OCC THER 772: EVIDENCE BASED PRACTICE 2: RESEARCH DESIGN, METHODS, AND ANALYSIS

In Workflow

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New Course Proposal

Date Submitted: Thu, 21 Nov 2019 19:52:44 GMT

Viewing: OCC THER 772 : Evidence Based Practice 2: Research Design, Methods, and Analysis

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Changes proposed by: sgartland

Proposal contact information:

Name

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Type of approval

Governance Approval Needed

Is your unit (department/subject listing) submitting more than 5 course proposals at this time?

Yes

Basic Catalog Information

First Available Term

Spring 2021 (1214)

Should this course have the graduate attribute?

Yes

Who is the intended audience?

Graduate or professional students only

Subject

OCC THER - Occupational Ther (Dept-Kines)

Course Number

772

Is this course crosslisted?

No

Course Title

Evidence Based Practice 2: Research Design, Methods, and Analysis

Transcript Title

EBP II: Rsrch Dsgn, Mthd, Anly

Course Description

Supports the development of a research proposal and the skills needed to implement a research project. Develop a research proposal and analyze data to inform practice in occupational therapy. Second in the evidence-based practice sequence leading to the development of a proposal and completion of a scholarly study.

Enroll Info (usually None)

None

Requisites

Declared in Entry Level Occupational Therapy Doctorate program

Grading Basis

A/F

Component Type

Lecture section is scheduled

Credits

3

Is this a topics course?

No

Repeatable

No

Rationale for the Course

Why is this course being proposed? In responding to this question, be sure to answer the following: What gap in the curriculum is this course fulfilling? What is the purpose of the course? What degree and/or major requirement(s) will this fulfill?

This course proposal is part of a series of new and pre-existing graduate courses being created for a new named option Entry Level Doctoral Degree in Occupational Therapy (OTD) in the Department of Kinesiology. This course proposal is put forward as companion to the formal degree authorization proposal. The content for this course is designed to meet a portion of the curricular standards put forth by our accrediting agency; the Accreditation Council for Occupational Therapy Education (ACOTE). The purpose of this course is to provide information on evidence-based practice within occupational therapy and learn skills to implement a research project.

What is the estimated enrollment for the course?

32

How many qualified instructors in the primary unit will be able to teach the course?

6

Address the relationship of the course to other UW-Madison courses, including the duplication of content, both inside and outside the primary unit.

Occ Ther 772 Evidence Based Practice 2: Research Design, Methods and Analysis does not duplicate current content in the Department of Kinesiology. Any potential content overlap with existing health science programs (eg Athletic Training , Physical Therapy, and Communication Disorders has been reviewed by the respective program directors who have provided support to the new degree program (EL-OTD) and the respective courses making up that program. Each health science program is subject to outside accreditation requirements thus necessitating an independent offering as part of the OTD.

What subjects (if any) outside your department might be interested in this course?

Subjects outside of unit
PHY THER - Physical Therapy
CS&D - Communication Sci. & Disorders

Course Content Information

Course Learning Outcomes

	Outcomes – enter one learning outcome per box, use the green + to create additional boxes.	Audience
1	Select, apply, and interpret quantitative and qualitative methods for data analysis to include basic descriptive, correlational, and inferential quantitative statistics and analysis and synthesis of qualitative data.	Graduate

2	Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge including level of evidence, validity of research studies, strength of the methodology, and relevance to the profession of occupational therapy.	Graduate
3	Locate, select, analyze, and evaluate scholarly literature to make evidence-based decisions.	Graduate
4	Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning).	Graduate
5	Create scholarly reports appropriate for presentation or for publication in a peer reviewed journal that support skills of clinical practice. The reports must be made available to professional or public audiences.	Graduate

Credit hour policy

This course has been designed to meet the credit hour policy.

Please upload a syllabus.

