

Psychology 415 – Spring Semester – 2011
Psychological Tests and Measurements



PSYC 415-01 – Psy Tests/Measurements, 3.00, M, 0630-0910
White Hall – Room 103
Lilly, J.; Prerequisite PSYC 101

James E. Lilly, Ed.S.

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Office Hours – I will be available before and after each class and I check my email several times per day.

Required Text: McIntire, Sandra and Miller, Leslie (2007). Foundations of Psychological Testing: A Practical Approach, Third Edition. United States: McGraw Hill ISBN: 978-1-4129-7639-8

Goals: The primary objective of this course is not to teach you about individual psychological tests, but to prepare you to be informed consumers – either test users or takers of psychological tests. Through individual and group exercises, activities and lectures, you will learn about the basic concepts and tools used in psychological testing and how these concepts, issues and tools are relevant to you everyday. You will also learn how tests are used in educational, clinical and organizational settings. While these concepts, issues, and tools may not be as exciting to you as the psychological tests themselves, an understanding of them is vital to the proper use of the tests. At the conclusion of this course you will be more knowledgeable about psychological tests and will be a more informed consumer.

We will cover the basics of psychological testing including what a psychological test is, where to find information about psychological tests, who uses psychological tests and for what reason, the history of psychological testing, some concerns our society has about the use of psychological tests, and the ethical and proper use of psychological tests. Additionally we will cover psychometric principles; we will discuss how to interpret test scores, the concepts of reliability and validity, and the methods for estimating reliability and validity. We will focus on the process of designing, pilot testing, and refining a psychological test.

Content: This course is designed for student interaction and application of principles of tests and measurement. Lectures are expanded through the use of demonstrations, case studies, pragmatic experiences, handouts, and in-class activities requiring the application of lecture/text content. Students will be encouraged to develop and apply critical thinking skills as applied to the practice of psychological testing.

Attendance: Is required. There will be material in the lectures and activities that will not be in your text. As set forth in the Undergraduate Catalog, you are responsible for material that is missed due to absence from class and you are responsible for arranging to make-up missed material. If circumstances make it impossible for you to meet any of the deadlines set forth, please see me **before** the assignment is due or as soon as is possible if the absence was unforeseeable (i.e., medical emergency). There will be dates for assignments to be turned in that will cause a loss in points if they are not turned in on time.

Academic Integrity Policy: “Cheating in all its forms, including plagiarism and cheating on visual work, is considered an academic matter to be controlled and acted upon by the individual faculty member. Students guilty of academic dishonesty on examinations in any course shall receive, as minimum penalty, a grade of F in that course. Such action shall be taken by the instructor, with written notification to the vice president for academic affairs. Repeated offenses shall subject the student to suspension or dismissal from the college. Students involved in facilitating the academic dishonesty among others, such as the unauthorized dissemination of examination materials, will be subject to disciplinary action beyond that called for by their own cheating in the course. Guidelines and policies affecting dishonesty and most other aspects of student life may be found in the Shepherd College Student Handbook” (Undergraduate Catalog). Academic dishonesty will not be tolerated in this class and this policy will be enforced at all times.

Note: Any student who has a disability and/or is in need of classroom accommodations please let me know and/or contact the Coordinator of 504/ADA services for Shepherd College.

At any time, students should feel free to ask for help, direction, guidance or clarification. I check my email frequently and will answer any questions.

Requirements: You are expected to have read the assigned material and completed any assigned work by the appropriate date. Some of the points you are awarded are simply for having material completed on time and therefore are not awarded if turned in late. You can email me the assignment up to midnight of the day it is due and still receive credit (it will be time-stamped by email). Be prepared to discuss the material assigned for each class. In the event that you do miss a class, you are responsible for obtaining information and assignments from one of your colleagues.

• **4 Tests** – In class – **Open book.** (100 X 4 = 400 possible Points). The tests will include multiple choice, short answer and brief essay questions.

