Midwestern University College of Health Sciences

CLINICAL PSYCHOLOGY PROGRAM

PSYCG 1514

Research Methods and Design

Spring 2018 / 3 Credits (30 clock hours) Wednesdays 8:00 – 11:00 am – Ocotillo 106

COURSE DESCRIPTION

Welcome to Research Methods and Design! This course is designed to introduce graduate students to quantitative and qualitative research methodology and continue preparation for dissertation development. There are three primary objectives for this class. The first is to help you develop the necessary skills and knowledge to read and interpret psychological research. These skills will help you as you move to professional practice and improve your ability to apply research findings to clinical practice. The second objective for this class is to help you develop the tools to begin your dissertation. This will include practice with literature reviews and research design. The final objective is to understand and apply ethical principals in the development, implementation, and dissemination of research.

Specific course goals and corresponding discipline specific knowledge and profession wide competencies to be addressed in this course are outlined below.

CATALOGUE DESCRIPTION

This course is a survey of the methods used in empirical clinical research, program evaluation, and clinical outcomes studies. Students will learn both experimental and quasi-experimental designs. Strategies for research design, subject selection, and statistical analysis will also be examined.

COURSE PRE-REQUISITE(S)

PSYCG 1508 Fundamental of APA Style; PSYCG 1509 Fundamentals of Graduate Level Writing; PSYCG 1515 Tests and Measurements I; and PSYCG 1516 Tests and Measurements II.

COURSE INSTRUCTOR

Kate Jansen, PhD Phone: 623-572-3712

Email: kjanse@midwestern.edu

Office hours: Wednesday 8-11am, Thursday 2-4pm, and by appointment

ADA POLICY

It is the policy of Midwestern University to ensure that no qualified student with a disability is excluded from participation in or subjected to discrimination in any University program, activity, or event. Student Services coordinates accommodations for all eligible students. If you need accommodations for a disability, please contact Student Services – Dr. Shannon Sesterhenn,

Coordinator for Disability Services, as soon as possible by email (<u>sseste@midwestern.edu</u>) or by phone at 623-572-3357.

It is the student's responsibility to identify themselves in a timely manner as an individual with a disability when seeking an accommodation. More information regarding available services can be found at:

https://www.midwestern.edu/glendale_campus/student_services/disability_services.html

Students who have Letters of Accommodations, please see me during my office hours or by appointment the first week of class to ensure that we are best meeting your learning needs.

REQUIRED READINGS

Books (to be purchased):

Kazdin, A. E. (2017). Research design in clinical psychology (5th ed.). Boston, US: Pearson. ISBN-13: 978-0205992089

Articles (available on Canvas and via Library resources)

- Berke, D. M., Rozell, C. A., Hogan, T. P., Norcross, J. C., & Karpiak, C. P. (2011). What clinical psychologists know about evidence-based practice: Familiarity with online resources and research methods. *Journal Of Clinical Psychology*, *67*(4), 329-339. doi:10.1002/jclp.20775
- Bohannon, J. (2015). Many psychology papers fail replication test. *Science*, *349(6251)*, 910-911. doi:10.1126/science.349.6251.910
- Burger, J. M. (2009). Replicating Milgram: Would people still obey today? *American Psychologist*, 64(1), 1-11. doi:http://dx.doi.org/10.1037/a0010932
- Cohen, J. (1990). Things I have learned so far. *American Psychologist*, 45, 1304-1312. doi: 10.1037/0003-066X.45.12.1304
- Cohen, J. (1994). The earth is round (p < .05). *American Psychologist*, 49, 997-1003. doi: 10.1037/0003-066X.49.12.997
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological bulletin*, *52*(4), 281. Doi: 10.1037/h0040957
- Dijkstra, A., & Bos, C. (2015). The effects of repeated exposure to graphic fear appeals on cigarette packages: A field experiment. *Psychology Of Addictive Behaviors, 29(1)*, 82-90. doi:10.1037/adb0000049
- Fallon, M. (2018). Writing Quantitative Empirical Manuscripts With Rigor and Flair (Yes, It's Possible). *Psi Chi Journal of Psychological Research*, *23*(3). Retrieved from http://www.psichi.org