OCC THER_772_Syllabus.pdf

Key: 13219

Occupational Therapy Program
DEPARTMENT OF KINESIOLOGY
UNIVERSITY OF WISCONSIN–MADISON

OCC THER 772
Evidence Based Practice 2: Research Design, Methods, and Analysis
Spring 1

3 Credits
Course is 3 credits and requires 135 hours of active learning. 45 Hours of learning will be in class and 90 will be outside of class. In this course, students will engage in reading, lectures, hands-on lab activities, quizzes, and written assignments.

Canvas Course URL: https://canvas.wisc.edu/courses/xxxxxx?

Meeting Time and Location: TBD

Instructional Mode: Face to face

Course Designations and Attributes
Graduate course for Entry Level OTD degree

Institution Name: University of Wisconsin-Madison

INSTRUCTOR

Instructor Name, Degrees
Position Title
608-xxx-xxxx
email @wisc.edu

Office hours/Chat hours: By Appointment

The course instructor will be available regularly in class and online to check messages and engage in discussions. You may arrange an individual appointment with the course instructor or send questions via email. Email is most effective for questions that are relatively simple (e.g., verifying factual information). If your questions relate to conceptual issues (e.g., explaining course content or assignments), then direct communication is encouraged.

OFFICIAL COURSE DESCRIPTION

Supports the development of a research proposal and the skills needed to implement a research project. Develop a research proposal and analyze data to inform practice in

occupational therapy. Second in the evidence-based practice sequence leading to the development of a proposal and completion of a scholarly study.

Requisites: Declared in Entry Level Occupational Therapy Doctorate program

LEARNING OUTCOMES

Upon course completion, the student will be able to:

1. *Select, apply, and interpret quantitative and qualitative methods for data analysis to include basic descriptive, correlational, and inferential quantitative statistics and analysis and synthesis of qualitative data. (ACOTE B.6.2)*
2. *Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge including level of evidence, validity of research studies, strength of the methodology, and relevance to the profession of occupational therapy (ACOTE B.6.1)*
3. *Locate, select, analyze, and evaluate scholarly literature to make evidence-based decisions. (ACOTE B.6.1)*
4. *Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning).*
    - This may include a literature review that requires analysis and synthesis of data. Systematic reviews that require analysis and synthesis of data meet the requirement for this Standard. (*ACOTE* B.6.1)
5. *Create scholarly reports appropriate for presentation or for publication in a peer reviewed journal that support skills of clinical practice. The reports must be made available to professional or public audiences. (ACOTE B.6.3)*

Commented [MS1]: This information should be listed somewhere else on the syllabus, or it should be included in the learning outcome itself.

ASSIGNMENTS

Assignment	Due Date	Percentage of Grade
In-Class Work & Peer Review Assignments	Weekly	15%
Hands-On Application Labs	Weekly	30%
Statistic Quizzes	Weekly	20%
Final Research Proposals	Finals week	30%
Self/Peer Group Assessment	Finals week	5%
Total		**100%**

Assignments are organized within 13 modules, and each module lasts 1-2 weeks.

In-Class Work & Peer Review Assignments: Throughout this course, there will be opportunities to submit work related to mentor/mentee discussions for peer review. We will emphasize peer review in this course, as the quality of all research rests on vigorous peer

review and comment, with the understanding that it is the work and not the person (student or investigator) being reviewed. All comments (positive and negative) must be honest, appropriate, and designed to improve the quality of the final project. Each peer review should be completed by posting feedback on your writer within your group forum of the course discussion section on the canvas course website. Use the proposal rubric to guide each peer review. Each peer review will be submitted with the proposal rubric completed for the author(s). Peer review deadlines are noted in the course syllabus. Learning outcomes addressed in this assignment include: Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge (ACOTE B.6.1).

