Course Organization

Psychology 209 On-Line
Measurement and Statistics
Winter 2010

Instructor
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Web site: http://hoffman.psych.udel.edu
Office Hours: 2-3 MW

Text


SPSS Software

You will also need the SPSS software package for doing statistics. You should get this ASAP. You can rent it for $35 (PC or MAC) by going to one of the following sites:

For the PC
http://e5.onthehub.com/WebStore/OfferingsOfMajorVersionList.aspx?ws=49c547ba-f56d-dd11-bb6c-0030485a6b08&vsro=8&pmv=b8d47559-f48c-de11-8cd1-0030487d8897&cmi_mnuMain=c689d9bd-408b-dd11-a5de-0030485a6b08&cmi_mnuMain_child=7862179d-3f8b-dd11-a5de-0030485a6b08

For the MAC, go to the same site and click on the MAC tab about half way down the page

Please note. Unfortunately, SPSS student version only runs on Windows PCs. If you use a Macintosh, you will need to find a way to run windows software on your MAC (Parallels and Boot camp are two solutions) or find a PC you can use.
Important!! If you choose not to purchase the bundle created for this course:

Be very careful to get the correct materials for this course. If you buy a used text, be sure it is the sixth edition. In addition you will have to purchase a copy of SPSS Version 16 which will be more expensive than the bundled price. Note, the disc that comes with the Carver and Nash book contains data sets for SPSS but does not have the actual SPSS software on it. You would have to purchase this separately.

You can’t succeed in the course unless you at least have both texts and the SPSS software. You should plan to hold onto your SPSS software. Instructors in your higher-level Psychology courses will expect you to use it for analyzing data in those courses.

Course Web Site: Sakai

Technology

You will need access to MS Word and all your work needs to be submitted in MS Word format. We won’t accept homework that is not in this format. During grading, comments will be inserted in your document and these will only be visible if you have Reviewing set to “Final Showing Markup”. You will also need a decent calculator, preferably one with statistical functions, for exams. A TI 83/84 or related product would be ideal because it is capable of doing most of the statistical tests covered in this course but lesser (and cheaper) scientific calculators will do just fine.

Course Goals for PSYCH 209 (online) Measurement and Statistics

This course provides an introduction to statistical reasoning in Psychology. You will learn how to present the results of experiments using tables and appropriate graphs as well as how to perform standard statistical tests including regression and correlation, the t-test, Analysis of Variance, and the Chi-Square test. In addition, we will cover the logic of hypothesis testing and the use of power analysis. You will also gain experience in evaluating typical results sections in journal articles in order to determine if the inferences drawn by the investigator are actually supported by the data and statistical results. Lab reports will give you an opportunity to analyze your own data sets and to apply what you have learned to communicating your results to others.
Course Philosophy

Every truth has four corners: as a teacher I give you one corner, and it is for you to find the other three.
Confucius

One goal of this course is to help you learn some of the facts of statistics: definitions of things like median and standard deviation. The more important goal though is to help you sharpen your thinking skills; to be able to reason logically and critically about data, and communicate what you have discovered to others. These are crucial skills in all areas of Psychology. This is not primarily a math course. Nothing more advanced than high school algebra is required to do well in this course. Careful, logical thinking and writing are the most important skills.

As the quote at the beginning of this section indicates, I believe that real learning is an active process of discovery on the part of the student. That doesn’t mean though that help isn’t available if you need it. For on-campus students, I will have regular hours where you can get help in any area that is posing difficulties for you. For off-campus students (as well as on-campus), there are discussion forums on Sakai where you can get help from fellow students as well as from me (I will try to make sure that all questions are answered within 24 hours). Students who are frequent contributors (in terms of helpful suggestions, answers, etc.) to the discussion forum can earn one extra credit point (out of 100) toward their final grade. You are also free to call me during office hours if e-mail isn’t up to the job.

