

EXPERIMENTAL PSYCHOLOGY (PSY 316 B)

Fall 2007

Lecture: MWF 9:05-9:55am -- FHF 536

Lab: M 3:30-6:00pm, T 12:30-3:00pm, T 3:30-6:00pm, W 3:30-6:00pm-- FHF 535

University of Miami
Department of Psychology

Instructor: Matthias Siemer, Ph.D.
Office Hours: Mon 12:30– 2:00 pm, Wed 10:00 – 11:30 am, or by appointment
Office: FHF 463
E-mail: msiemer@psy.miami.edu
Phone: (305) 284-1321

Laboratory Instructor: Rick Stuetzle, Ph.D.
Office Hours: Mon, Wed 2:30-4:45 pm, Tues 9:00 – 11:00 am, or by appointment
Office: FHF 515
E-mail: rstuetzle@miami.edu
Phone: (305) 284-1583

Laboratory Instructor: Marilyn Rodriguez, Ph.D.
Office Hours: Mon, Wed 12:30 -3:30, or by appointment
Office: FHF 459
E-mail: mbrito@miami.edu
Phone:

Teaching Assistant: Lara Levin, BA
Office Hours:
Office: FHF 318
E-mail: llevin@psy.miami.edu
Phone: (305) 284-8453

Required Textbooks:

Goodwin, C. J. (2007). *Research in Psychology: Methods and Design – 5th Edition*. Somerset, NJ: John Wiley & Sons.

American Psychological Association (2001). *Publication Manual of the American Psychological Association (5th ed.)*. Washington, DC: APA.

Course Description: This course provides an overview of research methods and the principles of experimental psychology. We will discuss the scientific concepts, principles, and ways of thinking that are central to the study of psychology. Topics to be covered include the goals of psychological research, ethical issues in the design and implementation of research studies, research design strategies and types of measurement, methods for analyzing and presenting data, and reporting on psychological experiments using the American Psychological Association (APA) format. A variety of in-class assignments will provide students with the opportunity to reflect upon the ways in which research is conducted, presented, and interpreted. Weekly lab sessions, as well as participation in a group project, will provide students with hands-on experience with experimental design, data collection, data analysis, and research report writing.

Course Objectives:

- Students will become familiar with the logic and goals underlying experimental psychology
- Students will be able to compare and contrast basic research designs

- Students will be able to generate clear, concise scientific questions regarding psychological phenomena and be able to employ sound scientific methods for addressing their questions
- Students will be able to critically evaluate the appropriateness of various research designs for different types of questions
- Students will develop scientific writing skills

Grades

A+ = 97-100%	B+ = 87-89.99%	C+ = 77-79.99%	D = 60-69.99%
A = 93-96.99%	B = 83-86.99%	C = 73-76.99%	F = < 60%
A - = 90-92.99%	B- = 80-82.99%	C- = 70-72.99%	

Course Requirements and Assessment:

You will receive only one grade for the entire course. Fifty percent (300/600 points) of your course grade is based on exams completed during the lecture portion of the class and 50% (300/600 points) is determined by your lab performance. Grades are posted on the course website on Blackboard, to which all registered students have access. This is done as a convenience only, and you should note that point totals on the website *may not* be accurate. Therefore, it is your responsibility to keep track of your own grades, and to address any grade discrepancies as soon as possible.

Exams (50% of final grade; 300 points total): There will be 3 non-cumulative exams. Each exam is worth 100 points of your final grade. The first two exams will take place during class on the scheduled days. The third exam will take place during the University scheduled final exam period. The exams will be a combination of multiple choice and short answer questions and will cover material presented in the lectures, textbook, and lab. *Students who miss an exam will not be able to make it up unless the student is absent for an excusable reason as defined below.*

Library Search Assignment (2% of final grade, 12 points total): During the first laboratory session, students will be given a short library assignment to be completed outside of class. This assignment will require you to use the library’s on-line databases in order to find specific documents. As well, using these documents you will create a reference list in APA format. The assignment will be due by 5 pm on Friday February 2nd.