Hands-On Application (HOA) Labs- The purpose of the HOA lab is to provide hands-on learning opportunities during which you can apply key course concepts. The HOA lab follows the flipped classroom model (http://kearnsmedia.weebly.com/using-canvas-to-flip-your-classroom.html), such that you have the opportunity to learn the material at your own pace through the assigned readings/videos, and then the lab time is used for you to apply that material in a supported environment. The assignments associated with the HOA lab are designed to be completed in the allocated 50 minutes of lab time. However, you will be allowed a full week to submit these assignments. Learning outcomes addressed in this assignment include: Select, apply, and interpret quantitative and qualitative methods for data analysis to include a) Basic descriptive, correlational, and inferential quantitative statistics. b) Analysis and synthesis of qualitative data (ACOTE B.6.2).

Statistics Quizzes- Eight open-book quizzes will test your knowledge of the basic statistical concepts and uses of the various statistical data analysis methods from your weekly reading and on-line tutorials. Quizzes must be completed BEFORE class time on the day that they are due. Each quiz will include 8-10 questions (multiple choice, multiple-multiple choice, and True/False). You will have 60 minutes to complete each quiz. Learning outcomes addressed in this assignment include: Select, apply, and interpret quantitative and qualitative methods for data analysis to include a) Basic descriptive, correlational, and inferential quantitative statistics. b) Analysis and synthesis of qualitative data (ACOTE B.6.2).

Final Group (or individual) Research Proposals- A major focus of this class is the preparation of a research proposal as the first significant step in completing the required research project. These proposals will be done as a group of 2-5 students or as an individual (whichever you and your mentor decide). Different types of proposals will be accepted but must be agreed upon by both you and your research mentor:

Type of Project (completed in OT 773)	**Aspects Completed/Due in OT 772**
Full research project	Proposal background, aims, methods, & data analysis plan
Systematic review or meta-analysis	Proposal for doing systematic review, background, aims, methods, and data analysis plan
Grant Proposal (NRSA or equivalent) (can only be completed as an individual)	Proposal background, aims, methods, and data analysis plan

This proposal will define an area of research, provide critical review and synthesis of relevant literature, and describe in detail the methods to be used to complete the project. The final proposal must also include all references and appendices needed to support the proposal.

Examples will be posted on the course site and reviewed in class. The proposed project will be completed and presented in OT 773. In preparing your proposal, you will submit drafts of sections throughout this course and receive feedback from the course instructor and your mentor. Learning outcomes addressed in this assignment include: (1) Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning) (ACOTE B.6.1). (2) Create scholarly reports appropriate for presentation or for publication in a peer reviewed journal that support skills of clinical practice. The reports must be made available to professional or public audiences (ACOTE B.6.3).

Self/Peer Group Assessment – The purpose of this assignment is to support students to make equitable contributions to their final research projects.

Assignment Submission

Unless otherwise stated, each assignment must be electronically submitted to the course website by 11:59 p.m. on the assigned due date. In order to ensure equitable grade assignment, all assignments must be turned in on the due date. **Assignments turned in late will not receive full credit.** For every day that an assignment is late, 10% of the student's earned points for that assignment will be deducted. **Assignments will NOT be accepted more than one week late.**

Guidelines for Assignment Format

Unless otherwise stated on the assignment guidelines:

1. All assignments should be typed, double-spaced, and use a font size no smaller than 14 characters per inch (e.g. Verdana 10-point font or Times New Roman 12-point font).
2. Use a 1-inch margin on all sides.
3. Insert page number for all assignments that are longer than 1 page.
4. All assignments should be written professionally using full sentences and paragraphs as appropriate.
5. Except for assignments to be written as occupational therapy documentation or otherwise specified, following the guidelines in the APA manual for writing style, including, but not limited to, headings, number, table format, citations, and reference list.
6. Clear and concise communication is a critical skill for OTs. Adhere to all page and space limits on assignments. Portions of the assignments exceeding page/space limits will not be considered in grading.

GRADING

Course grading is based on the successful completion of all assignments and is broken down according to the following percentages and awarded points.

