

COURSE SYLLABUS COVER SHEET
Lewis & Clark College
Graduate School of Education and Counseling

Course Name	CPSY 530 – Section 1
Course Number	Research Methods & Statistics I
Term	Fall 2014
Department	Counseling Psychology
Textbooks/Materials	See attached
Faculty Name	James R. Andretta
Faculty Phone/E-mail	andrettaj@lclark.edu
Faculty Office	Rogers Hall

Catalogue Description (*copy from current catalogue*):

Introduction to research methods with an emphasis on design, sampling, measurement issues, and introductory data analysis. Topics include (1) Research design: elements of the research process, types of designs, program evaluation. (2) Ethical considerations of research: informed consent, research with diverse and vulnerable populations, research with children, human subjects review. (3) Basic measurement concepts: validity, reliability, norms, score interpretation. (4) Basic statistical concepts: frequency distributions, central tendency, measures of variability, correlation. Reviews Web-based resources for conducting research.

Course Description:

This course covers the essential concepts related to research design and methodology that practitioners need to become critical evaluators of research and prepare for conducting research in their practices. Focus is on understanding each component of the research process, qualitative and quantitative designs, program evaluation, measurement issues, and data analysis,

Course Goals and Objectives:

The primary goal of this class is to have students gain a more complete understanding of the research process which would allow them to critically analyze published research and/or be able to conduct independent research. Included in this understanding are models of program evaluation and the use of research findings for program modification. The secondary goal is for students to gain an introductory understanding of measurement issues in research and assessment.

The objectives of this class will be to provide opportunities to learn and apply the skills necessary for evaluating research, and conducting independent research, including needs assessments and program evaluation. Emphasis will be on the following components of the research process: research questions and hypotheses, research design including qualitative research, action research and program evaluation; operationalization of variables, and measurement issues. The impact of culture on research design and analysis will additionally be addressed.

By the end of the semester students will be able to:

- Identify various paradigms for conducting research (NASP 2.1, CC: 8b)
- Identify each of the steps involved in the development of a research project (NASP 2.9; CC: 8b, 8c, 8d)
- Write research questions and hypotheses (CC: 8b)
- Understand the ethical issues involved in working with human participants (CC: 8f)
- Identify and describe various types of quantitative research designs (CC: 8b)
- Identify and describe various types of qualitative research designs (CC: 8b)
- Identify the components and models of program evaluations, including needs assessments (NASP 2.9; CC: 8d, B3)
- Identify and describe validity issues inherent in different types of designs (CC: 8b, 8c, 8d)
- Discuss the use of research findings for program change (CC: 8d, B3)
- Discuss the issues involved in conducting real world research (CC: 8a, 8e)

- Discuss the impact of culture on various aspects of the research process (CC: 8f, 7f, 2c)
- Critically evaluate published research articles (NASP 2.1; CC: 8a, 8b, 8d, 8e)
- Design a proposal for research project (NASP 2.11; CC: 8a, 8b, 8e)
- Write an Introduction and Literature Review for a research project (thesis students only)

Additionally, the course will cover the objectives and competencies from your professional organizations. These include:

From the NASP standards,

Students will:

- Have knowledge of research, statistics and evaluation methods
- Be able to evaluate research,
- Be able to translate research into practice
- Understand research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services
- Have knowledge of varied models and methods of assessment that yield information useful in identifying strengths and needs in understanding problems and in measuring progress and accomplishments
- Have knowledge of information sources and technology relevant to their work
- Access, evaluate, and utilize information sources and technology in ways that safeguard or enhance the quality of services

From the Marriage & Family Therapy Core Competencies & MCFT program standards

Students:

- Understand research and program evaluation methodologies, both quantitative and qualitative, relevant to MFT and mental health services.
- Demonstrate an understanding of process and outcome, research design, methodology, basic statistics, with research knowledge in individual and family counseling
- Understand the legal, ethical, and contextual issues involved in the conduct of clinical research and program evaluation.
- Recognize informal research processes involved in therapy, own biases relative to research
- Know the extant MFT literature, research, and evidence-based practice.
- Read current MFT and other professional literature and use the literature to inform clinical practice.
- Critique professional research and assess the quality of research studies and program evaluation in the literature.
- Determine the effectiveness of clinical practice and techniques.
- Utilize research and technology applications in marital, couple, and family counseling
- Recognize opportunities for therapists and clients to participate in clinical research when appropriate

