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

| | |
|---|---|
| **Course Name** | **Research Methods and Statistics II** |
| **Course Number** | **CPSY 531 Section 2** |
| **Term** | **GS/11** |
| **Department** | **Counseling Psychology** |
| **Textbooks/Materials** | **Salkind, Neil J. (2011)** *Statistics for People Who (Think They) Hate Statistics* **(4th Ed). Thousand Oaks, CA: Sage.** |
| | **Faherty, Vincent E. (2008).** *Compassionate Statistics. Applied Quantitative Analysis for Social Services.* **Thousand Oaks, CA: Sage.** |
| **Faculty Name** | **Carol Doyle** |
| **Faculty Phone/E-mail** | **503 768-6067** |
| | **cdoyle@lclark.edu** |
| **Faculty Office** | **Rogers Hall 317** |
| **Advising Hours** | **Tuesdays 4:00 – 6:00 Thursdays Friday 11 – 1** |

**Catalogue Description:**

Research design and data analysis, inferential statistics. Simple and complex designs, normal distribution, z-test, t-test, analysis of variance, statistical power, simple regression. Overview of nonparametric and multivariate analysis.

**Course Description:**

This course covers the descriptive and inferential statistics practitioners need for use in their practices. Focus is on understanding and application of basic descriptive and inferential statistics, appropriate interpretation of statistical results, and real-world presentation of data.

**Course Goals and Objectives:**

The primary goal of this class is to have students gain a conceptual and computational understanding of basic descriptive and inferential statistics as well as developing skill in interpreting those results. As a continuation of CPSY 530, an additional goal is for students to further their understanding of the research process, including issues surrounding measurement, which will allow them to critically analyze published research and/or be able to conduct independent research.

The objectives are to provide opportunities to learn and apply the skills necessary to appropriately conduct basic statistical analyses. Emphasis will be on: data processing, data analysis, appropriate use and interpretation of statistical tests, drawing conclusions from data, validity of conclusions, reporting results, discussion of results, and critiquing research.

By the end of the semester students will be able to
- Define, operationalize, and measure constructs
- Identify and compute descriptive statistics
- Identify data analysis appropriate for different types of research designs.
- Understand the hypothesis testing process

- Write research and null hypotheses
- Understand and compute basic inferential statistics
- Use the computer to perform descriptive and inferential statistical analysis
- Understand and compute reliability analyses
- Draw appropriate conclusions from data analysis
- Use APA style to write up results of statistical analyses.
- Interpret statistical analyses appropriately for a variety of audiences
- Understand the research process and use this understanding to identify strengths and weakness of published research.

**From the NASP standards, the expectation is that students will be able to:**
"Evaluate research, translate research into practice, and understand research design and statistics in sufficient depth to plan and conduct investigations and program evaluations for improvement of services"

**From ACA: Goal Statement**
The professional counselor is able to conduct research; interpret clearly the implications of research data to professional staff members, parents, students, clients, referral agencies, and community resources; and use the results in counseling and in program evaluation, program development, and program revision. (Engels, D.W. & Associates (2004). The professional counselor. Portfolio, competencies, performance guidelines and assessment. (3rd ed.) Alexandria, VA: American Counseling Association

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

- 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
- 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

**Course Calendar:**
    **See attached/Moodle**

**Required Texts:**
    Salkind, Neil J. (2011).* *Statistics for People Who (Think They) Hate Statistics* (4th Ed). Thousand Oaks, CA: Sage.
    *(The ordered book comes bundled with a Student version of SPSS. If you didn't buy book from bookstore you may not have received the "bundle" This means that you will not have SPSS to use at home. Differences between 4th and 3rd edition of text are not known.

    Faherty, V.E. (2008). *Compassionate Statistics. Applied Quantitative Analysis for Social Services.* Thousand Oaks, CA: Sage.

**Supplementary Texts & Workbooks**

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

Green, S.B. & Salkind, N.J. (2005)  *Using SPSS for Windows and Macintosh* (4th Ed).  Upper Saddle River NJ:  Prentice Hall

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.

**Course Requirements:  See attached**

**Attendance Requirements:**
Class attendance is expected and required.  Any missed class time will be made up by completing extra assignments designed at the by the instructor.  More than one missed class session (3.25 hours in the case of a three-credit hour class; 2.25 hours for a two-credit class; 1.25 hour for a one-credit class) may constitutes a failure to complete the class.  In extreme hardship situations, and also at the discretion of the instructor, a grade of incomplete may be given for an assignment or for the entire course.  In such cases, the work to be submitted in order to remove the incomplete must be documented appropriately and stated deadlines must be met.

One absence without arrangement or explanation, 2nd absence requires a make-up of class assignments, an additional assignment (an article summary) and explanation.

**Assignments**
As in 530, the graded requirements of the course differ dependent on your program.  Overall the requirements of the course include:  in class assignments, homework assignments, computer assignments, statistical analysis portfolio which include statistical result section write-ups; thesis proposals and group project(s).

**See attached for specific assignments and points**

**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 | - | D |
| less than 60% of  points possible | | F |

Additionally the determination of grades are as follows.  If one fulfills the minimum expectations for a course assignment, the grade given will be equivalent to a B+ (approximately 85% of the possible points)  If the

assignment exceeds the minimum expectations, the grade improves accordingly.  If the assignment does not meet minimum expectations, and/or is missing any components, a lower grade will be assigned
**Late papers and assignments:**  Any assignments turned in late (without previous permission) will automatically receive a 10% reduction in grade.

**Authorization Levels:**
all

**Partial Bibliography:**

American Psychological Association (1994).  *Publication manual of the American Psychological Association*. (4th 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.

Galvan, J.L. (2006).  *Writing Literature Reviews (3rd Ed.)* Los Angeles: Pyrczak Publishing.

Heppner, P.P., Kivlighan, D. M., & Wampold, B.E. (2008).  *Research Design in Counseling* (2nd Ed.).  Pacific Grove, CA:  Brooks/Cole.

Holcomb, Z.C. (2007).  Interpreting  Basic Statistics (5th Ed.)  A Guide and Workbook Based on Excerpts from Journal Articles.  Los Angeles:  Pyrczak Publishing.

Holcomb, Z.C. (1997).  *Real data.  A statistics workbook based on empirical data.*  Los Angeles: Pyrczak Publishing.

Pryzak, F. (2008).  Evaluating Research in Academic Journals (4th Ed.) Los Angeles:  Pyrczak Publishing.

Patten, M.L.  (2009). Understanding Research Methods (7th Ed.)  Glendale CA:  Pyrczak Publishing

Mertler, C.A. & Vannatta, R. A. (2005).  Advanced and Multivariate Statistical Methods.  Practical Application and Interpretation (3rd Ed.)  Glendale, CA:  Pyrczak Publishing

Rosenthal, J.A.(2001).  *Statistics and Data Interpretation for the Helping Professions.*  Belmont, CA: Wadsworth/Thompson Learning

Rubin, A. (2007). *Statistics for Evidence-Based Practice & Evaluation.*  Belmont, CA:  Wadsworth/Thompson Learning

**Spring Semester 2011 Assignments**

| School Psychology | | M.S. Thesis Students | |
|---|---|---|---|
| **Homework** | **150 points** | **Homework** | **150 points** |
| **Computer Work/Class Particip** | **55 points** | **Computer Work/Class Particip** | **55 points** |
| **Special Class Assignment** | **30 points** | **Special Class Assignment** | **30 points** |
| **Statistics Portfolio** | **320 points** | **Statistics Portfolio** | **370 points** |

School Psychology:
Includes
    Diagram/Model Combining Design of
        Research Process and Hypothesis Testing
        Measures of Relative Position/Standard Scores
        Confidence Intervals
        Model for Choice of Appropriate Test
        Data Interpretation Model
    Summary & Results sections for 4 tests

M.S. Thesis Students:
Includes
    Diagram/Model Combining Design of
        Research Process and Hypothesis Testing
        Measures of Relative Position/Standard Scores
        Confidence Intervals
        Model for Choice of Appropriate Test
        Data Interpretation Model
    Summary & Results sections for 4 tests
        Participants Write-up
        Reliability Write-up

| **Group Projects** | **125 points** | **Thesis Proposal (methods section)** | **75 points** |
|---|---|---|---|
| **Final Discussion** | **20 points** | **Final Discussion** | **20 points** |

Final grades will be based on 700 point total and will be distributed as follows:

| 630 and above | (90% of total points) | - | A |
|---|---|---|---|
| 560 - 629 | (80% of total points) | - | B |
| 490 - 559 | (70% of total points) | - | C |
| 420 - 489 | (60% of total points) | - | D |
| below 420 | (less than 60% of total points) | | F |

**Tentative Schedule of Classes/Assignments:  See Attached/Moodle**
**Important Dates**
    Homework – Weekly (Except Feb 17th)
    Self-Directed Class – Feb 10 – (Assignment Due Feb 17th )
    Group Project          April 21st
    Final Discussion       April 21st
    Portfolio Due (No Class)  April 28th