- Hayes, J. A., Nelson, D. B., & Fauth, J. (2015). Countertransference in successful and unsuccessful cases of psychotherapy. *Psychotherapy*, *52*(1), 127-133. doi:10.1037/a0038827
- Hom, M. A., Albury, E. A., Gomez, M. M., Christensen, K., Stanley, I. H., Stage, D. L., & Joiner, T. E. (2019). Suicide attempt survivors' experiences with mental health care services: A mixed methods study. *Professional Psychology: Research and Practice*. Advance online publication. https://doi.org/10.1037/pro0000265
- Isacco, A., Hammer, J. H., & Shen-Miller, D. S. (2016). Outnumbered, but meaningful: The experience of male doctoral students in professional psychology training programs. *Training And Education In Professional Psychology*, *10*(1), 45-53. doi:10.1037/tep0000107
- Kirk, R. E. (1996). Practical significance: A concept whose time has come. *Educational and Psychological Measurement*, *56*, 746-759. Doi: 10.1177/0013164496056005002
- Kosinski, M., Matz, S. C., Gosling, S. D., Popov, V., & Stillwell, D. (2015). Facebook as a research tool for the social sciences: Opportunities, challenges, ethical considerations, and practical guidelines. *American Psychologist*, *70*(6), 543-556. http://dx.doi.org/10.1037/a0039210
- Mangione, L., Borden, K. A., Nadkarni, L., Evarts, K., & Hyde, K. (2018). Mentoring in clinical psychology programs: Broadening and deepening. *Training and Education in Professional Psychology*, *12*(1), 4. https://doi.org/10.1037/tep0000167
- Morales, E., & Norcross, J. C. (2010). Evidence-based practices with ethnic minorities: Strange bedfellows. *Journal of Clinical Psychology*, *66*(8), 821-829. doi:10.1002/jclp.20712
- Rossen, E., & Oakland, T. (2008). Graduate preparation in research methods: The current status of APA-accredited professional programs in psychology. *Training and Education in Professional Psychology*, 2, 42-49. Doi: 10.1037/1931-3918.2.1.42
- Wilkinson, L. (1999) Statistical methods in psychology journals. *American Psychologist, 54 (8)*, 594-604. Retrieved from http://www.apastyle.org/manual/related/wilkinson-1999.pdf
- Yeh, R. W., Valsdottir, L. R., Yeh, M. W., Shen, C., Kramer, D. B., Strom, J. B., ... & Nallamothu, B. K. (2018). Parachute use to prevent death and major trauma when jumping from aircraft: randomized controlled trial. *bmj*, *363*, k5094. doi: https://doi.org/10.1136/bmj.k5094

COURSE LEARNING OBJECTIVES

Discipline Specific Knowledge (DSK):

a. History and Systems of Psychology; **b.** Affective Aspects of Behavior; **c.** Biological Aspects of Behavior; **d.** Cognitive Aspects of Behavior; **e.** Developmental Aspects of Behavior; **f.** Social Aspects of Behavior; **g.** Advanced Integrative Knowledge of Basic Discipline-Specific Content Areas; **h.** Research Methods; **i.** Statistical Analysis; **j.** Psychometrics

Program Profession-Wide Competencies (PWC):

I. Research; II. Ethical and legal standards; III. Individual and cultural diversity; IV. Professional values; attitudes, and behaviors; V. Communication and interpersonal skills; VI. Assessment; VII. Intervention; VIII. Supervision; IX. Consultation and interprofessional/interdisciplinary skills.

Course Objectives for Research Methods and Design

- 1. Critically read and review published clinical research reports (DSK: h; PWC: I).
- 2. Describe the components of a clinical research project and manuscripts (DSK: h; PWC: I).
- 3. Describe developmental, cultural, racial and biological diversity affecting the planning, execution, reporting and interpretation of clinical research (DSK: h; PWC: I, III).
- 4. Identify and comprehend ethical and professional issues related to research (DSK: h; PWC: I, II).
- 5. Identify and comprehend theoretical and practical differences between quantitative, qualitative and mixed research designs and the rationale for selecting each (DSK: h; PWC: I).
- 6. Identify and comprehend basic principles of measurement and evaluation related to research (DSK: h, i, j; PWC: I).
- 7. Develop hypotheses and methods to test them for a set of research questions (DSK: h, i; PWC: I).
- 8. Prepare a preliminary research proposal with literature review, hypotheses and methods to address a provided set of research questions (DSK: h; PWC: I).
- 9. Produce an understanding of, and appreciation for, the fundamental role that research methods and statistics play in the development of a scholarly attitude and commitment to lifelong learning (DSK: h; PWC: I).