From the CACREP Standards

- The importance of research and opportunities and difficulties in conducting research in the counseling profession,
- The importance of research in advancing the counseling profession;
- Research methods such as qualitative, quantitative, single-case designs, action research, and outcome-based research,
- Statistical methods used in conducting research and program evaluation;
- Use of technology and statistical methods in conducting research and program evaluation,
- Principles, models, and applications of needs assessment, program evaluation, and use of findings to effect program modifications
- Use of research to improve counseling effectiveness and inform evidence-based practice
- Legal and ethical issues in conducting research
- Ethical and culturally relevant strategies for interpreting and reporting the results of research and/or program evaluation studies.

Course Calendar: See attached

Course Requirements: See attached

Overall, the requirements of the course include, weekly homework and/or in class assignments, the development of a research article critique guide, a research methods glossary, a group research project and/or introduction to a research plan, a critique of a research article.

Attendance requirements: Class attendance is expected and required. Any missed class time will be made up by completing extra assignments designed by the instructor. Missing more than ten percent of class time may result in failure to complete the class. This would be 4.5 hours of a 45 hour class (3 credits), 3.0 hours for a 30 hour class (2 credits) or 1.5 hours for a 15 hour class (1 credit.) In case of extreme hardship and also at the discretion of the instructor, a grade of incomplete may be given for an assignment or the entire course. In such cases, the work to be submitted in order to remove the incomplete must be documented appropriately and stated deadlines met. Students are expected to be on time to class and tardiness may be seen as an absence that requires make-up work.

Late papers and assignments: Any assignments turned in late (without previous permission) will automatically receive a 10% reduction in grade.

Evaluation and Assessment:

Each assignment will be graded via a point system. Generally speaking, the following grades can be associated with the points for each assignment

90% of points possible	-	A
80% of points possible	-	B
70% of points possible	-	C
60% of points possible	-	Fail

Additionally, if the requirements for an assignment are met, the points given will be associated with a B⁺. If one exceeds the requirements of the assignment there point total will improve accordingly, Similarly, if the assignment does not meet the requirements point total will decrease accordingly. The points associated with each assignment are attached.

Authorization Levels: All levels

Partial Bibliography:

American Psychological Association (2010). *Publication manual of the American Psychological Association*. (6th Ed.). Washington, DC: American Psychological Association.

Cone, J.D. & Foster, S.L. (1993). *Dissertations and theses from start to finish*. Washington, DC: American Psychological Association.

Creswell (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (2nd ed). Thousand Oaks: Sage.

Creswell (2009) *Research Design: Qualitative & Quantitative, Quantitative, and Mixed Methods Approaches* (3rd Ed). Thousand Oaks: Sage

Denzin & Lincoln (2000). *Handbook of Qualitative Research* (2nd Ed.). Thousand Oaks: Sage

Galvan, J.L. (1999). *Writing Literature Reviews*. Los Angeles: Pyczak Publishing.

Heppner, P.P., Kivlighan, D. M., & Wampold, B.E. (1999). *Research Design in Counseling*. Pacific Grove, CA: Brooks/Cole.