Laboratory Study 1 and Write-Up (18% of final grade; 108 points total): During the laboratory sessions in the first half of the semester, students will focus primarily on conducting a study examining the relations between personality characteristics and the tendency to engage in materialistic thoughts and behaviors. Students will be required to collect data, analyze data, and write a complete scientific paper based upon the experiment. Twenty points will be assigned for writing the Introduction and Method sections for this study following APA format. Twenty points will be assigned for writing the Results and Discussion of the study in APA format. Eight points will be assigned for writing a brief abstract of the study in APA format. Finally, 10% of the final grade (60 points) is assigned for the re-write of all sections of the study (Abstract, Introduction, Method, Results, Discussion, References, and Tables and/or Figures in APA format), based on detailed feedback provided by your laboratory instructor. Note that each of these assignments must be typed and double-spaced and must be submitted in both printed and electronic format via the digital dropbox on Blackboard. Papers will *not* be accepted by e-mail.

Group Research Project (30% of final grade; 180 points total): Each student will conduct a research study as part of a 4 - or 5 - person group. This assignment is intended to provide students an opportunity to apply the concepts learned in class to a “real world” research topic of interest. Students will be given a list of possible topics from which to select their top *five* choices. Topic choices must be submitted to Dr. Siemer in lecture by Friday January 26th, at the latest. Students not submitting topic choices will be assigned to a group. The teaching assistant will form groups based on these

preferences. Based on these topics, students will be required to generate a sound and testable research question, develop an appropriate method for addressing the question, collect data, analyze data, and interpret their data. *Each student* will submit a complete scientific report in APA format at the end of the semester and *each group* will make a presentation to their laboratory section describing their study in full. Groups will be formed early in the semester and the groups are expected to work together throughout the semester. Five percent of the final grade (30 points) will be assigned based on a written proposal for the project. Five percent of the final grade (30 points) will be assigned for a draft of the Introduction and Method sections of the report in APA format. Fourteen percent (84 points) will be assigned for the final paper for the group project which will include all sections in APA format. Five percent of the final grade (30 points) will be assigned for each group's oral presentation of the project and one percent (6 points) of your final grade will be determined based on self/other evaluations of the *quality* and *quantity* of your contributions to the project.

Bonus Points:

Lecture: Students will have the opportunity to earn 6 bonus points as extra credit based on their participation in various in-class assignments that will take place during the lecture portion of the class.

The nature of the assignments will vary but all will include applying knowledge from the class and lab in order to comment on or critique the design and interpretation of different psychological studies. Students will respond to specific questions relevant to the topics being discussed at that point in the semester. The dates of these assignments are not announced ahead of time and it will not be possible to make these assignments up if they are missed.

Lab: Attendance at the laboratory sessions is **mandatory** (see below for detailed attendance policy). Students who attend all sessions on time and for the entire class (unless dismissed by the lab instructor) will gain 6 bonus points as extra credit.

Summary of Course Evaluation:

Exam #1 (Chapters 1, 2, 3, 4)	100
Exam #2 (Chapters 5, 6, 7, 8)	100
Exam #3 (Chapters 9, 10, 11, 12)	100
Library Search Lab Assignment	12
Study 1: Introduction & Method	20
Study 1: Results & Discussion	20
Study 1: Abstract	8
Revised Final Study 1 Paper: All sections	60
Group Proposal for final project	30
Final project: Introduction & Method	30
Final project: Complete report	84
Final project: Oral group presentation	30
Final project: Self/Other evaluation	<u>6</u>
	600

Although your course grade is divided in half based on the lecture versus lab component of the class, attendance and participation in both components is essential for successful performance in the course. Exams are based on material from the lectures, textbook, and laboratory. As well, in order to complete all lab assignments and projects you must have a solid understanding of the material from lectures and the textbook. Incompletes will only be granted at the end of the semester if a minimum of 50% of the work in *both* the lecture and lab portions of the class have been completed.