Final grade assignment will use the following scale:

%	Grade
94-100	**A**
90-93.99	**AB**
84-89.99	**B**
80-83.99	**BC**
70-79.99	**C**
60-69.99	**D**
<60	**F**

REQUIRED TEXTBOOK, SOFTWARE & OTHER COURSE MATERIALS

Required Textbooks

- Portney, L.& Watkins, M. (2008). Foundations of Clinical Research: Applications to Practice (3rd Edition). Saddle River, N.J.: Prentice Hall.
- Taylor, R. (2017). Kielhofner's Research in Occupational Therapy: Methods for Inquiry for Enhancing Practice. Philadelphia, PA: F.A. Davis.
- American Occupational Therapy Association (AOTA) student membership, 1 year. Please go the AOTA membership website to obtain your student membership. If you have any questions or need assistance, please reach out to the professor or teaching assistant. Please upload your AOTA member number to Canvas by the second day of class.
- Pallant, J. (2016). SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS (6th ed). Chicago, IL: McGraw Hill, Inc.. ISBN: 9780335262588.

Recommended Textbook

- American Psychological Association. (2019). Publication Manual of the American Psychological Association, Seventh Edition. New York: American Psychological Association.

- UW-Madison Writing Center Handbook available at http://writing.wisc.edu/Handbook/index.html

Required Software

- IBM SPSS Statistics Premium GradPack V.23
- Canvas with BB Collaborate
- Google Docs, Hangouts
- YouTube
- Adobe Acrobat
- Microsoft Word, Excel

RULES, RIGHTS & RESPONSIBILITIES

- See the Guide's Rules, Rights and Responsibilities

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: "The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA." http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

DIVERSITY & INCLUSION

Institutional statement on diversity: "Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion

enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world." https://diversity.wisc.edu/

COURSE SCHEDULE

Modules: TOPIC Objectives	Readings	Activities
Module 1: **COURSE OVERVIEW & DEVELOPING THE RESEARCH QUESTION** **Lecture:** • **Identify course expectations and assignments** • **Discuss course engagement and classroom environment** • **Identify best practices for developing a research question for a research proposal/study** **Hands-On Activity Lab:** • **Identify best practices for scientific writing and peer review**	Textbooks: • Taylor, R. (2017). Chapter 11. Generating Research Questions and Defining Specific Aims & Hypotheses. E-articles (posted in Canvas): • Harter, S. (2006). (Part I and Part II). The challenge of framing a problem: What is your burning question? Discussion Prep: • Completed pre-course self-assessment on Canvas • Read Dunn (1997) in preparation to discuss best practices in scientific writing	Lecture: • ENGAGED PARTICIPATION • CLASS STRUCTURE • GO OVER RESULTS OF PRE-COURSE SELF-ASSESSMENT • STEPS TO DEVELOPING A RESEARCH QUESTION • SOURCES OF RESEARCH QUESTION INSPIRATION AND COMMON MIS-STEPS Hands-On Activity Lab: • BASICS OF GOOD SCIENCE WRITING • TIPS FOR GROUP WRITING • PEER REVIEW GUIDELINES
Module 2: **STARTING THE PROPOSAL: INTRODUCTION & LITERATURE REVIEW** **Lecture:** • **Review research proposal basics** • **Learn to craft meaningful and effective proposals** • **Review best practices for performing literature searches** • **Learn best practices for writing an introduction & literature review** **Hands-On Activity Lab:** • **How to navigate SPSS and output of APA-compliant tables and graphs**	Textbooks: • Review: Taylor, R. (2017). Chapter 13. Writing the Research Proposal • Taylor, R. (2017). Chapter 31. Writing a Literature Review E-articles (posted in Canvas): • Cone & Foster: Chapters 5 & 6 (posted on canvas) Discussion Prep: • If you want to know more about the research proposal, read Portney & Watkins: Chapter 32 • Lynda.com SPSS tutorial Modules 1-4 (posted on canvas). This takes a while, but it takes you through everything you need to know for the HOA Lab. • If you need more SPSS support, read Pallant Chapter 1. • Read links on how to make APA styled figures/tables in SPSS. • Upload the pdf of 2 articles from AJOT that are relevant to what you think your proposal topic might be.	Lecture: • RESEARCH PROPOSAL: WHAT IT IS, HOW WE WRITE IT, & WHY WE WRITE IT • THE HOURGLASS METHOD OF WRITING PROPOSALS • COMPONENTS OF AN INTRODUCTION • ACTIVITY: LET'S PARSE THE INTRO Hands-On Activity Lab: • NAVIGATING SPSS • CREATING GRAPHS AND TABLES IN SPSS Due: • APA-STYLE TITLE PAGE, ABSTRACT PAGE, AND REFERENCE PAGE WITH 3 REFERENCES FOR YOUR PROPOSAL (the text does not have to be real, but the text has to be

