Summer 1-2003

PSYC 523.01: Advanced Research Design

Kimberly Wallace

University of Montana - Missoula

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Advanced Research Design
Psychology 523– Spring 2003

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Ph: 243-5191
Email: wallace@selway.umt.edu

Class Meetings:
T 11:10 - 12:30
W 10:40 - 12:00

Office Hours:
Tuesday: 1 – 2:30; Thursday: 11:00 – 12:30; & by appointment

Course Objective:
The primary objective of this course is to provide students with an understanding of advanced topics in research design and methods. To achieve this objective, students will read a variety of articles, both empirical and theoretical, and book chapters that deal with design- and methods-related topics. Class format will include lecture, discussion, and student presentations. We will begin with an exploration of issues relating to philosophy of science, reliability and validity. Discussion of specific designs, including experiments and quasi-experiments, will also be included. In addition, we will examine other widely used methodologies, including surveys, qualitative research, and meta-analysis. Finally, we will read and evaluate published articles that utilize methodologies discussed in class. Students who complete this course are expected to demonstrate an understanding of research methods and design issues and to be able to apply that understanding in their own research and in the critical evaluation of the work of others.

Readings:
Required:
The readings for this course will consist of theoretical and empirical articles, as well as various book chapters. Complete citations for these readings are provided on pages 6-8 of the syllabus. Copies of the readings will be on electronic reserve through the Mansfield Library. These articles can be accessed online at: http://eres.lib.umt.edu/

Recommended:
The following books are not required and will not be covered explicitly in class, but you may find them helpful during the course and throughout your graduate career:
**Course Requirements:**

**Readings:** A listing of dates and reading assignments is attached (see Class Schedule). Students are expected to have read the material by class on the day specified. Timely completion of reading assignments will help facilitate class discussion. In addition, exams will be based on the material discussed in class and presented in the readings.

**Class Participation & Attendance:** Students are required to attend all classes and to participate actively in class discussions. Keeping up-to-date with the readings will be a very important part of your preparation for class and will subsequently impact the quality of your class participation. Note that class participation, including attendance, is part of your final grade.

**Research Proposal Paper & Presentation:** The research proposal paper is to be approximately 15 to 20 pages, written in APA style. The paper will include an abstract, literature review, methods section, proposed analyses section, and discussion section. A brief description (1 to 2 paragraphs, but not more than 1 page) of your proposal idea is due on February 12. A preliminary literature search is due on March 5. This search should include specific references; you will turn in a brief summary of each article, including how you will use the reference, and a copy of the first page of each article. For this assignment, you should have a minimum of six articles (certainly, though, for the final paper you will have more than this). On April 8th and 9th you will present your hypothesis and design to the class for discussion and critique. On April 30th, May 6th, and 7th, you will present your final project to the class. This will be a formal presentation (15 minutes to present; 5 minutes for questions), done in convention paper format. Finally, the paper itself is due May 7th at the beginning of class.

**Exams:** There will be a mid-term and a final exam for this course. Exams will consist of several broad-based essay questions, which will require you to integrate the material from class and the readings. The exams will be take-home and you will have one week to complete them (Note that this does not mean that they should take that long to complete). You may use your class notes and readings, but NOT each other when completing the exam. Make-up exams will not be given except in documentable emergency situations.
Grading:

Class participation & attendance  15%     60
Research proposal paper     20%     80
Formal research presentation  15%     60
Exams (2)                2@25% = 50%   2 @ 100 = 200

TOTAL: 400

Letter grades will be assigned based on the following breakdown:

<table>
<thead>
<tr>
<th>POINTS</th>
<th>GRADE</th>
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<tbody>
<tr>
<td>358 – 400</td>
<td>A (90-100%)</td>
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<tr>
<td>318 – 357</td>
<td>B (80-89%)</td>
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<tr>
<td>278 – 317</td>
<td>C (70-79%)</td>
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<td>238 – 277</td>
<td>D (60-69%)</td>
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<tr>
<td>0 – 237</td>
<td>F (0-59%)</td>
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Notes:
1. March 10 is the last day to drop classes. After that date, no petitions to drop the course will be signed and no Incompletes will be given except in a documentable emergency situation.