An important note about on-line courses. Some of you may be worried about taking a course “without a teacher”. First, please be assured that I will be very involved in the course and willing to do whatever I can to help you learn. Second, in my opinion, lectures are highly overrated as a tool for helping students learn. Most of what you learn in school (and life) comes from your own efforts to grapple with ideas and not from listening to someone talk. Nonetheless, I will post tutorial materials on the web for certain topics that may be difficult.

In the fall semester of 2005, I used the same book, assignments, and tests for both the on-line version of this course and a regular section taught on campus. Test performance for the two groups was virtually identical, so you really are not at a disadvantage by taking statistics on-line.

That being said though, I do not think that on-line courses are for everybody. You should ask yourself whether you are the type of person that is self-motivated and disciplined enough to take charge of your own learning. If you aren’t, you should consider taking this course in the more traditional format. Please contact me if you are having difficulty with the material or having trouble getting your assignments submitted on time. Students who have communicated with me on a regular basis have generally done well in this course.
Course Organization

Realistically, you should plan to spend at least 10 hours per week on this course. The nature of the material will require you to read parts of the chapter more than once. Tackle assignments early so you have time to get help if you need it.

Assignments

There are two kinds of homework assignments: TEXT homework and SPSS assignments. These assignments have to be prepared using a word processor, either Microsoft Word or one that can export documents in Word format. Assignments need to be uploaded to the Sakai site by 11:55pm on the due date. The upload link will disappear at 11:55pm and you will not be able to submit it later. Your clock may not agree with the computer’s so give yourself a margin of error.

Your name should appear at the top of each assignment and must be a part of the name of the file you submit to WebCT. I will exclude your lowest Text and SPSS grades (a “free pass”) so if you do happen to miss handing in an assignment, it won’t hurt your grade. Of course, missing more than one assignment will impact your grade. Don’t miss Text and SPSS assignments! They should help your grade.

When a problem requires a table or graph from SPSS, it can be copied and pasted into your word processing document. Your homework needs to be laid out in an organized and neat fashion. We will not spend time searching your homework for the required information. Keep all your assignments for the entire semester. Check your grades regularly and immediately contact me if you seem to be missing a grade or an assignment. If you contact me weeks after the due date and claim that you submitted assignments on-time but didn’t receive credit, there isn’t anything I can do. In other words, you need to act immediately if something seems amiss in your assignments or grades. Also, note that your grade is completely based on the assignments laid out in this syllabus. There are no “extra” assignments to improve your grade.

Important! Late assignments will not be accepted except for a documented medical reason.

Repeat

Late assignments will not be accepted except for a documented medical reason. Do not ask about submitting late assignments.

Exams
There will be three exams (see Assignment Schedule for dates and coverage). The format of the exams will be multiple choice. You can have a calculator, a formula sheet, and statistical tables from the back of the book at the exam. You create the formula sheet which is a single 8 ½ X 11 piece of paper containing only formulae.

**Important information about Exams from UD OnLine:**

The UD Online Resource Center, located at 850 Library Avenue, Suite 200, is the location where all UD Online proctored exams are administered in Newark. The following site has a map to the testing center: [http://www.continuingstudies.udel.edu/udonline/contact/annex.html](http://www.continuingstudies.udel.edu/udonline/contact/annex.html).

**Weekly Testing Schedule can be found here:**
[http://www.pcs.udel.edu/udonline/exams/schedule.html](http://www.pcs.udel.edu/udonline/exams/schedule.html)

Check this link for information on testing off campus:

You will have the entire week to take your exam. You are encouraged not to wait until the end of the exam week to lessen the possibility of long wait times. There are no make-ups for exams.

**Tips for Succeeding in this Course**

1. Don’t wait until the day an assignment is due to begin working on it. Give yourself time to read (and reread) the chapter before tackling the problems.

2. Use the discussion forum and e-mail to discuss homework problems with other students. **Your submitted homework has to reflect your own work** but you are allowed (even encouraged) to discuss the problems with others, in terms of how to approach it, what it means, etc. Be very careful to avoid plagiarizing on homework and exams. **In general, it is a bad idea to do homework and labs with another student. If your data and wording, errors, graphs, etc. are similar or identical, you may have a problem.**

3. Form a discussion group to go over sample tests and quiz each other. The best way to learn something is to explain it to someone else. Discussion groups can also be created on-line. If you are interested in this, I can create a group site on Sakai for your group.

