University of South Florida Sarasota-Manatee  
Experimental Design & Analysis  
PSY 4205 section 521  
SPRING 2015  
v. 1/5/15  

January 7th – April 29th; Wednesdays 8:00 – 10:45am  
SMC room B206  

Instructor: Michael A. Gillespie, Ph.D.  Office Hours: W 11:00 to 12:00  
SMC, B216  or by appointment  
941-359-4228  Mailbox: SMC Room C263  
magillespie@sar.usf.edu  
Website: http://usfsm.edu/faculty-members/dr-michael-gillespie/  

Required Materials  

Textbook:  
This is NOT really required and the version does not matter. However, if you don’t have this book you will need other ways of accessing experimental design and data analysis content to reinforce lecture materials.  

Software: IBM SPSS  
• Available on disk for $10/semester at the USF Computer Store. This or a more permanent local installation on your own laptop IS required. Any working version is fine.  
• An online application is also available at www.apps.usf.edu. This is only to be used as a backup resource. It runs on USF Tampa’s servers and has some quirks, especially regarding saving and retrieving (opening) your data.  

Supplemental readings that I will provide you with:  

Course Description  

This course covers the common statistical techniques used in experimental psychological research. Along the way, a brief overview of experimental methods is provided. Emphasis is on the conceptual underpinnings of Analysis of Variance (ANOVA) and the calculation (using the software package SPSS) and formal presentation of ANOVA results. Throughout, emphasis will be placed on the development of a final project that extends the content covered in research method to include the actual analysis and write-up of an empirical study.  

Prerequisite. PSY 3213 (Research Methods in Psychology) with a grade of C or higher.  
(Informal prerequisite: PSY 3204, Psychological Statistics, or similar)
Psychology Mission Statement

The curriculum for a Psychology degree from USF Sarasota-Manatee prepares graduates for the many occupations (e.g., human services, community or public relations, administration, and advertising and market research) and graduate work in such disciplines as clinical, cognitive, and industrial/organizational psychology, education, gerontology, counseling, management, medicine, law, and other human service programs. By the time our majors are ready to graduate, they are equipped with two vital skill sets. First, our majors are familiar with numerous factors influencing behavior and mental processes, and the interactions among them. These factors range from the molecular (e.g., communication in the brain) to the cultural (e.g., human diversity). Second, our majors have developed the critical thinking skills necessary for the consumption and production of psychological research. These skills include writing and familiarity with the ethics of conducting psychological research. Students will have the opportunity to take a capstone course that allows them to create their own research study to demonstrate these competencies.

Assignments and Evaluation

Grading:

- Exams: 150 points each * 2 = 300 possible points
- Assignments: 40 points each * 10 = 400 possible points
- Final Project: 200 points
- Participation: 100 points
- Total: 1,000 points possible

Final grades will be based on the following scale:

- A+ 970 - 1000
- A  930 - 969
- A- 900 - 929
- B+ 870 - 899
- B  830 - 869
- B- 800 - 829
- C+ 770 - 799
- C  730 - 769
- C- 700 - 729
- D+ 670 - 699
- D  630 - 669
- D- 600 - 629
- F  0 - 599

Assignments: Ten graded assignments are designed to give you hands-on practice analyzing data and to help guide you through the execution of your final project. Additionally, two ungraded assignments (HW1a and HW7a) are designed to help provide a starting point for in-class discussion as well as a starting point toward their respective graded assignments (HW1b and HW7b). Unless specified, all assignments must be typed. That is, only typed responses will be graded. SPSS output does not count and will not be graded – rather, the data must be appropriately summarized in text and/or provided in APA-format tables. Unless specified, completed HW assignments are to be uploaded via Canvas.
Exam content: Exam 1 is multiple-choice, as it is primarily anchored in the Gravetter & Forzano text and the content mostly concerns concepts and terminology. Exam 2 is a take-home exam (distributed in class) focusing on the analysis and interpretation of data using between-subjects and within-subjects ANOVAs, which is the focus of the middle third of our class. There is no Exam 3 / Final exam. Your performance for the last third of the class is assessed through the homework assignments and your final project.

Final Project: At the conclusion of this course, I want everyone to be able to analyze research data and write up the results of your analysis. Therefore, the final project requires you to do exactly that. The final project should be a very succinct (approx. 6-12 pages all inclusive) “research report” that contains the following in APA format. You may use your own data, made-up data, or data I’ve provided you with. The statistical analysis you conduct must contain at least three levels of one independent variable, or at least two independent variables. A final project grading rubric will be distributed in class.