- Holcomb, Z.C. (1997). *Real data. A statistics workbook based on empirical data.* Los Angeles: Pyczak Publishing.
- Holcomb, Z.C. (1927). *Interpreting Basic Statistics. A Guide and Workbook Based on Excerpts from Journal Articles.* Los Angeles: Pyczak Publishing.
- Holcomb, Z.C. (1997). *Real data. A statistics workbook based on empirical data.* Los Angeles: Pyczak Publishing.
- LeCompte & Schensul (1999). *Ethnographer's Toolkit*
- Leong & Austin (2006). *The psychology research handbook. A guide for graduate students and research assistants (2nd Ed.).* Thousand Oaks, CA: Sage Publications
- Pryzak, F. *Evaluating Research.* Los Angeles: Pyczak Publishing.
- Patten, M.L. (2000). *Understanding Research Methods. An Overview of the Essentials.* Los Angeles: Pyczak Publishing
- Maxwell, J. (1996). *Qualitative Research Design: An Interactive Approach (2nd Ed.).* Thousand Oaks, CA: Sage
- Mertens (2005). *Research & Evaluation in Education & Psychology (2nd Ed).* Thousand Oaks, CA: Sage.
- Moustakas, C. (1994). *Phenomenological Research Methods.* Thousand Oaks, CA: Sage.
- Mertler, C.A. & Vannatta, R. A. (2005). *Advanced and Multivariate Statistical Methods. Practical Application and Interpretation (3rd Ed.)* Glendale, CA: Pyczak Publishing
- Rosenthal, J.A.(2001). *Statistics and Data Interpretation for the Helping Professions.* Belmont, CA: Wadsworth/Thompson Learning
- Weis, L. & Fine, M. (2000). *Speed bumps: A student-friendly guide to qualitative research.* New York: Columbia University, Teacher College Record.

CPSY 530 - Section 1
Research Methods & Statistics I

Fall Semester 2014

Wednesday 5:30 – 9:00pm, York Graduate Center Room 101

James R. Andretta, Ph.D.

Office: Rogers Hall Advising Hours: by appointment

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Course Description

Introduction to research methods with an emphasis on design, sampling, measurement issues, and introductory data analysis. Topics include (1) Research design: elements of the research process, types of designs, program evaluation. (2) Ethical considerations of research: informed consent, research with diverse and vulnerable populations, research with children, human subjects review. (3) Basic measurement concepts: validity, reliability, norms, score interpretation. (4) Basic statistical concepts: frequency distributions, central tendency, measures of variability, correlation. Reviews Web-based resources for conducting research.

Requirements:

Requirements of the course include class participation, homework assignments, and the development of an introduction section to a manuscript. A description of each homework assignment is provided in the “Assignments” document available on doodle. Below, please find how grades will be calculated, and a more detailed account of scoring is provided in the “Assignments” document.

Assignments

Class Participation	100 points or 38%
Homework/Assignments	110 points or 42%
Paper Draft	20 points or 8%
Poster Presentation	30 points or 12%
Final Paper	60 points or 23%

Final grades will be based on a 260 point total and will be distributed as follows:

234 & above	A
233 - 208	B
207 - 182	C
Below 182	Fail

Late papers and assignments: Any assignments turned in late (without previous permission) will automatically receive a 10% reduction in grade.

Required Texts:

Mertens (2015). *Research and evaluation in education and psychology. Integrating diversity with quantitative, qualitative and mixed methods.* (4th Ed). Thousand Oaks, CA: Sage.

American Psychological Association (2010). *Publication manual of the American Psychological Association.* (6th Ed.). Washington, DC: American Psychological Association.

Supplementary Texts & Workbooks

Leong & Austin (1996). *The psychology research handbook. A guide for graduate students and research assistants*. Thousand Oaks, CA: Sage Publications

Cone, J.D. & Foster, S.L. (1993). *Dissertations and theses from start to finish*. Washington, DC: American Psychological Association.

Tentative Course Schedule

Date	General Topic	Official Topic	Readings to be completed before class	
Sept. 3	Introduction Goals Finding a topic Address a topic <i>Laboratory</i>	Class overview -- Literature Review Research Strategy <i>R Statistics</i>	APA manual pp. 9-11 Research & Evaluation Chpt. 3 <i>*If possible, bring computer to class for laboratory work</i>	Attempt to download <i>R</i> before coming to class. Directions are included in course materials.
Sept. 10	Major Research Paradigms Manuscript Structure and Content <i>Laboratory</i>	How paradigms guide research APA format First paragraph of a manuscript Distribution of Scores & Small Group Discussion on paper topics	Research & Evaluation Chpt. 1 APA Chpt. 2	
Sept. 17	Ethical and Legal Standards in Publishing <i>Laboratory</i>	Scientific knowledge, rights and welfare of participants, intellectual property Correlation	APA page 11-20 APA Ethical Principles of Psychologists and Code of Conduct—focus on <i>Research and Publication</i>	

