ASHA Standard Assessed	Points
Completion of the CITI HSP (Human Subjects Protection) course	Standard IV-E: The applicant must have demonstrated knowledge of standards of ethical conduct.	5
Midterm examination	Standard IV-E: The applicant must have demonstrated knowledge of standards of ethical conduct. Standard IV-F: The applicant must have demonstrated knowledge of processes used in research and of the integration of research principles into evidence-based clinical practice.	20
EBP application for a clinical question related to treatment	Standard IV-F (See above.) Standard V-A The applicant must have demonstrated skills in oral and written or other forms of communication sufficient for entry into professional practice.	40
Final examination	Standard IV-F (See above.) Standard V-A (See above.)	20
Participation	Standard V-A (See above.)	15
	TOTAL	100

See course schedule, below, for due dates

Late assignments

Late submissions can receive up to 50% up to one week after the submission deadline. After one week, you will receive a grade of “0”. A make-up examination will only be allowed if you contact the instructor prior to missing the exam.

Grading scale.

93–100: A	73–76.9: C
93–100: A	70 –72.9: C-
87–89.9: B+	67 –69.9: D+
83–86.9: B	60 –66.9: D
80–82.9: B-	Below 60: E
77–79.9: C+	

Assignment information

(1) Completion of the Human Subjects Protection CITI course (Certificate of completion) (5pts)

Purpose. Taking this course will introduce you to important ethical principles in research and enable you to participate as a researcher on a project of your own or that of another researcher.

Short description of the assignment. You will go to the Office of Research Compliance to the following page to complete them. You will choose the courses associated with Social and Behavioral Research.

<https://orrrp.osu.edu/irb/training-requirements/citi/>

(2) Examinations (Mid-term 20 pts and Final – 20)

Purpose. The purpose of these examinations is to encourage careful reading and study of course materials to promote retention of the most important concepts, especially those related to measurement concepts. The mid-term will cover content introduced from Week 1 to 7; The final will cover content introduced from Week 8 to 15.

Short description of the assignment.

(3) Presentation on EBP application for a clinical question related to treatment (40 pts)

Purpose. To (a) help you develop skills allowing you to search, evaluate and interpret evidence related to a clinical problem, a practice that represents a core aspect of EBP and (b) Share that information with your class colleagues.

Short description of the assignment.

(4) Participation (15 pts)

Purpose. To encourage you to engage with class materials and on-line discussions.

Short description of the assignment. The following is a summary of everyone's expected participation:

- **Logging into Carmen: TWO TIMES PER WEEK**
Be sure you are logging in to the course in Carmen at least 2 times per week (During most weeks you will probably log in many times.)
- **Participating in discussion forums: 2 TIMES PER WEEK**
As participation, each week you can expect to post at least two times as part of our substantive class discussion on the week's topics, readings and presentations.

Grading will be pass/fail such that the grade = $[(\# \text{ of weeks with at least 2 log-ins} + \# \text{ of weeks with at least 2 postings}) / (2 \times 15 \text{ weeks})] \times 15$.

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

Grading and feedback

For larger assignments, you can generally expect feedback **within 14 days**.

E-mail

I will reply to e-mails within **24 hours on school days**. Please email me at mccauley.90@osu.edu rather than through the Carmen email.

Discussion board

I will check and reply to messages in the discussion boards every **24 hours on school days**.

Attendance

A class meeting on Zoom will take place at one or two times per week to allow for live lectures, discussions, and live visits with researchers and an OSU librarian. Attendance at these is **REQUIRED**.

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. Informality (including an occasional emoticon) is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. (For the course materials, list at least the author and page numbers. For online sources, include a link.)
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into Carmen discussions.

Other course policies

Policies for this course

- **Exams:** You must complete the one examination in this course by yourself, without any external help or communication. Course materials may be consulted, however.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should

revise or rewrite your work. Although there will be several assignments in which you will be encouraged to work in small groups, your collaboration should stop at the point where you prepare your written response.

- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.
- **Name/pronoun preference:** I will gladly address you by a preferred name or gender pronoun. Please do not hesitate to notify me at the beginning of the semester or any time after, so that I may make appropriate changes to my records. As we seek to be an inclusive classroom, I support The Ohio State University's efforts and commitment to diversity and inclusion. If you have additional questions or concerns regarding names, pronouns, or other matters, please do not hesitate to reach out to me.
- **Feedback:** Students are encouraged to talk to me when things aren't going well in the class, for example, due to conflicts in the timing of assignments for different classes or if class materials aren't working to support learning. My goal in this course is to help you become the best critical thinkers and problems solvers you can be. Consequently, I trust that our working together will be the best way to accomplish that.

Ohio State's academic integrity policy

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Accessibility accommodations for students with disabilities

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- [Carmen \(Canvas\) accessibility](#)
- Streaming audio and video
- Synchronous course tools

Student academic services

Student academic services offered on the OSU main campus
<http://advising.osu.edu/welcome.shtml>.

Student support services

Student support services offered on the OSU main campus <http://ssc.osu.edu>.

Your mental health!

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the

aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614- 292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273- TALK or at suicidepreventionlifeline.org

Tentative Course Schedule

Week	Dates (Tu, Th)	Topics	Readings and assignment due dates Note: <u>Major assignment due dates</u> are in bold font with underlining
Introduction to Evidence-Based Practice			
1	Aug 25, 27	Evidence Based Practice, Research and Ethics	READINGS 1. ASHA (2016) Code of ethics (9 pp) 2. Dollaghan (2007) Intro to evidence-based practice. (8pp) 3. Finn, Bothe, & Bramlett (2005) Science and pseudoscience (15 pp) 4. Kalinowski, et al. (2007). Response to Finn et al. (8 pp) 5. Ebbels (2017). Intervention research 6. Kummer & Turner (2011). Ethics in the practice of speech-language pathology in health care settings.
2	Sept 1, 3	Information Gathering: Research and EBP - Part 1	READINGS 1. Wendt (2006) Critically appraised topics (3 pp) 2. Schlosser, Koul & Costello (2007) Asking well-built questions (14 pp) 3. Bragge (2010). Asking good clinical research questions (4 pp)
3	Sept 8, 10	Information Gathering: Research and EBP - Part 2	<ul style="list-style-type: none"> • <u>CITI training</u> READINGS 1. Gillam & Gillam (2006) EBP process in child language interventions in schools (10 pp) 2. Fey (2007) Response to Gillam & Gillam (4 pp)
Evaluating measurements within an EBP framework			
4	Sept 15, 17	Measurement & Stats review	READINGS 1. McCauley (2001) Chapter 2. Measurement of communication (31 pp)

5	Sept 22, 24	Evaluating Norm-referenced (NR) measures	<p>READINGS</p> <ol style="list-style-type: none"> 1. Friberg (2010) Considerations for test selection (16 pp) 2. McCauley & Swisher (1984) Use and misuse of NR tests. (11 pp) 3. Denman et al (2017) psychometric properties of language tests (29 pages) 4. Information gathering handout. (no need to upload summary) 5. 2 pages from Mental Measurement Yearbook reviewer's guide (2 pages) 6. On our Carmen website go to the Buros Center for Testing Website – look up and examine 2 reviews about the Test of Word Reading Efficiency (about 8 pages)
6	Sept 29, Oct 1	Evaluating criterion-referenced (CR) measures	<p>READINGS</p> <ol style="list-style-type: none"> 1. McCauley (1996) Familiar strangers: Criterion-referenced measures (10 pp) 2. Olswang & Bain (1994) Data collection (CR measurement) (12 pp) 3. McCauley & Strand (2008) Review of standardized tests (NR and CR) Oral motor and motor speech (11 pp)
7	Oct 6, 8	Measures to address diversity	<p>READINGS</p> <ol style="list-style-type: none"> 1. Peña, Gillam, & Bedore (2014) Dynamic assessment and ELL (13 pp) 2. Zuer Pearson, Jackson & Wu (2013) Dialect neutral testing (14 pp) 3. Arias & Friberg (2017). Bilingual language assessment (15 pp)
Evaluating research designs within an EBP framework			
8	Oct 13, 15	Evidence hierarchies & research designs	<p>Mid-term</p> <p>READINGS</p> <ol style="list-style-type: none"> 1. Sternberg & Sternberg (2012). Preparing a manuscript for publication. 2. Applebaum et al. (2018). Journal article reporting standards for quantitative research in psychology.
9	Oct 20, 22	Secondary Research – Systematic Reviews	<p>READINGS</p> <ol style="list-style-type: none"> 1. Hopper et al. (2011). EBP sys. review on cognitive interventions for dementia (10 pp) 2. Helmsley, et al. (2018). Systematic review of facilitated communication (2018)
10	Oct 27, 29	Group designs – randomized controlled trials	<p>READINGS</p> <ol style="list-style-type: none"> 1. Ramig, Halpern, Spielman, Fox, & Freeman (2018) Speech treatment in Parkinson's (14 pp) OR 2. Suskind et al. (2016). Parent-directed language intervention for children of low SES: RCT (41 pp) 3. Ludemann, Power, & Hoffman (2017) Description of RCTs (13 pp)