		formatted correctly according to APA)
Module 3: **QUALITATIVE DATA COLLECTION/MANAGEMENT & METHODS SECTIONS** **Lecture:** • **Overview of qualitative research** • **Best practices in qualitative data collection and analysis** • **Tools for qualitative analysis** **Hands-On Activity Lab:** • **Practice engaging qualitative data** • **Methods, results, & discussion Sections in qualitative research**	Textbooks: • Taylor, R. (2017). Chapter 16. Design Considerations in Qualitative Research • Taylor, R. (2017). Chapter 17. Collecting Qualitative Data • Taylor, R. (2017). Chapter 18. Contemporary Tools for Managing and Analyzing Qualitative Data • Taylor, R. (2017). Chapter 19. Qualitative Approaches to Interpreting and Reporting Data E-articles (posted in Canvas): • Video: Qualitative Interviewing 101, Nora Jacobson, PhD (canvas) Discussion Prep: • Please read narrative for in-class coding exercise	Lecture: • QUALITATIVE vs. QUANTITATIVE vs. MIXED RESEARCH • GOALS & CORE FEATURES OF QUALITATIVE RESEARCH • COMMON QUALITATIVE STRATEGIES Hands-On Activity Lab: • PRACTICE CODING • QUALITATIVE INTERPRETATION • QUALITATIVE WRITE UP
Module 4: **PARTICIPATORY AND MIXED APPROACHES FOR ENHANCING CULTURAL COMPETENCE IN DISSEMINATION AND IMPLEMENTATION RESEARCH** • **Recognize and implement participatory and mixed methods research by understanding the components, benefits, and challenges** • **How to enhance cultural competence in research**	Textbooks: • Taylor, R. (2017). Chapter 30. Participatory Research Approaches. • Taylor, R. (2017). Chapter 34. Using Mixed Methods Designs to Study Therapy and Its Outcomes E-articles (posted in Canvas): • Kone A, Sullivan M, Senturia K,Chrisman N, Ciske S, and Krieger J. (2000). Improving Collaboration between Researchers and Communities. Public Health Reports, 115:243-248. • Sullivan M, Kone A, Senturia K, Chrisman N, Ciske S, Krieger J. (2001). Researcher and researched – community perspectives: Towards bridging the gap. Health Education & Behavior, 28,130-149. • Minkler M, Salvatore A, & Chang C. (2018). Chapter 11. Participatory approaches for study design and analysis in dissemination and implementation research. Discussion Prep: Reflection on how to enhance cultural competence using participatory and mixed methods research due (300 words max about what you learned from the readings or about remaining questions you have about the topic)	Lecture: • CONTINUUM OF PARTICIPATION IN RESEARCH • COMMUNITY BASED PARTICIPATORY RESEARCH (CBPR) AND MIXED METHODS: BASICS & KEY PRINCIPLES • CBPR AND MIXED METHODS BENEFITS AND CHALLENGES • PCORI GRANTS •
Module 5: **QUANTITATIVE DATA COLLECTION/MANAGEMENT & METHODS SECTIONS**	Textbooks: • Taylor, R. (2017). Chapter 20. Quantitative Research Designs: Defining Variables and Their Relationships with One Another	Lecture: • GOALS & CORE FEATURES OF QUANTITATIVE RESEARCH