		& Second paragraph of manuscript		
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Sept. 24th	No class			
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Date	General Topic	Official Topic	Readings to be completed before class	HMW/points:
Oct. 1	<p>Understanding quantitative research</p> <p>What design will I use?</p> <p><i>Laboratory</i></p>	<p>Overview of quantitative research</p> <p>Outcome research Survey research Single subject Experimental Causal comparative</p> <p>Regression</p> <p>& manuscript outlines</p>	<p>Research & Evaluation Chpts. 4 to 7</p> <p>Thompson (2007) PITS article on effect sizes</p>	
Oct. 8	<p>What will my intervention look like?</p> <p>What will my outcome look like?</p> <p>Sampling in quantitative research</p> <p><i>Laboratory</i></p>	<p>Designing and operationalizing independent and dependent variables</p> <p>Review of sampling participants</p> <p>Multiple Regression</p> <p>Pairs, edit & discuss papers</p>	<p>Research & Evaluation, pp.364-391</p>	

Oct. 15	<p>Am I measuring what I think I am measuring?</p> <p>What is a score, and what does it mean?</p> <p><i>Laboratory</i></p>	<p>Tests and testing process, reliability and validity</p> <p>Psychometric issues and norms</p> <p>Internal consistency, factor saturation of scores, construct validity</p> <p>& small group discussions on paper outlines</p>	Research & Evaluation pp.396-416	
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Oct. 22	How do I summarize my data?	<p>Overview of statistical concepts:</p> <p>Descriptive statistics, normal curve, standard scores, standard error of measurement</p>	Research & Evaluation pp.418-426	
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Oct. 29	<p>How will I analyze my data?</p> <p>How will I interpret my results?</p> <p><i>Laboratory</i></p>	<p>Analyzing data, inferential statistics</p> <p>Comparing differences in mean scores, between and across groups</p> <p>Probability vs effect size</p> <p>Pairs, edit & discuss papers</p>	Research & Evaluation pp.429-436	
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Nov. 5	<p>Research on the Job—Program Evaluation & Needs Assessment</p> <p>Understanding qualitative Research</p> <p><i>Laboratory</i></p>	<p>Problem Identification/ Conceptualization</p> <p>Reading and critiquing a qualitative study</p> <p>What do I report in my Method section?</p>	<p>Research & Evaluation Chpt. 2</p> <p>APA pp.29-32</p>		
Nov. 12	<p>Qualitative questions</p> <p>What qualitative design to use?</p> <p>How will I collect my data?</p> <p><i>Laboratory</i></p>	<p>Types of qualitative designs</p> <p>What qualitative approach will I use?</p> <p>Sampling strategies for qualitative research</p> <p>Review and Questions</p> <p>Making a research poster</p>	<p>Research & Evaluation pp.237-251</p>		
Nov. 19	<p>Collecting data Continued</p> <p><i>Laboratory</i></p>	<p>Focus groups/Interviews</p> <p>Ensuring quality of data collection</p> <p>Coding and inter-rater reliability</p>	<p>Research & Evaluation pp.253-277</p>		
Nov. 26	No class, holiday				

Dec. 3	<p>How will I analyze and interpret my data?</p> <p>What does good qualitative data look like?</p> <p><i>Laboratory</i></p>	<p>Analyzing and interpreting qualitative data</p> <p>Critique of qualitative study</p> <p>Coding and inter-rater reliability continued</p> <p>Review of student selected topics & Introduction of selected statistics</p> <p>Research Poster Presentations</p>	Research & Evaluation pp.437-446		
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Dec. 10	<p>How can I use research to inform my clinical work?</p> <p>How can I use my clinical work to inform my research?</p> <p>Can I be both a clinician and a researcher?</p> <p><i>Laboratory</i></p>	<p>Review of student selected topics & Introduction of selected statistics</p> <p>Research Poster Presentations</p>			
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