- Title page
- Introduction (very brief intro, discussion of variables analyzed, and hypotheses or research questions)
- Method (succinct summary of the nature of your study, participants, and variables)
- Results (results of your statistical analysis of the data, like the examples seen in class)
- Conclusion (correct interpretation of the results as pertains to hypotheses or research questions)
- References

Participation: I consider participation to be the constructive contribution to a learning environment. I do not require everyone to have comments/questions every single class, but if your involvement in class is conspicuously absent, it will likely result in a decreased participation grade (particularly if it’s unclear whether or not you’re attending to the material). Students who are – in general – actively involved and collegial in class discussions can expect to receive a good participation grade.

First-day attendance. Students not present during the first class will be dropped from the class.

Makeup/late policy:
- Exams: If you are unable to take a test during the scheduled time, you must let me know before the test in order to schedule a make-up test. If you don’t let me know before the test, documentation of a valid reason for missing the test (e.g., a note from the hospital) must be provided or you will not be allowed a make-up, resulting in a grade of zero. Make-up tests might be in essay or other alternative format. They will be administered at USF Sarasota-Manatee’s main campus in a proctored environment on the following Fridays from 2 to 4: 2/20, 3/20, 4/10 and 4/24. If you must miss a test and you absolutely cannot make any of these dates, please let me know.
- Assignments are due via Canvas before class on the day they are due. If an assignment is late, 10% of the project grade will be deducted for each class meeting missed. Late assignments will be graded at the end of the semester.

Extra credit: You may choose to Participate in Research being conducted at USFSM. Participation in research is completely voluntary, and you will not be penalized in any way should you choose not to participate in research. Opportunities to participate in research can be found on the Sona website (https://usfsm.sona-systems.com/) and instructions for accessing and using the Sona website can be found in the getting started module on Canvas. Per Sona Guidelines you can earn 1 point for every 30 minutes of participation in a "live" research study (i.e., a study requiring in-person participation) and 0.5 points for every 15 minutes of participation. For studies administered solely online studies you can earn 0.5 points for every 30 minutes of participation. The time allocated for a research study is established by the researcher and is based on the estimated time needed to participate. I will accept a maximum of 5 extra credit points.

Computer/laptop policy. You are required to bring your own laptop to class and it must have a functioning local installation of SPSS.
USF Sarasota-Manatee Policies and Procedures

Academic Dishonesty
The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the USFSM Catalog and the USF Student Code of Conduct. Current and archived catalogs may be found at: http://usfsm.edu/academics/ and the USF Student Code of Conduct can be found at http://www.sa.usf.edu/srr/page.asp?id=88

Academic Disruption
The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the USFSM Catalog and the USF Student Code of Conduct. Current and archived catalogs may be found at: http://usfsm.edu/academics/ and the USF Student Code of Conduct can be found at http://www.sa.usf.edu/srr/page.asp?id=88

Contingency Plans
In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor Canvas site for each class for course specific communication, and the main USFSM and College websites, emails, and MoBull messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the Campus Police Website for further information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency.

Disabilities Accommodation
Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator: 359-4714; email: disabilityservices@sar.usf.edu and website: http://usfsm.edu/disability-services/

Fire Alarm Instructions
At the beginning of each semester please note the emergency exit maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See information available on the USFSM student and faculty webpages at www.usfsm.edu

Religious Observances
The University recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. http://generalcounsel.usf.edu/policies-and-procedures/pdfs/policy-10-045.pdf

Emergency Preparedness
It is strongly recommended that you become familiar with the USF Sarasota-Manatee Emergency Action Plan on the Safety Preparedness. See information available on the USFSM student and faculty webpages at www.usfsm.edu

Web Portal Information
Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and Canvas course information via that address. Therefore it is the student’s responsibility to check their USF email regularly.

Instructor Copyright
Students may not sell notes or other course materials.
Student Resources

Information Commons (General assistance, e.g., eLearning, Technology, Library resources, etc)
SMC 2nd floor, main rotunda
941-359-4295
Hours 8:00 – 9:00 Monday – Friday

Learning Support Services (tutoring, workshops, etc). [http://usfsm.edu/information-commons/tutoring/](http://usfsm.edu/information-commons/tutoring/)
Learning Support Services provides free tutoring to all actively-enrolled USFSM students, in both subject specific areas and academic writing. This service is available as a result of funding provided by the Student Government Association. The tutoring staff consists of both faculty consultants and specially trained peer tutors — undergraduate and graduate students that have met rigorous eligibility requirements.
Contact:
Su Senapati, Ph.D.
(941) 359-4323
sbs2@sar.usf.edu

Students with Disabilities Services: [http://usfsm.edu/disability-services/](http://usfsm.edu/disability-services/)
The mission of Students with Disabilities Services is to encourage and support students with both temporary and permanent disabilities. The office is committed to developing an individualized plan for academic accommodations to enable each student to participate fully in the academic experience.
Contact:
8350 N. Tamiami Trail C107
Sarasota, FL 34243
disabilityservices@sar.usf.edu
Phone: (941) 359-4714 | TTY: (941) 359-4666 | Fax: (941) 359-4701

Students of Concern Assistance Team (SOCAT). [http://legacy.usfsm.edu/socat/](http://legacy.usfsm.edu/socat/)
Works with students who may be distressed or whose behavior is of concern to others to provide support and assistance before more significant problems arise. For yourself or others.
Contact:
Lora Kosten
(941) 426-7330
SOCAT@sar.usf.edu

Counseling & Wellness Center: [http://usfsm.edu/counseling-wellness-center/](http://usfsm.edu/counseling-wellness-center/)
The Counseling and Wellness Center is available to all currently registered New College and University of South Florida Sarasota Manatee students. They provide services in consideration of the individual as a whole and emphasize emotional and physical well-being, as well as academic concerns.
Contact:
Anne E. Fisher, Ph.D.
5800 Bay Shore Road
New College of Florida
Sarasota, FL 34243
Phone: (941) 487-4254
Fax: (941) 487-4256
Email: fisher@ncf.edu

Veteran’s Services: [http://www.usf.edu/student-affairs/veterans/](http://www.usf.edu/student-affairs/veterans/)
Located at the Tampa campus, our office is open Monday - Friday, 8:00 AM to 5:00 PM. We are located in the Grace and Allen Building (ALN 130). Or contact us by the following means.
Phone: 813-974-2291
Email: vetserve@usf.edu
<table>
<thead>
<tr>
<th>Date</th>
<th>Have done for class</th>
<th>Topic</th>
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<tbody>
<tr>
<td>7-Jan</td>
<td>HW1a: Prepare 1-page research proposal; Read G&amp;F Ch. 1 pp. 25-36 &amp; Ch. 3</td>
<td>Introduction to the course.</td>
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<td>Defining &amp; measuring variables, reliability &amp; validity (Ch. 3; ppt01)</td>
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<td>14-Jan</td>
<td>Read G&amp;F Ch. 6, 7</td>
<td>Research Strategies, Experimental Research (Ch. 6,7; ppt02)</td>
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<td>21-Jan</td>
<td>HW1b: 2 page research proposal; Read G&amp;F Ch. 8.</td>
<td>Between-Subjects Design (Ch. 8; ppt02)</td>
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<td>HW2: B-SS concepts; Read G&amp;F Ch. 9.</td>
<td>Within-Subjects Design (Ch. 9; ppt04)</td>
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<td>28-Jan</td>
<td>HW3: W-SS concepts; Assigned reading: Cohen 1992</td>
<td>Power, effect size, statistical significance, decision errors (ppt05)</td>
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<td>4-Mar</td>
<td>Study for Exam 1</td>
<td>Exam 1. Basic concepts</td>
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<td>11-Mar</td>
<td>HW4: ANOVA by hand; Read G&amp;F Appendix C pp. 560-562</td>
<td>Between-SS ANOVA data analysis (Appendix C; ppt06)</td>
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<td>18-Mar</td>
<td>HW5: B-SS data analysis + writeup</td>
<td>Within-SS ANOVA (ppt07)</td>
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<td>20-Mar</td>
<td>HW6: W-SS data analysis + writeup; prepare for exam</td>
<td>Review, HW 5 and 6 discussion</td>
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<td>25-Mar</td>
<td>HW7a: Draft of dataset (1-2 p. printout of dataset/excerpt)</td>
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<td>HW7b: Correct data example; Final Project draft</td>
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<td>1-Apr</td>
<td>Prepare for Exam 2</td>
<td>Exam 2. Single-factor ANOVA</td>
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<td>8-Apr</td>
<td>Read G&amp;F Ch. 11.</td>
<td>Factorial ANOVA I. Two-factor, independent measures (Ch. 11)</td>
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<td>15-Apr</td>
<td>HW8: 2-factor B-SS ANOVA analysis; Read G&amp;F Appendix C pp. 566-569.</td>
<td>Factorial ANOVA II. Two-factor, mixed; Writing a research paper; final project discussions</td>
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<td>22-Apr</td>
<td>HW9: mixed ANOVA analysis</td>
<td>My SIOP conference (no class)</td>
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<td>29-Apr</td>
<td>Final Project</td>
<td>Final exam week; no class; Project due 4/30, 8:00am</td>
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