COURSE REQUIREMENTS, ASSIGNMENTS, AND EVALUATION:

This course will utilize Canvas to manage course materials, assignments, and information. It is your responsibility to check Canvas for updates. You are also encouraged to utilize the student discussion board on Canvas to reach out to peers for clarification on course content. Please note that faculty and TAs will not regularly monitor this board, so please contact me or the course TAs directly with any urgent questions.

The learning format for this course will consist of lecture, in-class activities, and class discussion. Please note that discussion in this class will be conducted in adherence to the University nondiscrimination policy. We will be discussing ethical issues, and diverse viewpoints are welcomed and should be respected by all members of the class. Our use of language should be respectful to each other and of other persons or groups.

You are expected to complete all assigned readings for the class they are due as outlined in the assignment table (see below). You will be evaluated for the course based on completion of graded course assignments.

Papers and discussion questions are due, via canvas, at the beginning of the class session indicated on the course schedule. Late papers will be accepted, but scores will be decreased by 10% in each 24-hour period following the due date and time (e.g. 1min to 23 hours 59min late -10%, 24 hours to 47 hours 59min late -20%, etc.). All assignments are subject to review via Vericite.

- 1. **Tests** (30points; Course Objectives 2, 4, 5, 6, 9). Two tests will be given during the quarter on the dates indicated on the assignment table (see below). Test content will be based on previous weeks' readings and lectures. The test format will include multiple choice, fill in the blank, short answer, and matching.

 Test 2 will only cover material from the second half of class (i.e., it will not be cumulative)
- 2. **Article Discussion** (20points; Course Objectives 1, 2, 3, 4, 9). You are expected to prepare 2-4 discussion questions each week based on the journal article assigned for the date. These questions should highlight important points of the reading as well as demonstrate understanding of the methodology and primary findings of the articles. Discussion questions may address relevance of the article's findings or conclusions to your own practice or future work, and/or connections to other readings in the course or readings from other courses.

You will be asked to lead class discussion utilizing these questions <u>at random</u> each week, thus students should have prepared discussion questions for <u>every</u> class. Selected students will turn in a written copy of their questions for grading at the end of the class discussion. Grade on this assignment is based on the content of the questions as well as the discussion lead in class.

Given the size of the class, readings and students will be divided into groups a and b, students are only responsible for preparing questions for their group's readings (e.g. if you are assigned group "a", only prepare questions for the designated group "a" reading each week, not the group b reading)

Table 1 Grading Rubric for Article Discussion

Incomplete	Partial	Full credit	Points Possible
Student did not prepare questions for the article on the week picked to lead	Student prepared one question, or questions that did not relate to the article in a meaningful way	Student prepared 2-4 questions that directly related to the article	/10
Student did not prepare questions	Questions were yes or no answers or had limited ability to provoke discussion	Questions were written and presented in a way that encouraged discussion	/5
Student did not lead discussion	Student was passive leading discussion, did not encourage participation or call on peers	Student actively lead the group discussion, encouraging participation from peers	/5
			/20

If you are not presenting, you are expected to actively participate in class discussion. If you have concerns about your level of participation please reach out to me for feedback. Students who are not participating sufficiently will be contacted at the mid point of the course and encouraged to speak up more often.

Continued failure to participate in class discussion can lead to loss of up to 5 points from this assignment.

3. **Brief Literature Review** (30points; Course Objective 1, 2, 8) You will complete a 5-6 page literature review on a topic of your choosing.

Reference section must be included and include at least 4, but likely more, peer reviewed journal articles. All components of the paper must adhere to APA formatting.