Lecture: • **Overview of quantitative research** • **Best practices in quantitative data collection and analysis** • **Tools for quantitaive analysis** **Hands-On Activity Lab:** • **Preparing the Data File & Dual Data Entry**	• Taylor, R. (2017). Chapter 22. Collecting Quantitative Data • Taylor, R. (2017). Chapter 23. Entering, Storing, and Managing Data • Pallant, J. (2016).Chapter 4: Creating a Data File and Entering Data. • Pallant, J. (2016).Chapter 5: Screening and Cleaning the Data Discussion Prep: • Excel for Researchers pp. 1-37 (posted on canvas) • Look over dual-entry excel form (under HOA lab)	• COMMON QUANTIATIVE STRATEGIES Hands-On Activity Lab: • PREPARE A DATA FILE IN EXCEL • PERFORM DUAL DATA ENTRY Due: • MENTOR/MENTEE DISCUSSION SHEET DUE • POST YOUR MENTOR-APPROVED RESEARCH QUESTION
Module 6: **BASICS OF STATISTICS** **Lecture:** • **Understand the foundations of statistical analysis and descriptive statistics** **Hands-On Activity Lab:** • **Using SPSS to Describe Quantitative Data**	Textbooks: • Portney & Watkins: Chapter 17 & Review Chapters 4,8-11 • Pallant, J. (2016).Chapter 6: Descriptive Statistics. • Pallant, J. (2016).Chapter 7: Using Graphs to Describe and Explore Data • Pallant, J. (2016).Chapter 8: Manipulating the Data. Discussion Prep: • Statistics Quiz 1	Lecture: • DESCRIPTIVE VS INFERENTIAL STATISTICS • TYPES OF VARIABLES, & SCALES OF MEASUREMENT • SHAPES OF DISTRIBUTIONS, CENTRAL TENDENCY, & VARIABILITY • Z-SCORES Hands-On Activity Lab: • OBTAIN & VISUALIZE DESCRIPTIVE STATISTICS FOR DIFFERENT TYPES OF VARIABLES • INTERPRET & REPORT DESCRIPTIVE STATISTICS
Module 7: **STATISTICAL INFERENCE AND CONCEPTS OF STATISTICAL TESTING** **Lecture:** • **Understand the foundations of inferential statistical analysis and hypothesis testing** **Hands-On Activity Lab:** • **Peer review of introduction and outline of literature review**	Textbooks: • Portney, L. & Watkins, M. (2008). Chapter 18: Statistical Inference. • Pallant, J. (2016). Chapter 9: Choosing the right statistics. E-articles (posted in Canvas): • Why inferential statistics are needed (see canvas) • Understanding confidence intervals (see canvas) Discussion Prep: • Submit literature review for peer review • Statistics Quiz 2	Lecture: • POPULATION VS. SAMPLES • PROBABILITY • HYPOTHESIS TESTING Hands-On Activity Lab: • PEER REVIEW
Module 8: **1-2 GROUP QUASI-EXPERIMENTAL DESIGNS & T-TESTS** **Lecture:**	Textbooks: • Portney, L. & Watkins, M. (2008). Chapter 11: Quasi-Experimental Designs. • Portney, L. & Watkins, M. (2008). Chapter 19: Comparing Two Means: The t-test.	Lecture: • 1-2 GROUP QUASI-EXPERIMENTAL DESIGNS • T-TEST BASICS Hands-On Activity Lab:

• **Understand 1- & 2-group quasi-experimental designs** • **Utilize t-tests to compare 2 groups in quasi-experimental designs** **Hands-On Activity Lab:** • **Performing t-tests in SPSS**	• Pallant, J. (2016).Chapter 17: T-tests. E-articles (posted in Canvas): • T-test online tutorials (see canvas) • Blog post: how to write statistical hypotheses Discussion Prep: • Statistics Quiz 3	• ANSWERING RESEARCH QUESTIONS WITH T-TESTS • INTERPRETING T-TEST RESULTS
Module 9: **3+ GROUP QUASI-EXPERIMENTAL DESIGNS & ONE-WAY ANOVA** **Lecture:** • **Understand 3+-group quasi-experimental designs** • **Utilize one-way ANOVA to compare 3+ groups in quasi-experimental designs** **Hands-On Activity Lab:** • **Performing one-way ANOVA in SPSS**	Textbooks: • Portney, L. & Watkins, M. (2008). Chapter 20 [1st half]: Comparing More Than Two Means: Analysis of Variance. • Pallant, J. (2016).Chapter 18: One-way analysis of variance. E-articles (posted in Canvas): • ANOVA online tutorials (see canvas) Discussion Prep: • Statistics Quiz 4	Lecture: • 3+ GROUP QUASI-EXPERIMENTAL DESIGNS • CONCEPTUAL BASIS OF ANOVA Hands-On Activity Lab: • ANSWERING RESEARCH QUESTIONS WITH ONE-WAY ANOVAs • INTERPRETING ONE-WAY ANOVA RESULTS • METHODS SECTION DUE
Module 10: **TRUE EXPERIMENTAL DESIGNS AND ADVANCED ANOVA** **Lecture:** • **Understand true experimental designs** • **Utilize advanced ANOVA to compare 3+ groups in quasi-experimental designs** **Hands-On Activity Lab:** • **Performing Advanced ANOVA & ANCOVA in SPSS**	Textbooks: • Portney, L.& Watkins, M. (2008). Chapter 10: Experimental Designs. • Portney, L.& Watkins, M. (2008). Chapter 20 [2nd half]: Comparing More Than Two Means: Analysis of Variance. • Pallant, J. (2016).Chapter 19: Two-way between-groups ANOVA. • Pallant, J. (2016).Chapter 20: Mixed between-within subjects analysis of variance. • Pallant, J. (2016).Chapter 22: Analysis of covariance. E-articles (posted in Canvas): • Mulder, R. T., Frampton, C., Joyce, P. R., & Porter, R. (2003). Randomized controlled trials in psychiatry. Part 2: Their relationship to clinical practice. Australian and New Zealand Journal of Psychiatry, 37, 265–269. • Porter, R., Frampton, C., Joyce, P. R., & Mulder, R. T. (2003). Randomized controlled trials in psychiatry. Part 1: methodology and critical evaluation. Australian and New Zealand Journal of Psychiatry, 37, 257–264. • Williams, L. S. (2001). Randomized controlled trials: Methodology, outcomes and interpretation. (pp 1-26). In J. Biller & J. Bogousslavsky (Eds.). Clinical Trials in Neurologic Practice. Boston MA: Butterworth-Heinemann. Discussion Prep:	Lecture: • RANDOMIZED CONTROLLED TRIALS • TWO-WAY (FACTORIAL) ANOVA • REPEATED MEASURES ANOVA • MIXED ANOVA • ANCOVA Hands-On Activity Lab: • ANSWERING RESEARCH QUESTIONS WITH ANOVA & ANCOVA • INTERPRETING ADVANCED ANOVA RESULTS • ANTICIPATED RESULTS DUE

