## Course Name
Research Methods and Statistics II

## Course Number
CPSY 531 Section 1

## Term
GS/11

## Department
Counseling Psychology

## Textbooks/Materials

## Faculty Name
Carol Doyle

##Faculty Phone/E-mail
503 768-6067
cdoyle@lclark.edu

## Faculty Office
Rogers Hall 317

## Advising Hours
Tuesdays 3:30 – 5:30 Thursdays Friday 11 – 1

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### 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 weaknesses 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

Required Texts:
*(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.


Supplementary Texts & Workbooks


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

<table>
<thead>
<tr>
<th>Points Possible (%)</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>90%</td>
<td>A</td>
</tr>
<tr>
<td>80%</td>
<td>B</td>
</tr>
<tr>
<td>70%</td>
<td>C</td>
</tr>
<tr>
<td>60%</td>
<td>D</td>
</tr>
<tr>
<td>less than 60%</td>
<td>F</td>
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</tbody>
</table>

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:
Partial Bibliography:


Spring Semester 2011 Assignments

**School Psychology**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>150</td>
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<tr>
<td>Computer Work/Class Particip</td>
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<tr>
<td>Special Class Assignment</td>
<td>30</td>
</tr>
<tr>
<td>Statistics Portfolio</td>
<td>320</td>
</tr>
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</table>

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**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Homework</td>
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</tr>
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<tr>
<td>Statistics Portfolio</td>
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</table>

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**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Final Discussion</td>
<td>125</td>
</tr>
<tr>
<td>Final Discussion</td>
<td>20</td>
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</table>

**Thesis Proposal (methods section)**

<table>
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<tr>
<th>Assignment</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Thesis Proposal (methods section)</td>
<td>75</td>
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</table>

**Final Discussion**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>Final Discussion</td>
<td>20</td>
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</tbody>
</table>

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 16th)
- Self-Directed Class – Feb 9 – (Assignment Due Feb 16th)
- Group Project April 20
- Final Discussion April 20
- Portfolio Due (No Class) April 28th