You will also utilize this paper in the professional writing course. The writing course instructor will review the literature review and provide feedback according to the syllabus for that course. The feedback given in the professional writing course is formative, you will not be graded *in this course* based on that draft. However, it is expected that you will address corrections and edits from the writing course and incorporate them into the final paper for this course.

Table 2 Brief Literature Review Grading Rubric

Incomplete	Partial	Full credit	Points Possible
Edits from previous drafts not addressed or corrected	Edits from previous drafts partially addressed, corrected, and incorporated	Edits from previous drafts fully addressed, corrected, and incorporated	/5
Does not adhere to technical requirements (page length, references, APA formatting)	Partially adheres to technical requirements (page length, references, APA formatting)	Adheres to all technical requirements (page length, references, APA formatting)	/10
Literature review is article summary without synthesis or interpretation	Literature review synthesizes, interprets, and critiques articles, beyond article summary	Literature review builds the case for the research question, is topic rather than article focused, and synthesizes, interprets, and critiques previous work.	/15
			/30

4. **Hypotheses and Research Design** (20 points; Course Objective 2, 6, 7, 8) You will complete a 4-5 page hypotheses and methods section. It is suggested that this be a continuation of the literature review assignments (i.e. cover the same topic), but this is not required.

This paper will include 1-2 research questions, 3-4 specific hypotheses, and a detailed description of the plan for recruitment and data collection including descriptions of any measures utilized. This must adhere to APA formatting and present rationale for the research methods employed.

Table 3 Hypotheses and Research Design Rubric

Incomplete	Partial	Full Credit	Points possible
Does not adhere to technical requirements (page length, references, APA formatting)	Partially adheres to technical requirements (page length, references, APA formatting)	Adheres to all technical requirements (page length, references, APA formatting)	/5

Hypotheses and research questions not present and/or less than 2 hypotheses	Hypotheses and research questions present, but unclear, inappropriate for the topic, or incomplete	Hypotheses and research questions well described, clear, and appropriate for research topic	/6
Plan for data collection and description of measures is missing, does not describe the measures, or methods are incongruent with hypotheses and/or research topic.	Plan for data collection and description of measures present, adequately described, includes some detail but missing recruitment plan, sampling technique, reliability and validity statistics, or sample questions	Plan for data collection and description of measures clearly described, appropriately cited, gives good depth of detail including recruitment, sampling technique, reliability and validity statistics and sample questions as appropriate.	/6
Rationale for methods chosen is unclear or inappropriate for research topic.	Rationale for methods chosen is present, may be appropriate for research question, but lacks sufficient detail.	Rationale for methods chosen is clear, explicitly described, appropriate for research topic and hypotheses.	/3
			/20

COURSE ACTIVITIES:

This course will utilize a number of in class activities to supplement lecture and readings. A brief overview of the activities utilized in the class are outlined below.

EPPP questions (Course objective 4, 5, 9): As you know, the EPPP is the professional licensing exam psychologists must take (and pass) to become licensed clinical psychologists. Throughout the course we will use EPPP practice questions to review content covered in the lectures. This is an opportunity to check your understanding of the material and become familiar with the EPPP question format and content. You will not be graded on your answers to these questions.

Brainstorming research topics (Course objective 8): We will complete a brain storming activity of your personal and professional interests. Time in class will be dedicated to narrowing down interest areas that you may choose to pursue for your class projects and potentially dissertation.

Setup EndNote accounts (Course objective 1,8): Students will meet in the computer lab and will walk through setting up an endnote account to manage literature search results and references.

We will walk through how to conduct a literature search, how to save articles to your endnote account, and how to share your endnote references with your dissertation chair.

Mock IRB application review (Course objective 3,4,7): After we discuss the necessary components of an IRB application and the steps necessary to submit an IRB application here at Midwestern, we will work in small groups to evaluate a sample IRB application. In this activity we will apply ethical principles related to research design and consider ways to improve adherence to best research practices.

Power and the teddy bear (Course objective 7): Weather permitting we will go outside! In this activity we will demonstrate the relationship between power, statistical significance, and sample size.

Survey Design (Course objective 5,6): Using the information we learned about survey design, we will work together as a class to design a survey.