2. Students with disabilities are responsible for declaring their disability to the instructor at the beginning of the semester if they require accommodations. Such students are also responsible for arranging for any necessary accommodations with Disability Services for Students. The instructor will work collaboratively with the student and DSS to provide these accommodations.

3. Departmental and University policies regarding Incompletes do not allow changing “Incomplete” grades after one year has passed since the “I” was granted.

4. Cheating will NOT be tolerated and may result in a final course grade of an ‘F.’
<table>
<thead>
<tr>
<th>Date</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td>January 28</td>
<td>Course Introduction</td>
<td>29 Philosophy of Science</td>
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<td></td>
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<td>Betchel (88), chaps. 2 &amp; 3</td>
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<td>February 4</td>
<td>Philosophy of Science</td>
<td>5 Research Design &amp; Methods Overview</td>
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<td>Doyal &amp; Harris (86)</td>
<td>Leavitt (01)</td>
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<tr>
<td>11</td>
<td>Reliability</td>
<td>12 Validity</td>
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<td>Kline (93); DeVellis (91)</td>
<td>Shadish et al. (02), chaps. 2 &amp; 3</td>
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<tr>
<td>18</td>
<td>Reliability &amp; Validity</td>
<td>19 Experimental Design</td>
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<td>Mook (83); *Calhoun et al. (00)</td>
<td>Keppel (91); Hsu (89)</td>
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<td>25</td>
<td>Experimental Design &amp; Causal Inference</td>
<td>26 Experimental Design</td>
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<td>Shadish et al. (02), chap. 1</td>
<td>*Dunford (00)</td>
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<tr>
<td>March 4</td>
<td>Quasi-Experimentation</td>
<td>5 Quasi-Experimentation</td>
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<td></td>
<td>Reichardt &amp; Mark (98)</td>
<td>*Russell &amp; Hutchinson (00)</td>
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<td>11</td>
<td>Small N Designs</td>
<td>12 MID-TERM EXAM</td>
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<td>Christensen (00); Morgan &amp; Morgan (01)</td>
<td>Due by 12 noon</td>
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<td>18</td>
<td>Survey Methods</td>
<td>19 Survey Methods</td>
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<td>Krosnick (99); Schwarz (99)</td>
<td>Patrick et al. (98); O’Neal &amp; Chissom (94); *Lemieux et al. (99)</td>
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<td>March 24 - 28</td>
<td>Spring Break</td>
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<td>April 1</td>
<td>Qualitative Research</td>
<td>2 Qualitative Research</td>
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<td>Taylor &amp; Bogdan (98); Fischer (94)</td>
<td>Ponterotto &amp; Grieger (99); *Falbo et al. (01)</td>
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<td>8</td>
<td>Hypothesis &amp; Design Presentations</td>
<td>9 Hypothesis &amp; Design Presentations</td>
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<td>Tuesday</td>
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<tr>
<td>15 Developmental Designs Schae (94)</td>
<td>16 Meta-Analysis</td>
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<td></td>
<td>Cooper &amp; Lindsay (98); Knight et al. (96)</td>
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<tr>
<td>22 Meta-Analysis</td>
<td>23 Ethics</td>
<td></td>
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<tr>
<td>*Kleiber &amp; Harper (99)</td>
<td>Bersoff &amp; Bersoff (99); Cieurzo &amp; Keitel (99)</td>
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<tr>
<td>29 Reflections on Methods &amp; Design Cohen (90); Morgeson et al. (99)</td>
<td>30 Presentations*</td>
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<td>30 Presentations*</td>
<td>7 Presentations*</td>
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<td>May 6 Proposal papers DUE</td>
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<td>12 – 16 Final Exam Week</td>
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**Final Exam Due:** *Wednesday, May 14th by 12 noon*

* **Note:** If we do not finish the presentations during these class periods, we will meet during our scheduled final exam time (Monday, May 12, 10:10 – 12:10) to complete them.

Philosophy of science


Research design & methods overview

Reliability & validity


Experimental design & causal inference


**Quasi-experimentation**


**Small N Designs**


**Survey methods**


**Qualitative research**


**Developmental designs**
**Meta analysis**


**Ethics**


**Reflections**