4. When you are reading the text, monitor your own understanding. There will be times when the concepts are not jelling. Back up to an earlier point in the chapter and reread. It is natural to encounter these comprehension difficulties. They key is to not give up! Everything you need to understand the material is in the chapter but sometimes you will have to struggle a bit to grasp it.
There is no success without hardship. - Sophocles

6. Work hard and don’t give up. Contact me early if you are having trouble.

Grading

Grades will be based on the following activities.

25 % Text Homework
15 % SPSS Assignments
60 % Exams
1 % Extra Credit Discussion Participation

Point Distributions Per Letter Grade

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<thead>
<tr>
<th>Grade Range</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>93-100</td>
<td>A</td>
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<tr>
<td>90-92</td>
<td>A-</td>
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<td>87-89</td>
<td>B+</td>
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<td>83-86</td>
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<td>80-82</td>
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<td>77-79</td>
<td>C+</td>
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<td>73-76</td>
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Important note about grades. There are no extra credit assignments except for the discussion participation. Also, I do not give out incomplete grades. Please don’t ask me about these at the end of the course. My goal is to be fair to everyone in the course.
Academic Integrity

I take the issue of academic honesty very seriously. All work in this class must be your own. If you are unsure about the definition of academic dishonesty, go the University Office of Judicial Affairs website: http://www.udel.edu/judicialaffairs/ai.html. Any cases of suspected academic dishonesty in this class will be referred to that office. Once again, do not prepare homework and lab assignments with another student. Your submitted work needs to reflect your own effort and understanding and not anyone else’s.

Summary of the rules we will follow in this course

1. To get help on a content question: post it in the discussion forum and I will try to answer it within 24 hours if someone else doesn’t answer it first. If you have made a posting, feel free to e-mail me to alert me to that fact. If you have a question about your grade or any other matter that pertains to your personal progress, feel free to e-mail or call me.

2. Post your questions in the appropriate forum. If they are about SPSS assignments, use the SPSS discussion. If they have to do with the text homework, post them in “Text Homework”. Be careful when you post responses on the discussion forums. You shouldn’t provide the answers to problems, only help with how to understand and approach the problem.

3. Work has to be on time. Late work will not be accepted. The only excuse for missing an assignment or an exam is a medical one.

4. Grades will be determined by the assignments laid out in the syllabus. There are no extra credit assignments available (outside of the discussion forum participation credit).

5. I do not give incomplete grades except for documented medical reasons.

Important Syllabus Assignment Due Wed. Jan. 6th

See the Syllabus assignment instructions on Sakai (located under “Resources”)

This assignment is due on Sakai by 11:55pm, Jan, 6th. This counts as a homework assignment.
Assignment Schedule (version 1-15-10)

PSYC 209 On-Line
Assignment Schedule
Winter, 2010

Course Goals for PSYCH 209 (online) Measurement and Statistics

This course provides an introduction to statistical reasoning in Psychology. You will learn how to present the results of experiments using tables and appropriate graphs as well as how to perform standard statistical tests including regression and correlation, the t-test, Analysis of Variance, and the Chi-Square test. In addition, we will cover the logic of hypothesis testing and the use of power analysis. You will also gain experience in evaluating typical results sections in journal articles in order to determine if the inferences drawn by the investigator are actually supported by the data and statistical results. Lab reports will give you an opportunity to analyze your own data sets and to apply what you have learned in order to communicate your results to others.

These are the assignments for each topic. Each assignment is due by 11:55 pm on the date listed. Don’t wait until the last minute. Your clock and the Sakai clock may disagree by a few minutes! If you do miss an assignment, you can use your one “free homework pass” to cover this.