Survey administration and results discussion (Course objective 8, 9): Hopefully we designed the survey well! After edits and discussion, we will administer our survey to several participants. Then we will evaluate the data that we gathered and discuss if and how we could interpret it.

Design and test your own experiment (Course objective 3, 5, 6, 7): Weather permitting, we go outside again! Using vision distortion goggles, backyard games, and the information we learned about experimental design, we will work in small groups to design and implement our own experiments. We will collect results and discuss how we would interpret the data.

Sample qualitative data coding (Course objective 5): We will apply the qualitative coding methods discussed in class to real-life interview transcripts. Working individually we will apply the 5 step method to portions of the interview transcript, then work in small groups to compare findings.

Muddiest Point: Getting ready for the final exam, we will look at the muddiest points for the quarter. You will identify areas of class content that you still get "stuck" on, and we will take time as a class to re-visit the concepts.

Coding children's TV show for cooperative and aggressive behaviors (Course objective 5,6,9): Research can be so fun! As a class we will code the content of popular children's television programs for pro-social and violent behaviors. Using the existing data research design method discussed in lecture, as well as developmental psychology theories from Lifespan Development, we will code and interpret the messages kids are getting from popular culture. Individual coding results will be discussed in small groups, and common themes will be identified.

Design a research project from scratch (Course objective 3,4,5,7,9): Here's a chance to put it all together! Working in teams, you will be given a random topic of psychological interest. You and your partner will determine the most appropriate research method (survey, experimental, qualitative, or existing data), determine best method for recruitment and data collection, and develop specific hypotheses to test on the topic assigned. We will then form small groups of teams with similar topics and share out designs. Other groups will give feedback and discuss ways that they designed their own studies.

ASSIGNMENT TABLE*:

Class Date	Topics	Readings/Resources	Learning Activities and Assessments
3/6/19	 Course Introduction What is Research Steps in Conducting Research 	 Kazdin Chapters 1, 4 Wilkinson, L. (1999) 	Article Discussion Lecture and Discussion
3/13/19	 The Use of Theory The Introduction Review of the Literature The Purpose Statement Finding gaps in the literature 	 Burger, J. M. (2009) Rossen, E., & Oakland, T. (2008). 	Article Discussion Activity: Brainstorming research topics Setup EndNote Accounts
3/20/19	 Research Processes and Approaches Research Ethics and the IRB Process Informed Consent and Assent 	 Morales, E., & Norcross, J. C. (2010). Kosinski, M., et. al. (2015). 	Article Discussion Activity: Mock IRB application review
3/27/19	 Research Questions and Hypotheses Hypothesis Testing Power and Effect Size 	Kazdin Chapter 13Cohen, J. (1990).Cohen, J. (1994).	Article Discussion Activity: Power and the Teddy Bear Reminder: Literature review due to writing course

4/3/19	 Internal and External Validity Construct Validity Measurement 	 Kazdin Chapters 2, 3, 10 Kirk, R. E. (1996). Cronbach, L. J., & Meehl, P. E. (1955). 	Test 1 (start of class) Article Discussion Activity: Survey Design
4/10/19	• Quantitative Methods: Survey Research	 Mangione, L., Borden, K. A., Nadkarni, L., Evarts, K., & Hyde, K. (2018). Berke, D. M., Rozell, C. A., Hogan, T. P., Norcross, J. C., & Karpiak, C. P. (2011). 	Article Discussion Activity: Survey Administration and results discussion
4/17/19	• Quantitative Methods: Experimental, Quasi-Experimental, and Observational Designs	 Kazdin Chapter 5-6 Dijkstra, A., & Bos, C. (2015). Yeh, R. W. et al. (2018). 	Article Discussion Activity: Design and test your own experiment Reminder: Literature Review due to me
4/24/19	 Qualitative Methods 5 Step Process to Qualitative Data Coding 	 Kazdin, Chapter 9 Hayes, J. A., Nelson, D. B., & Fauth, J. (2015). Isacco, A., Hammer, J. H., & Shen-Miller, D. S. (2016). 	Article Discussion Activity: Sample qualitative data coding
5/1/19	 Archival Data Mixed Methods Procedures Sampling Techniques Diversity Considerations in Research Recruitment 	 Kazdin (Chapters 9; pp. 237-238) Bohannon, J. (2015). Hom, M. A., Albury, E. A., Gomez, M. M., Christensen, K., Stanley, I. H., Stage, D. L., & Joiner, T. E. (2019). 	Article Discussion Activity: Muddiest Point; Coding children's TV show for cooperative and aggressive behaviors Reminder: Hypotheses and Methods due