11	Nov 3, 5	Single-case experimental designs	<p>READINGS</p> <ol style="list-style-type: none"> 1. Byiers, Reichle & Symons (2012) SSEDs for EBP (18 pp) 2. Pohala & Allen (1999). A tutorial for understanding and evaluating single subject methodology (5 pages) 3. Katochwill, et al. (2013). Single-case intervention research design standards (13 pp)
12	Nov 10, 12	Group designs – not RCTs	<p>READINGS</p> <p>TBD</p>
13	Nov 17, 19	Case studies & Qualitative research	<p><u>EBP application for a clinical question related to treatment</u></p> <p>READINGS</p> <ol style="list-style-type: none"> 1. Yin (2012) Case study methods (~15 pp) 2. Brinton & Fujiki (2003) case studying showing quant and qualitative methods Child language (7 pp) 3. Rumbach et al. (2016). Challenges of dysphagia rehabilitation. 2 complex cases. (11 pp) 4. Damico & Simmons-Mackie (2004) Qualitative research (13 pp)
Challenges to Practicing EBP			
14	Nov 24	Research Challenges to EBP	<p>READINGS</p> <ol style="list-style-type: none"> 1. Dingfelder & Mandell (2011) Bridging the research to practice gap in ASD intervention 2. Olswang & Prelock (2015) Bridging the gap between research and practice: Implementation science (9 pp) 3. Turkstra et al. (2016). Specification of treatment is critical to EBP (8 pp)
15	Dec 1, 3	Client & Clinician Challenges to EBP	<p>READINGS</p> <ol style="list-style-type: none"> 1. Gawande (2013). Annals of medicine: Slow Ideas (the checklist) (15 pp) 2. Video on confirmatory bias 3. Croskerry (2002). Achieving quality in clinical decision making: Cognitive strategies and detection of bias.
16	Dec 7-11	Finals week	<u>Final exam</u> – Dec 9 4-5:45PM

2020 Readings

(These will be made available in modules along with other course materials, organized by week)

- American Speech-Language-Hearing Association. (2016). *Code of ethics*. Available from www.asha.org/policy. 9 pages
- Applebaum, M., Cooper, H., Kline, R.B., Mayo-Wilson, E., Nezu, A.M. & Rao, S. M. (2018). Journal article reporting standards for quantitative research in psychology: The APA Publications and Communications Board Task Force Report. *American Psychologist*, 73 (1), 3-25. 23 pages