Text Assignments

There are two kinds of assignments: Text and SPSS. Instructions for the SPSS assignments appear following the schedule for Text assignments. Text assignments involve doing problems from the text. These problems have to be submitted as a Word document on Sakai. If you have another word processor, it should be able to export your document in this format. Make sure that your homework presents your work in a neat and organized fashion. Show your work as much as possible. If you need to state an equation and don’t know how to use the equation editor built into WORD, you can spell it out like this:

\[ Y = x \text{ squared} + \sqrt{x} \]

Make sure that all homework documents have your name as part of the title of the file. Your name should also appear in the document itself. You will lose 10/100 points if you fail to do this so please add this information.
Note, the homework is designed to help you learn the material and also to help your grade. Don’t miss handing in homework. You should be able to get close to 100 on these assignments and this can make up for missed points on the exams.

Late homework will not be accepted. Don’t wait until the last minute. Your clock and the Sakai clock may disagree by a few minutes! A documented medical excuse is the only acceptable excuse for late homework. Please don’t ask about submission of late work. I will drop your lowest homework grade (for both text homework and SPSS assignments), so if you miss a homework assignment, you can use your “free drop” to cover it.

**Special Homework Assignment**

Syllabus Assignment Due by Wed., Jan. 6th at 11:55 pm

The instructions for this assignment are located on Sakai under “Resources”.

**Text Homework Schedule** Note: to see comments on your Text and SPSS reports, go to “Review” in MS Word and be sure that “Final Showing Markup” has been selected.

*Indicates that assignment won’t be submitted for grading

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<thead>
<tr>
<th>Week 1</th>
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<tr>
<td>**Mon., Jan. 4</td>
<td>Chapter 1 Intro: Read Chapter 1</td>
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<td>*Tues., Jan 5</td>
<td>Chapter 1 Intro: 8, 10, 14, 18, 22, 24</td>
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<tr>
<td>Wed., Jan. 6</td>
<td>Syllabus Assignment Due</td>
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<td>*Thurs., Jan. 7</td>
<td>Chapter 2 Freq. Dist. : 2, 14, 16, 20</td>
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<td>*Fri., Jan. 8</td>
<td>Chapter 3 Central Tendency : 8, 10, 20, 26</td>
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<td>Week 2</td>
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<td>Topic</td>
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<td>Mon., Jan. 11</td>
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<td>Chapter 4 Variability: 8, 12, 16, 22</td>
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<td>Tues., Jan 12</td>
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<td>Chapter 5 z-scores: 2, 4, 10, 26</td>
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<td>Wed., Jan. 13</td>
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<td>Chapter 6 Probability: 2, 8, 10, 12,</td>
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<td>Thurs., Jan. 14</td>
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<td><strong>Exam 1 Week: Ch. 1-6</strong></td>
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<td>Fri., Jan. 15</td>
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<td>Chapter 7 Sampling Distribution: 10, 18, 20</td>
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<th>Date</th>
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<td>Martin Luther King Day</td>
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<tr>
<td>Tues., Jan 19</td>
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<td>Chapter 8 Hypothesis Testing: 8 (skip 8d), 18, 20</td>
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<tr>
<td>Wed., Jan. 20</td>
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<td>Chapter 9 t Statistic: 8, 18, 20</td>
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<td>Thurs., Jan. 21</td>
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<td>Chapter 10 Independent Sample t: 10, 12, 14, 22</td>
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<tr>
<td>Fri., Jan. 22</td>
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<td>Chapter 11 Related Sample t: 10, 12, 16, 24</td>
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<th>Week 4</th>
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<tr>
<td>Mon., Jan. 25</td>
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<td><strong>Exam 2 Week: Chapters 7-11</strong></td>
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<tr>
<td>Tues., Jan 26</td>
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<td>Chapter 12 Confidence Intervals: Read</td>
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<tr>
<td>Wed., Jan. 27</td>
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<td>Chapter 12: 8, 14, 18, 20</td>
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<td>Thurs., Jan. 28</td>
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<td>Chapter 13 ANOVA</td>
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<td>Fri., Jan. 29</td>
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<td>Chapter 13: 8, 12, 16, 20</td>
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<th>Week 5</th>
<th>Date</th>
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<tbody>
<tr>
<td>Mon., Feb. 1</td>
<td></td>
<td>Chapter 14 Repeated and Two way ANOVA</td>
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SPSS Homework Assignments

SPSS homework assignments involve material in the Carver & Nash book (C&N), Doing Data Analysis with SPSS 16. SPSS assignments have to be submitted on Sakai as Word documents. Tables and graphs that you create in SPSS can be copied and pasted into your Word Document. Make sure your writing is grammatical and clear. Poor writing will be marked off. Late SPSS reports will not be accepted.