5/8/19	Presenting and Writing	Fallon, M. (2018).Gernsbacher, M. A. (2018).	Article Discussion Activity: Design a research project from scratch
5/15/19	Test 2		

^{*}Subject to change

COURSE GRADES: You may earn up to 100 points for the course. Letter grades are assigned as follows:

Grade	Percent (%)	Quality Points	Points	Benchmark Meanings
A	93 -100	4.000	93-100	Superior Attainment
A-	90-92	3.67	90-92	
B+	87-89	3.33	87-89	Meritorious Attainment
В	83-86	3.00	83-86	
B-	80-82	2.67	80-82	Marginal Attainment
				Failure, no course credit

Individual scores and final grades will not be rounded. Final grades will be posted by the Tuesday after Final's week.

POLICY REGARDING ACADEMIC DISHONESTY & UNPROFESSIONAL CONDUCT

(Refer to Student Handbook)

Students are expected to abide by the APA Ethical Principles and Code of Conduct and the ethical code of conduct and policies regarding academic dishonesty/plagiarism described in the most current version of the Student Handbook. Assignments for this class must represent the original work of each student, and except where specifically described as a cooperative or group assignment, must represent independent work. In instances where references are required, all sources must be appropriately cited. Submission of work previously or simultaneously submitted in another course without explicit permission of the instructor is prohibited. When in doubt, students are strongly encouraged to consult with the instructor before submitting an assignment.

Academic dishonesty or unprofessional conduct may result in failure of an assignment, failure of the entire course, and/or disciplinary action up to and including dismissal from the program. All class content is subject to review through Turnitin.com, vericite.com, or other plagiarism detecting software.

ATTENDANCE

You are required to attend all classes. If you need to miss a class, the student must inform me prior to the missed class. For all missed classes, you are responsible for learning content presented in the missed class by obtaining the lecture/class notes and meeting with me to discuss class content. If you misses more than one class for an excused reason (i.e., one in which the student has informed the Instructor prior to the class), you will be required to complete a makeup assignment designed to cover equivalent material presented in the missed class. Failure to meet with me and complete the assignment will result in a 4% reduction in overall course grade earned at the end of the class. No student may pass a course if missing three or more classes (<30% of course). It is up to you to notify and discuss any extenuating circumstances with the both the Course Instructor and Program Director.

PREPARATION AND COMPORTMANT

You are required to read the assigned readings as outlined in the course schedule before class session, and should arrive in class prepared to discuss the readings. Cell phones and pagers should be turned off or set to vibrate during class sessions. Computers, cell phones, and other devices should be used only for class purposes, such as note-taking, and not for any other purpose during class sessions. Use of computers or phones for social purposes, such as Facebook or texting, during class is considered unprofessional conduct, and may result in an incident report. Please refer to the Student Handbook for an explanation of this process.

EXPECTATIONS OF INSTRUCTOR

I will be available for student questions and/or discussion during office hours and by appointment. I will attempt to answer all student emails and phone calls within a reasonable time frame. Please keep in mind that late night emails prior to a test and/or assignment being due may not be the best time to get your questions answered. I will model professional behavior in and out of the classroom, and treat all students respectfully.

The instructor will:

- 1. Explain the course structure and objectives at the beginning of the quarter.
- 2. Provide a course syllabus and course schedule at the beginning of the quarter, and oversee administration of evaluation tools and methods.
- 3. Facilitate the identification of useful learning resources in areas of development.
- 4. Provide a respectful and safe learning environment.
- 5. Provide meaningful feedback to learners. Graded assignments will be returned within 2 weeks of the deadline
- 6. Assure that all learners have equal opportunity to achieve the course objectives.