Lab Attendance Policy: The laboratory sessions are very hands-on and therefore necessitate your attendance and punctuality. Attendance will be taken *at the beginning* of each lab session, and it is *your* responsibility to sign the attendance sheet. *If you are late to class (more than 15 minutes) you will be marked as tardy.* In addition, the first two lates will count as an absence, and every late thereafter will count as an absence. Even though you are expected to come to all lab sessions, illnesses and emergencies do occur. As a result, you are allowed to miss two lab meetings for ANY reason without penalty. After that, you will lose *5 points for each lab meeting* that you miss. *However, if you attend all lab sessions on time and for the entire class (unless dismissed by the lab instructor), you will gain 6 bonus points as extra credit.* If you have a pre-arranged University related absence on a lab meeting day, or if one of the meetings falls on a religious holiday, please see Dr. Stuetzle or Dr. Rodriguez during the *first two weeks of class.*

Handing in Written Lab Assignments:

- All assignments need to be typed and double-spaced. Papers must be in Word format and will not be accepted by e-mail. *All lab assignments need to be submitted in both printed format and electronically via the Lab Section website on Blackboard.*
- Ten percent of the points of an assignment will be deducted for each calendar day an assignment is late. If you have a *legitimate and extraordinary* reason, you must provide your lab instructor with proper documentation immediately.

Class Outline:

DATE	LECTURES & ASSIGNMENTS	TEXT	LAB TOPICS & ASSIGNMENTS
<u>Week 1</u>			
Aug 22	Course Introduction Experimental Psychology	pp. 1-18	NO LAB MEETINGS; See Library search demonstration on Blackboard
Aug 24	Science vs. Pseudoscience,	pp. 18-26	
<u>Week 2</u>			
Aug 27	Pseudoscience still exists		<u>Lab #1:</u> Introduction to Lab; Library Search Demo; Intro to APA Style; Scientific Writing
Aug 29	Goals of Behavioral Research	pp. 26-27	
Aug 31	Research Ethics: Guidelines	pp. 37-60	Last day to submit group project choices
<u>Week 3</u>			
Sept 3	*** LABOR DAY HOLIDY – NO CLASS ***		NO LAB MEETINGS
Sept 5	Research Ethics (cont)	pp. 67-72	
Sept 7	Starting Research: Defining “the question”	pp. 77-85	

DATE	LECTURES & ASSIGNMENTS	TEXT	LAB TOPICS & ASSIGNMENTS
<u>Week 4</u>			
Sept 10	Starting Research: Developing “the idea”	pp. 85-103	<u>Lab#2</u> : Collect data for Study 1 in Lab; APA Style (cont); meet with group Library Search Assignment DUE Friday 09/14 by 5pm.
Sept 12	Measuring Behavior: Reliability, Validity, & Scales	pp. 117-134	
Sept 14	Measuring Behavior: Sampling, Descriptive & Inferential Statistics	pp. 134-151	
<u>Week 5</u>			
Sept 17	Sampling, Descriptive & Inferential Statistics (cont)	pp. 145-158	<u>Lab #3</u> : Analyze data for Study 1; Group project design and proposal guidelines; meetings with group and instructor re: key constructs, variables and design.
Sept 19	Open/Review for Exam #1		
Sept 21	Exam #1 (Chapters 1, 2, 3, 4)		
<u>Week 6</u>			
Sept 24	Experimental Research: Selecting Variables	pp. 161-176	<u>Lab #4</u> : Review Abstract format; meet with groups; provide instructor with operational definitions of key variables, potential risks, and possible measures. Group Proposals DUE Friday 09/28 at 5pm
Sept 26	Experimental Research: Variables and Validity	pp. 177-183	
Sep 28	Experimental Research: Threats to Internal Validity	pp. 184-190	
<u>Week 7</u>			
Oct 1	Experimental Control: Between Subjects Designs	pp. 195-202	<u>Lab #5</u> : Meet with groups; provide instructor with finalized measures and preliminary hypotheses. Study 1 Intro & Method sections DUE Friday 10/05 at 5pm
Oct 3	Experimental Control: Within Subjects Designs	pp. 202-214	
Oct 5	Experimental Control: Problems with Biasing	pp. 218-226	

DATE	LECTURES & ASSIGNMENTS	TEXT	LAB TOPICS & ASSIGNMENTS
<u>Week 8</u>			
Oct 8	Experimental Design: Single Factor, Between Subjects	pp. 233-239	<u>Lab #6</u> : Review APA Results and Discussion format; meet with instructor re: proposal feedback; Data collection schedule
Oct 10	Experimental Design: Single Factor, Within Subjects, Control Groups	pp. 239-245	
Oct 12	Experimental Design: Multilevel Designs	pp. 245-260	
<u>Week 9</u>			
Oct 15	Experimental Design: Factorial Designs; Main Effect vs. Interactions	pp. 269-287	<u>Lab #7</u> : Data collection for group projects Study 1 Results, Discussion & Abstract DUE Thursday 10/18 by 5pm
Oct 17	Experimental Design: Factorial Designs; Interactions (cont)		