- Arias, G. & Friberg, J. (2017). Bilingual language assessment: Contemporary versus recommended practice in American Schools, *Language, Speech, and Hearing Services in Schools*, 48, 1-15. DOI: 10.1044/2016_LSHSS-15-0090
- Bragge, P. (2010). Asking good clinical research questions and choosing the right study design. *Injury*, 41S, S3-S6. doi:10.1016/j.injury.2010.04.016. 3 pp
- Brinton, B., & Fujiki, M. (2003). Blending quantitative and qualitative methods in language research and intervention. *American Journal of Speech-Language Pathology*, 12 (2), 165-171. 7 pages
- Byiers, B.J., Reichle, J., & Symons, F.J. (2012). Single subject experimental design for evidence-based practice. *American Journal of Speech-Language Pathology*, 21, 397-414. 18 pages
- Burrus, A.E. & Willis, L.B. (2017). *Professional communication in speech-language pathology: How to write, talk, and act like a clinician* (3rd edition, pp. 206-210; 222-224). San Diego, CA Plural Publishing. 8 pages
- Coelho, C., Ylvisaker, M., & Turkstra, L. (2005). Nonstandardized assessment approaches for individuals with traumatic brain injuries. *Seminars in Speech & Language*, 26(4), 223-241. 18 pages
- Croskerry, P. (2002). Achieving quality in clinical decision making: Cognitive strategies and detection of bias. *Academic Emergency Medicine*, 9, 1184-1204. 21 pages
- Damico, J.S., & Simmons-Mackie, N.N. (2003). Qualitative research and speech-language pathology: A tutorial for the clinical realm. *American Journal of Speech-Language Pathology*, 12, 131-143. 13 pages.
- Denman, D., Speyer, R., Munro, N., Pearce, W.J., Chen, Y-W., & Cordier, R. (2017). Psychometric properties of language assessments for children aged 4-12 years: A systematic review. *Frontiers in Psychology*, 8, 1-28. doi: 10.3389/fpsyg.2017.01515 29 pages
- Dingfelder, H.E., & Mandell, D.S. (2011). Bridging the research-to-practice gap in autism intervention: An application of diffusion of innovation theory. *Journal of Autism and Developmental Disorders*, 41, 597-609. 13 pages
- Dollaghan, C.A. (2007). Chapter 1. Introduction to evidence-based practice. *The handbook for evidence-based practice in communication disorders* (pp. 1-8). Baltimore, MD: Paul Brookes. 8 pages
- Duchan, J.F., Calculator, S., Sonnenmeier, R., Diehl, S., & Cumley, G. (2001). A framework for managing controversial practices. *Language Speech and Hearing Services in Schools*, 32, 133-141. 9 pages
- Ebbels, S.H. (2017). Intervention research: Appraising study designs, interpreting findings and creating research in clinical practice. *International Journal of Speech-Language Pathology*, 19(3), 218-231. DOI: 10.1080/17549507.2016.1276215
- Fey, M.E. (2006). Commentary on "Making evidence-based decisions about children language interventions in schools" by Gillam and Gillam." *Language, Speech, and Hearing Services in Schools*, 37, 316-319. 4 pp
- Finn, P. Bothe, A.K., & Bramlett, R.E. (2005). Science and pseudoscience in communication disorders: criteria and applications. *American Journal of Speech-Language Pathology*, 14, 172-186. 15 pages
- Friberg, J.C., (2010). Considerations for test selection: How do validity and reliability impact diagnostic decisions? *Child Language Teaching and Therapy*, 26, 77-92. DOI: 10.1177/0265659009349972 16 pages
- Gillam, S.L., & Gillam, R.B., (2006). Making evidence-based decisions about child language intervention in schools. *Language, Speech, and Hearing Services in Schools*, 37, 304-315. 10 pages
- Gawande, A. (2013). Annals of medicine: Slow ideas. *The New Yorker*. 15 pages.
- Hemsley, B., Bryant, L., Schlosser, R.W., Shane, H.C., Lang, R., Paul, D., Banajee, M., & Ireland, M. (2018). Systematic review of facilitated communication 2014-2018 finds no new evidence that messages delivered using facilitated communication are authored by the person with disability. *Autism and Developmental Language Impairments*, 3, 1-8. DOI: 10.1177/2396941518821570 8 pages.
- Hopper, T., Bourgeois, M., Pimentel, J., Qualls, C.D., Hickey, E., Frymark, T., & Schooling, T. (2011). An evidence-based systematic review on cognitive interventions for individuals with dementia. *American Journal of Speech-Language Pathology*, 22, 126-145. 10 pages
- Kalinowski, J., Saltuklaroglu, T., Stuart, A., & Guntupali, V.K. (2007). On the importance of scientific rhetoric in stuttering: A reply to Finn, Bothe, and Bramlett (2005). *American Journal of Speech-Language Pathology*, 16, 69-76. 8 pages
- Kratochwill, T.R., Hitchcock, J.H., Horner, R.H., Levin, J.R., Odom, S.L., RIndskopf, D.M. & Shadish, W. R. (2013). Single-case intervention research design standards. *Remedial and Special Education* 34(1), 26-38. 13 pages
- Kummer, A.W., & Turner, J. (2011). Ethics in the practice of speech-language pathology in health care settings. *Seminars in Speech and Language*, 32(4), 330-337. 8 pages

- Ludemann, A., Power, E., & Hoffmann, T.C. (2017). Investigating the adequacy of intervention descriptions in recent speech-language pathology literature: Is evidence from randomized trials useable? *American Journal of Speech-Language Pathology*, 26, 443-455. 13 pages
- McCauley, R.J. (1996). Familiar strangers: Criterion-referenced measures in communication disorders. *Language, Speech, and Hearing Services in Schools*, 27, 122-131. 10 pages
- McCauley, R.J. (2001). Chapter 2. Measurement of children's communication and related skills. *Assessment of language disorders in children* (pp. 17-47). Mahwah, NJ: Lawrence Erlbaum Associates. 31 pages
- McCauley, R.J., & Strand, E.A. (2008). A review of standardized tests of nonverbal oral and speech motor performance in children. *American Journal of Speech-Language Pathology*, 17, 81-91. 11 pages
- McCauley, R.J. & Swisher, L. (1984). Use and misuse of norm-referenced tests in clinical assessment. A hypothetical case. *Journal of Speech and Hearing Disorders*, 49, 338-348. 11 pages
- Olswang, L.B., & Bain, B. (1994). Data collection: Monitoring children's treatment progress. *American Journal of Speech-Language Pathology*, 3, 55-66. 12 pages
- Olswang, L.B., & Prelock, P.A. (2015). Bridging the gap between research and practice: Implementation science. *Journal of Speech, Language, and Hearing Research*, 58, S1818-1826. 9 pages
- Peña, E.D., Gillam, R.B., & Bedore, L.M. (2014). Dynamic assessment of narrative ability in English accurately identifies language impairment in English Language Learners. *Journal of Speech, Language, Hearing Research*, 57, 2208-2220. 13 pages
- Pohala, J.A., & Allen, K.D. (1999). A tutorial for understanding and evaluating single subject methodology. *Proven Practice*, 1(2), 73-77. 5 pages
- Ramig, L., Halpern, A., Spielman, J., Fox, C., & Freeman, K. (2018). Speech treatment in Parkinson's disease: Randomized controlled trial. *Movement Disorders*, 33(11), 1777-1791. 15 pages
- Rumbach, A.F., Cremer, R., Chatwood, A., Fink, S., Haider, S., & Yee, M. (2016). The challenges of dysphagia management in two complex cases post chemical ingestion injury. *American Journal of Speech Language Pathology*, 25(4), 470-480. 11 pages
- Schlosser, R.W., Koul, R., & Costello, J. (2007). Asking well-built questions for evidence-based practice in augmentative and alternative communication. *Journal of Communication Disorders*, 40, 225-238. doi:10.1016/j.jcomdis.2006.06.00. 14 pages
- Sternberg, K., & Sternberg, R.J. (2012). Preparing a manuscript for publication. In H. Cooper (Ed.), *APA Handbook of research methods in psychology; Vol.3. Research designs* (pp.503-519). Washington, DC: APA. DOI: 10.1037/13621-026
- Suskind, D.L., Leffel, K.R., Graf, E., Hernandez, M. W, Gunderson, E.A., Spolich, S.G, Suskind, E. Leininger, L., Goldin-Meadow, S., & Levine, S.C. (2016). A parent-directed language intervention for children of low socioeconomic status: A randomized controlled pilot study. *Journal of Child Language*, 43, 366-406. Doi:10.1017/S0305000315000033
- Turkstra, L.S., Norman, R., Whyte, J., Dijkers, M.P., & Hart, T. (2016). Knowing what we're doing: why specification of treatment methods is critical for evidence-based practice in speech-language pathology. *American Journal of Speech-Language Pathology*, 1, 1-8. DOI: 10.1044/2015_AJSLP-15-0060 8 pp.
- Wendt, O. (2006). Critically appraised topic: An approach to critical appraisal of evidence. *Augmentative and Alternative Communication*, September, 24-26. 3 pages
- Yin, R.K. (2012). Case study methods. In H. Cooper (Ed.), *APA handbook of research methods in psychology: Vol 2. Research designs* (pp. 141-155). Washington, DC: American Psychological Association.
- Ylvisaker, M., Coelho, C., Kennedy, M., Sohlberg, M.M., Turkstra, L., Avery, J., et al. (2002). Reflections on evidence-based practice and rational clinical decision making. *Journal of Medical Speech Language Pathology*, 10, xxv-xxviii. 4 pages
- Zuer Pearson, B., Jackson J.E., (2014). Seeking a valid gold standard for an innovative, dialect-neutral language test. *Journal of Speech, Language, and Hearing Research*, 57, 495-508. DOI: 10.1044/2013_JSLHR-L-12-0126

Distance Approval Cover Sheet

For Permanent DL/DH Approval | College of Arts and Sciences

Course Number and Title: SPHHRNG 5785 Research Methods

Carmen Use

When building your course, we recommend using the [ASC Distance Learning Course Template](#) for CarmenCanvas. For more on use of [Carmen: Common Sense Best Practices](#).

- A Carmen site will be created for the course, including a syllabus and gradebook at minimum.

If no, why not?

Syllabus

- Proposed syllabus uses the ASC distance learning syllabus template, includes boilerplate language where required, as well as a clear description of the technical and academic support services offered, and how learners can obtain them.
- Syllabus is consistent and is easy to understand from the student perspective.
- Syllabus includes a schedule with dates and/or a description of what constitutes the beginning and end of a week or module.
- If there are required synchronous sessions, the syllabus clearly states when they will happen and how to access them.

Additional comments (optional):

Specific dates have not been included, but the syllabus is broken up into weekly modules that can overlaid onto an semester academic calendar.

Instructor Presence

For more on instructor presence: [About Online Instructor Presence](#).

Students should have opportunities for regular and substantive academic interactions with the course instructor. Some ways to achieve this objective:

- Regular instructor communications with the class via announcements or weekly check-ins.
- Instructional content, such as video, audio, or interactive lessons, that is visibly created or mediated by the instructor.

- Regular participation in class discussion, such as in Carmen discussions or synchronous sessions.
- Regular opportunities for students to receive personal instructor feedback on assignments.

Please comment on this dimension of the proposed course (or select/explain methods above):

Part of the course will run through weekly synchronous meetings. Furtherm there will be weekly quizzes and learning activities for which the student will post work and receive instructor feedback.

Delivery Well-Suited to DL/DH Environment

Technology questions adapted from the [Quality Matters](#) rubric. For information about Ohio State learning technologies: [Toolsets](#).

- The tools used in the course support the learning outcomes and competencies.
- Course tools promote learner engagement and active learning.
- Technologies required in the course are current and readily obtainable.
- Links are provided to privacy policies for all external tools required in the course.

Additional technology comments (optional):

Which components of this course are planned for synchronous delivery and which for asynchronous delivery? (For DH, address what is planned for in-person meetings as well.)

The asynchronous recorded lectures will cover the analysis and experimental design techniques for that week. The synchronous meeting will allow for applied examples, discussions of how to use the techniques discussed in clinical and pre-clinical experiments, and feedback on the quizzes and learning activities.

If you believe further explanation would be helpful, please comment on how course activities have been adjusted for distance learning (optional):

Workload Estimation

For more information about calculating online instruction time: [ODEE Credit Hour Estimation](#).

- Course credit hours align with estimated average weekly time to complete the course successfully.
- Course includes direct (equivalent of “in-class”) and indirect (equivalent of “out-of-class”) instruction at a ratio of about 1:2.

Provide a brief outline of a typical course week, categorizing course activities and estimating the approximate time to complete them or participate:

The in-class time will be two one-hour asynchronous MediaSite recorded lectures, and a one-hour synchronous meeting. The out-of-class time will include weekly readings, work on the quizzes and/or learning activity for that week.

- In the case of course delivery change requests, the course demonstrates comparable rigor in meeting course learning outcomes.

Accessibility

For more information or a further conversation, contact the [accessibility coordinator](#) for the College of Arts and Sciences. For tools and training on accessibility: [Digital Accessibility Services](#).

- Instructor(s) teaching the course will have taken Digital Accessibility training (starting in 2022) and will ensure all course materials and activities meet requirements for diverse learners, including alternate means of accessing course materials when appropriate.
- Information is provided about the accessibility of all technologies required in the course. All third-party tools (tools without campus-wide license agreements) have their accessibility statements included.

Description of any anticipated accommodation requests and how they have been/will be addressed.

The primary accommodation we have in our program is for hearing impairment. Therefore, all relevant Zoom meetings will be recorded and transcribed, and all video materials used, including MediaSite recordings, will include captioning.

Additional comments (optional):

Academic Integrity

For more information: [*Academic Integrity*](#).

- The course syllabus includes online-specific policies about academic integrity, including specific parameters for each major assignment:
- Assignments are designed to deter cheating and plagiarism and/or course technologies such as online proctoring or plagiarism check or other strategies are in place to deter cheating.

Additional comments (optional):

Frequent, Varied Assignments/Assessments

For more information: [*Designing Assessments for Students*](#).

Student success in online courses is maximized when there are frequent, varied learning activities.
Possible approaches:

- Opportunities for students to receive course information through a variety of different sources, including indirect sources, such as textbooks and lectures, and direct sources, such as scholarly resources and field observation.
- Variety of assignment formats to provide students with multiple means of demonstrating learning.
- Opportunities for students to apply course knowledge and skills to authentic, real-world tasks in assignments.

Comment briefly on the frequency and variety of assignment types and assessment approaches used in this course (or select methods above):

The course includes weekly quizzes to assess weekly knowledge, learning activities to apply the research techniques to areas relevant to clinical and pre-clinical speech and hearing science environments, and a midterm and final to assess accumulated knowledge and applications.

Community Building

For more information: [Student Interaction Online](#).

Students engage more fully in courses when they have an opportunity to interact with their peers and feel they are part of a community of learners. Possible approaches:

- Opportunities for students to interact academically with classmates through regular class discussion or group assignments.
- Opportunities for students to interact socially with classmates, such as through video conference sessions or a course Q&A forum.
- Attention is paid to other ways to minimize transactional distance (psychological and communicative gaps between students and their peers, instructor, course content, and institution).

Please comment on this dimension of the proposed course (or select methods above):

The synchronous meetings will allow for interactive participation, and breakout rooms will be used for smaller groups to brainstorm different ways to approach research problems and apply the techniques discussed in the class.

Transparency and Metacognitive Explanations

For more information: [Supporting Student Learning](#).

Students have successful, meaningful experiences when they understand how the components of a course connect together, when they have guidance on how to study, and when they are encouraged to take ownership of their learning. Possible approaches:

- Instructor explanations about the learning goals and overall design or organization of the course.
- Context or rationale to explain the purpose and relevance of major tasks and assignments.



- Guidance or resources for ancillary skills necessary to complete assignments, such as conducting library research or using technology tools.
- Opportunities for students to take ownership or leadership in their learning, such as by choosing topics of interest for an assignment or leading a group discussion or meeting.
- Opportunities for students to reflect on their learning process, including their goals, study strategies, and progress.
- Opportunities for students to provide feedback on the course.

Please comment on this dimension of the proposed course (or select methods above):

The learning activities permit application of the techniques for conducting research and analyzing data within the specific context of speech and hearing science. The learning activities will be structured so that multiple approaches can be deployed that would yield successful completion of the assignment. It will be up to the students, individually or in small breakout groups, to identify the approach that will work best for them.

Additional Considerations

Comment on any other aspects of the online delivery not addressed above (optional):

Syllabus and cover sheet reviewed by _____ on _____

Reviewer Comments:

Though the course does include synchronous elements that seem to be mandatory, in the "How this Online Course Works" section of the syllabus, all live sessions are described as "optional". Please consider editing so there is no ambiguity about expectations for attending synchronous meetings and the attendance policy.

Additional resources and examples can be found on [ASC's Office of Distance Education](#) website.