	• Statistics Quiz 5	
Module 11: **EXPLORATORY & DESCRIPTIVE RESEARCH AND CORRELATION & REGRESSION** **Lecture:** • **Understand exploratory & descriptive research designs** • **Utilize correlations and regression to find relations in exploratory/descriptive research** **Hands-On Activity Lab:** • **Performing Correlation & Regression in SPSS**	Textbooks: • Portney, L.& Watkins, M. (2008). Chapter 13: Exploratory Research: Observational Designs. • Portney, L.& Watkins, M. (2008). Chapter 14: Descriptive Research. • Portney, L.& Watkins, M. (2008). Chapter 23: Correlation. • Portney, L.& Watkins, M. (2008). Chapter 24: Regression. • Pallant, J. (2016).Chapter 11: Correlation. • Pallant, J. (2016).Chapter 12: Partial Correlation. • Pallant, J. (2016).Chapter 13: Multiple Regression. E-articles (posted in Canvas): • Benedict, R.E. (2006). Disparities in use of and unmet need for therapeutic and supportive services among school-aged children with functional limitations: A comparison across settings. Health Services Research, 41, 103-24. • Ottenbacher, K. J., Smith, P. M., Illig, S. B., Linn, R. T., Ostir, G. V., & Granger, C. V. (2004). Trends in length of stay, living setting, functional outcome, and mortality following medical rehabilitation.[see comment]. JAMA, 292(14), 1687-1695. Discussion Prep: • Statistics Quiz 6	Lecture: • DESCRIPTIVE RESEARCH • OBSERVATIONAL RESEARCH • EXPLORATORY ANALYSES • EPIDEMIOLOGY, CASE-CONTROL STUDIES, & COHORT STUDIES Hands-On Activity Lab: • ANSWERING RESEARCH QUESTIONS WITH CORRELATION & REGRESSION
Module 12: **CHI-SQUARE, NON-PARAMETRIC STATISTICS SECTION** **Lecture:** • **Utilize chi-square & non-parametric tests in research** **Hands-On Activity Lab:** • **Performing Chi-Square and Non-Parametric Tests in SPSS**	Textbooks: • Portney, L.& Watkins, M. (2008). Chapter 22: Nonparametric Tests for Group Comparisons. • Portney, L.& Watkins, M. (2008). Chapter 25: Measures of Association for Categorical Variables: Chi-Square. • Pallant, J. (2016).Chapter 16: Non-Parametric Statistics. E-articles (posted in Canvas): • AJOT Chi-Square Article (Salls et al., 2002) Discussion Prep: • Statistics Quiz 7	Lecture: • CHI-SQUARE GOODNESS OF FIT VS. TEST OF INDEPENDENCE • CONCEPTUAL BASIS OF NONPARAMETRIC TESTS Hands-On Activity Lab: • ANSWERING RESEARCH QUESTIONS WITH CHI-SQUARE TESTS • ANSWERING RESEARCH QUESTIONS WITH NON-PARAMETRIC TESTS
Module 13: **EFFECT SIZES, SYSTEMATIC REVIEWS, & META-ANALYSES** **Lecture:** • **Know how to interpret effect sizes**	Textbooks: • Portney, L.& Watkins, M. (2008). Chapter 16: Systematic Reviews and Meta-Analyses. • Taylor, R. (2017). Chapter 25. Meta-Analysis. E-articles (posted in Canvas): • How to write an abstract (blog post)	Lecture: • CONCEPTUAL BASIS OF EFFECT SIZES • SYSTEMATIC REVIEW VS. META-ANALYSIS • PRISMA GUIDELINES

• **Understand the components of a systematic review** • **Understand the components of a meta-analysis** **<u>Hands-On Activity Lab:</u>** • **Calculating and reporting effect sizes**	• PRISMA Reporting Criteria <u>Discussion Prep:</u> • Statistics Quiz 8	<u>Hands-On Activity Lab:</u> • CALCULATE EFFECT SIZES • CONVERT ACROSS DIFFERENT MEASURES OF EFFECT SIZE • INTERPRET EFFECT SIZES **FINAL RESEARCH PROPOSAL DUE** **SELF/PEER GROUP ASSESSMENT DUE**