Oct 19 *** FALL RECESS – NO CLASSES ***			

<u>Week 10</u>			
Oct 22	Experimental Design: Varieties of Factorial Designs	pp. 287-301	<u>Lab #8</u> : Data collection for group projects
Oct 24	Open/Review for Exam #1		
Oct 26	Exam #2 (Chapters 5, 6, 7, 8)		
<u>Week 11</u>			
Oct 29	Correlational Research	pp. 307-318	<u>Lab #9</u> : Data collection for group projects Study 1 rewrite with all APA Sections DUE 11/02 by 5pm
Oct 31	Correlational Research: Regression & Interpretation	pp. 318-327	
Nov 02	Correlational Research: Applications	pp. 327-334	

DATE	LECTURES & ASSIGNMENTS	TEXT	LAB TOPICS & ASSIGNMENT
<u>Week 12</u>			
Nov 05	Applied Research	pp. 343-351	<u>Lab #10</u> : Data collection for group projects
Nov 07	Quasi-Experimental Designs	pp. 351-360	
Nov 09	Time Series Designs	pp. 360-365	
<u>Week 13</u>			
Nov 12	Program Evaluation	pp. 369-379	<u>Lab #11</u> : Analyze data for group projects Rough draft (Title page, Intro, & Method) of final paper DUE Friday Nov 16th by 5pm
Nov 14	Program Evaluation (cont.)		
Nov 16	Small N Designs & Experimental Analysis of Behavior	pp. 385-400	
<u>Week 14</u>			
Nov 19	Small N Designs: Applications	pp. 401-414	<u>Lab #12</u> : Analyze data for group projects; preparation for group presentations
Nov 21	Small N Designs: Case Studies	pp. 414-419	
***** Nov 22-25 **** THANKGIVING RECESS – NO CLASSES **** *****			
<u>Week 15</u>			
Nov 26	Descriptive Research: Behavioral Observations	pp. 423-435	<u>Lab #13</u> : Group presentations
Nov 28	Descriptive Research: Survey Methods, Sampling	pp. 435-456	
Nov 30	Open/Review for Final Exam		

FINAL PAPER DUE

Thursday Dec 6th by 5pm

FINAL EXAM Chapters 9, 10, 11, 12

Monday, Dec 10th 8:00-10:30 am

Other Information

Office Hours: If you would like additional assistance in order to achieve the goals of this course, I am happy to meet with you during my office hours (see top of syllabus). If these times are inconvenient for you, please see me about scheduling an appointment at a mutually convenient time. If you need to contact me, my phone number and email are listed at the top of the syllabus. *If you are struggling in this course for any reason*, please contact me immediately – do not wait until the end of the semester because it may be too late.

Policy on Academic Integrity: Students are expected to abide by the terms of the University of Miami Honor Code. One of the primary purposes of this class is to teach you about becoming both a scientifically-sound and ethically-principled researcher. As such, we treat any instances of academic dishonesty very seriously. Academic dishonesty includes cheating on exams or assignments, plagiarizing written work, submitting fraudulent documents, and forging signatures. Any violation of the honor code will result in a course grade of F. For further information on the University of Miami Honor Code, please go to http://www6.miami.edu/UMH/CDA/UMH_Main/0,1770,2618-1;12148-3,00.html.

Accommodations for Students with Disabilities: Students with disabilities should inform Dr. Siemer and his/her lab instructor of their needs at the *beginning of the semester*. Students should contact Disability Services in the Academic Development Center, N201, Whitten University Center, for an evaluation, then make an appointment to see me so we can work together to determine and implement appropriate academic accommodations.

Excusable Absences: Absences from exams are only considered excusable under the following circumstances: illness of the student; religious observance (where the nature of the observance prevents the student from being present during the class period); participation in university activities at the request of University authorities; and compelling circumstance beyond the student's control. Students claiming excused absence must apply in writing and furnish documentary support for their assertion that absence resulted from one of these causes.

Religious Observances: Students are responsible for informing the instructor at the *beginning of the semester* if they anticipate any absences for religious observances. Students will not be penalized because of observances of their religious beliefs and students will be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances.