# Psychology 212C
# Experimental Methods & Data Analysis II
# Spring 2011

**Instructor: Dr. Lori Toedter** **e-mail: meljt01@moravian.edu**
**Office: PPHAC Room 227** **Office Phone: 610-861-1565**

**Office Hours:** Mondays & Wednesdays 1:00-2:30pm; Thursdays 2:30-4:00pm
*or by appointment* [Please check Blackboard for Updates]

---

## Course Overview:

The second semester of this two semester course introduces inferential statistical techniques that build on concepts introduced in Psychology 211. Students will carry out the research study outlined in their proposals from Psychology 211, analyze their data using SPSS and complete an APA-style research paper. This course must be taken in the semester immediately following Psychology 211 with the same instructor. **Prerequisite**: C or better earned in Psychology 211.

## Course Objectives:

Students who successfully complete this course, should be able to:

1. Write a proposal in standard format for approval by the Moravian College Human Subjects Institutional Review Board (HSIRB), including an Informed Consent document;
2. Think critically about all phases of the research process in order to critique their own research and the research of others, as well as to become better consumers of information;
3. Carry out a research study based upon the proposal developed in PS 211;
4. Compute the most common inferential statistical tests and understand the link between research design and statistical analysis;
5. Use SPSS (Statistical Package for the Social Sciences) to summarize and analyze data;
6. Write a report of original research in APA format;
7. Present the results of their study to an audience of their peers.

**Required texts:**

We will be using the same texts as those you used in PSYC 211 last semester. You should bring the Jackson text to class every day. I will announce in advance the days on which you will need your SPSS Manual or the Dunn text. ***Please also be sure to bring a calculator with a square root function to class each day!!***

**Attendance:**

You are expected to attend all classes, and will be asked to sign in at the beginning of each class. If you must miss a class, it is still your responsibility to submit any assignments that are due that day ***on that day***. (See policy on late assignments, below). You will also need to get notes and handouts. Excessive absences will be dealt with on an individual basis. If special circumstances arise that will cause you to miss more than one or two classes, you should contact the Learning Services Office.

**Course Requirements and Grading:**

| | |
|---|---|
| Assignments [including Presentations] | **15%** |
| In-Class Exams (2) (20% each) | **40%** |
| Final Exam | **20%** |
| Research Project | **25%** |

[Extra Credit]

**Explanation of Course Requirements and Grading:**

Assignments [including Presentations]: **Assignments** will be announced on a day-by-day basis. Late assignments will be accepted at a penalty of 2 points per day. **Even if you miss the date for receiving a grade, please turn in the assignment when you have completed it.** There is no other way for you and me to know if you understand the material! Assignments will include both in-class and out-of-class SPSS laboratories and problems assigned from the end of the chapters in Jackson and other sources. Your **presentations** will be graded with a focus on clarity of expression, quality of visual aids and your overall understanding of your project components.

In-Class Exams & Final Exam: There will be two **in-class** exams over the course of the semester, as noted in the Class Schedule. In-class exams will be in both closed and open book formats, and will consist of multiple choice, short essays, SPSS analyses and computational problems. The exact format of a particular test will be announced in advance of the test date. The final exam will have a **cumulative** component, which will serve as a makeup for any exam missed during the semester. In that case, the cumulative portion of the final grade will count twice: once as the cumulative score on the final and once as the missed exam grade.

Research Project: Your **project** is the culmination of your work across the past two semesters. Your grade for the project will be based upon three components (for a total of 200 points):

(1) The effort you put into ***designing*** the best research study you can. This includes such things as controlling for extraneous variables and creating quality measures of variables. You have made a good start at this and have my feedback on your final proposal draft to guide you. I will continue to give you feedback both formally and informally on how you are progressing on this dimension. (50 pts.)

(2) The effort you put into ***conducting*** the study, including starting early enough to get at least the minimal number of participants needed to test your hypothesis and your work on data coding and analysis. (50 pts.)

(3) The quality of your ***final report***, which you will work on across the semester. Building upon your proposal, you will make final editorial (or, if needed, substantive changes) to your introduction. (See my comments on the final draft of your proposal).Your methods section must be changed to use past tense, and updated as needed to reflect any changes made in project design as a result of my feedback, peer feedback and pilot testing. You will then add a results section (including graphs and tables, as appropriate) in APA format after completing your data collection and analysis. You will then write your discussion, in which you will integrate your findings with the literature on your topic. Finally, you will write an abstract, and check your entire manuscript (including references) for compliance with APA format. Anyone wishing to turn in one or more drafts prior to the final due date for the project is welcome to do so. Please see me in advance so that we can set up a workable timeline. (100 pts.)

Extra Credit

Students may earn up to 3 points extra credit by participating in research projects through the department's subject pool. One point may be earned for each ½ hour of participation. Additional opportunities will be announced as they become available.

## Calculating your Grade:

To calculate your final grade, I first add any extra credit points earned (e.g. experimental participation credit to a test grade) and then weight each grade according to the percentages given above. For example, if an exam is worth 15% and you score an 80 on it, I multiply (.15) (80) for a point total of 12. Adding these points together for all the grading components listed above will give you your final grade for the course (out of 100 points). These points are then converted to a letter grade as follows:

| | | |
|---|---|---|
| 92.6-100 | = | A |
| 89.6 – 92.5 | = | A- |
| 86.6– 89.5 | = | B+ |
| 82.6 – 86.5 | = | B |
| 79.6 – 82.5 | = | B- |
| 76.6 – 79.5 | = | C+ |
| 72.6 – 76.5 | = | C |
| 69.6 – 72.5 | = | C- |

| | | |
|---|---|---|
| 66.6 – 69.5 | = | D+ |
| 62.6 – 66.5 | = | D |
| 59.6 – 62.5 | = | D- |
| less than 59.6 | = | F |

**Students Please Note**: It is within the instructor's purview to apply qualitative judgment in determining grades in the course. Submitting a draft for review does not in and of itself earn you a higher grade.

## Academic Integrity:

Academic integrity is a core value of the college and is expected. Cheating and plagiarism will not be tolerated. It is **my contractual agreement** with the college to report all **suspected** cases of plagiarism and cheating. Plagiarism is the misrepresentation of someone else's work as your own. This includes but is not limited to transcribing sentences or paragraphs belonging to another author directly from another written source giving the impression that they are your own words, quoting directly from a published work without giving the author credit (i.e. proper citation), using or "borrowing" another student's work, or buying a paper from a professional service. The policy of the department is that the student must keep all notes and rough drafts until given a grade for the course. See the Student Handbook on AMOS for a more complete description. Please see me for any needed clarification.

## Other Important Information

### Blackboard

Important documents (including the syllabus), announcements, reminders and grades will be posted on **Blackboard,** so please login for this course as soon as possible.

### Learning Services

Students with learning disabilities who need special accommodations for this course should contact Mr. Joe Kempfer in Learning Services at 1307 Main Street (ext. 1510). Accommodations cannot be provided until authorization is received from Learning Services based upon proper documentation of the conditions and needed accommodations. **Accommodations must be authorized on a class by class basis every term.** (This is required by the ADA and is not just an arbitrary annoyance). I will continue to work with Learning Services to arrange tutoring services for this class. Please see me if you believe you are in need of such assistance.

**Students Please Note**: The class schedule that follows is subject to change at my discretion in order to make the class flow more smoothly. Except for extreme circumstances (e.g. multiple class cancellations due to severe weather) I will not change the due dates for major assignments.

# Class Schedule

**[Please note:** Homework problems will be assigned on the day we complete the in class problem(s) for a particular statistical test. They will be due at the next class meeting. Since it is sometimes difficult to know exactly when we will finish the in class problem(s), I have not put the individual homework assignments in the syllabus.]

| **Date** | **Topic** | **Readings & Major Assignments** |
|---|---|---|
| (1**)** Mon 1/17 | Overview of Course/Syllabus<br>Organize presentation schedules | None |
| (2) Wed 1/19 | HSIRB/Prepare for Presentations | Review Ch 4 (pp. 87-90) & Ch 8 (pp. 203-220) & do handout |
| (3) Mon 1/24 | Presentations | Work on projects |
| (4) Wed 1/26 | Presentations | Work on projects |
| (5) Mon 1/31 | Presentations | Work on projects |
| (6) Wed 2/2 | Hypothesis testing I | Jackson, Ch 7, pp. 164-70<br>Work on HSIRB packet! |
| (7) Mon 2/7 | Hypothesis testing II | Work on HSIRB packet! |
| (8) Wed 2/9 | Single Sample Tests I | Jackson, Ch 7, pp. 171-5<br>Work on HSIRB packet! |
| (9) Mon 2/14 | Single Sample Tests II | Jackson, Ch 7, pp. 175-80<br>**HSIRB packet DUE** |
| (10) Wed 2/16 | Single Sample Tests III | Jackson, Ch 7, pp. 180-2; 184-190 |
| (11) Mon 2/21 | Single Sample Tests IV & Exam Review | Jackson, Ch 7, pp. 193-4 |
| (12) Wed 2/23 | **Exam #1** | Prepare for Exam |
| (13) Mon 2/28 | t-test for Independent Groups I | **Signup sheet DUE**<br>Jackson, Ch 9, pp. 226-34<br>[omit p. 232 Cohen's d] |

| **Date** | **Topic** | **Readings & Major Assignments** |
|---|---|---|
| (14) Wed 3/2 | t-test for Independent Groups II | **Script DUE** |
| | ***Spring Break---Enjoy!!*** | |
| (15) Mon 3/14 | t-test for Dependent Groups I | Jackson, Ch 9, pp. 234-40 (omit Cohen's d) |
| (16) Wed 3/16 | t-test for Dependent Groups II | **Work on Revisions to Intro., Methods, Refs.** |
| | ***Data collection begins!!*** | |
| (17) Mon 3/21 | Overview: Nonparametric tests<br>The $Chi^2$ test I | Jackson, Ch 9, pp. 245-7 |
| (18) Wed 3/23 | The $Chi^2$ test II | **Work on Revisions to Intro., Methods, Refs.** |
| (19) Mon 3/28 | Catch up Day<br>**Homework/Problem Review** | Review for Exam |
| (20) Wed 3/30 | **Exam #2** | Prepare for exam |
| (21) Mon 4/4 | One-way ANOVA I | Jackson, Ch 10, pp. 257-64; [pp. 265-9 optional]<br>***Coding system/data analysis plan DUE*** |
| (22) Wed 4/6 | One Way ANOVA II | Jackson, Ch 10, pp. 270-4 |
| (23) Mon 4/11 | One Way ANOVA III | Jackson, Ch 10, pp. 274-6 |
| (24) Wed 4/13 | Two Way ANOVA I | Jackson, Ch 11, pp. 291-8 [pp. 298-303 optional] |
| (25) Mon 4/18 | Two Way ANOVA II | Jackson, Ch 11, pp. 304-7<br>***Draft of results & discussion bullets DUE*** |

| **Date** | **Topic** | **Readings & Major Assignments** |
|---|---|---|
| (26) Wed 4/20 | Two Way ANOVA III | Work on final project paper |
| | ***Easter Break---Enjoy!!*** | |
| (27) Wed 4/27 | Presentations | Work on presentation<br>**Final Report DUE** |

**Final Exam**: Monday, May 2nd at 8:30am