Instructions. Each chapter in C&N provides detailed instructions on how to carry out various analyses in SPSS. Sometimes you will be asked to open a data set. These are located on the CD-ROM that accompanies the C&N text. I would recommend that you copy the data files to a location on your hard drive and access the files from there.

Just follow the step-by-step instructions in C&N using your copy of SPSS. Sometimes you will see questions in bold and/or italics. For example, in chapter 1 on p. 10 of C&N, you are asked: “What does the chart tell you about the original question: Did the males or females have a better practice that day?” The homework assignment involves providing answers to these questions. You should put the question in your word document along with your answer. In general you shouldn’t answer questions with one word answers such as “male” or yes vs. no. Use sentences and explain your answers.

Important! As part of answering each question, you will need to copy a graph or table from SPSS into your Word document. Every question in C&N refers to an SPSS object (a graph or table). In the example above, in following the
step-by-step instructions in C&N, you would have created a chart like the one shown on p. 10. This chart appears in the SPSS output window. To paste it into your homework, click on the chart, go up to the menu bar at the top of the window and click on "EDIT" and then "COPY". Click on your word document and choose "PASTE" and the graph will appear in your document. You can then resize it if you’d like. For every question, you should copy the relevant SPSS object into your homework.

In addition, some SPSS homework assignments have one additional problem from the "Moving on" section of the C&N book (designated as "MO"). These problems require you to apply the SPSS skills from that chapter to a problem without providing you with step-by-step instructions. For example, on the Jan. 25th assignment, after answering the questions in Session 12, you will also do the Moving on (MO) problem called “Infant” which is described on page 134 in C&N. Once again, you should include relevant graphs and tables as part of your answers.

**SPSS Homework Schedule** Labs are due by 11:55 pm on the date listed

*Jan. 8  Session 1 & 2 Tables and Graphs
No Moving on Assignment

Jan. 12  Sessions 3 & 4 Scatterplots and Desc. Stats.
Session 4, MO: Sleep (p. 49)

Jan. 15  Session 8 Normal Dist.
No Moving on Assignment

Jan. 19  Session 9 Central Limit Theorem
Skip the session 9 chapter in C&N. Follow the instructions in “Sampling Dist and CLT SPSS revised Jan. 2010” located on Sakai Under “Resources`: Central limit theorem`”.

Jan. 22  Session 11 One sample t-test
See Special Instructions for Session 11 under “Resources/SPSS Data Sets”
No Moving on Assignment
Jan. 25
Session 12 Two Sample t-tests
MO: Infant (p. 134)

Jan. 27
Session 10 Confidence Intervals
MO: Colleges 2007 (p. 110)
*See “Special Instructions for Session 10” on Sakai under SPSS Data files

Jan. 29
Session 13 pp. 137-144 (skip Repeated Measures) One way ANOVA
MO: GSS2004 #1 p. 149
*See “Special Instructions for MO: GSS2004” on Sakai under SPSS Data files

Feb. 2
Session 14 Two-way ANOVA
MO: Student #7 (p. 163)

Feb. 4
Session 15 Regression
MO: MFT (pp 176-177)

Note: to see comments on your Text and SPSS reports, go to "Review" in MS Word and be sure that “Final Showing Markup” has been selected.

Note: there is a problem with creating charts in SPSS 16. Go to this site to download a patch:

http://support.spss.com/student/Patches/SPSS/Windows/16.0.1.2/16.0.1.2_Readme.html

See INTERACTIVE INSTALLATION INSTRUCTIONS on this page