• **Test Construction Project** – (200 possible points) This is an assignment that will require you to apply the knowledge gained in this class. You will follow the steps necessary to design and field a brief test measuring a psychological attitude or attribute. This is not a research project involving the exploration of an hypothesis, you will be developing an assessment measure. You will need to do a concise literature review to familiarize yourself with the construct (chosen topic to assess) and then initially develop 12 questions appropriate to your area of inquiry. You will then field test your measure and perform an item analysis. Corrections and improvements will be made based upon this analysis. Next you will administer the improved test (shortened to the 10 best questions) and calculate the descriptive statistical properties of the measure. Next you will establish the reliability and validity of the measure through statistical and other appropriate means. You will create an interpretive rationale (assign numerical value to the raw scores) and calculate the Standard Error of Measurement (SEM). Finally, you will write up your results in the form of a test manual to be turned in to me. The norm group will be your classmates, so you will need to make as many as (depending upon class size) 30 copies of your pretest and 30 copies of your post-test (up to 60 copies total!). Ethical considerations must also be addressed, including complete confidentiality of any results. This is an applied project designed to address your understanding of the concepts put forth in class.

• **Interim Deadlines** – (100 possible points) There will be a number of stages of the project with specific deadlines. Several of these deadlines are very important as they involve exchanging information with your class. Therefore, in total, these deadlines are worth 100 points. These points are earned by work being turned in on time (at the beginning of class) and while the work must be made up (to complete your project), the on-time points **cannot**.

Bonus for emailing me within one week of joining class = 5 points. Please use the address at the top of the syllabus. This is so I can contact you by email if necessary. PLEASE REMEMBER TO PUT SHEPHERD IN THE SUBJECT LINE OR I WILL LIKELY DELETE YOUR EMAIL UNREAD! (Don't forget to include your name in the body of the message.)

Final grades are calculated on a ten point scale – therefore 700-630 = A; 629-559 = B; 558-488 = C; 487-417 = D, below 417 = F.

You will need:

***A calculator (capable of square root) – It does not need to be fancy! Many cost less than 5\$ (have it at hand any night the class meets!!!!) Please have a calculator and do not rely on the capabilities of your cell phone unless you are exceedingly familiar with how to calculate square roots, etc. on your phone.**

A pencil

A simple pocket folder for carrying your pre and post tests back-and-forth

Please do not text, check email or otherwise use electronic gadgets to communicate or play during class time!

Course Schedule – Psychological Tests and Measurements – Psych 415

Spring 2011

Date	Topic	Assignment
January 10	What are Psychological Tests? (Ch 1)	
January 17	Martin Luther King Holiday	
January 24	Why is Psychological Testing Important? (Ch 2)	
January 31	Is There a Right or Wrong Way to Use Psychological Tests? (Ch 3) ▶ Bring definition of your topic/construct and get approval (10 points)	
February 7	Exam One – Chapters 1, 2, and 3	Bring original notes
February 14	How Do You Develop a Test (Ch 11) ▶ Turn in brief Literature Review (include citations, APA format) (20 points)	
February 21	How Do You Know When a Test Works? (Ch 12)	
February 28	How Do Test Users Interpret Test Scores? (Ch 5) (Part 1) ▶ Bring 12 questions (Pilot test) to class ready for exchange (30 copies!) (20 points) Mid-Term grade will reflect performance to this point but is not a good predictor of final grade	
March 7	How Do Test Users Interpret Test Scores? (Ch 5) (Part 2) ▶ Bring your completed pilot tests back to class for return (10 points)	
March 14	Spring Break	
March 21	What Is Test Reliability? (Ch 6) ▶ Bring your Final version (10 questions) to class ready for exchange (30 copies!) (20 points)	
March 28	Exam Two – Chapters 11, 12, 5, and 6 ▶ Bring your Final version (10 questions) to class for return (10 points)	Bring original notes
April 4	What Is Validity, Specifically Content Validity? (Ch 7) Can Tests Really Predict Future Behavior? (Ch 8)	
April 11	What Is Construct Validity? (Ch 9) ▶ Bring your initial descriptive statistics to class (10 points)	
April 18	Exam Three – Chapters 7, 8, and 9 Some time will be set aside during this class for consultation on your test project	Bring original notes
April 25	How Are Tests Used In Educational Settings? (Ch 13) How Are Tests Used In Clinical and Counseling Settings? (Ch 14) How Are Tests Used In Organizational Settings? (Ch 15) Turn in Project!	
May 2	Final Exam Chapters 13, 14, and 15	Bring original notes

***There is the possibility of changes to this syllabus as appropriate or necessary.**

Test Manual Project

Psychological Tests and Measurements

In a manual the sections **usually** look something like this:

1. History and Perspective (or Rationale and Overview) - (your lit review) APA format with citations at the end of the manual. This is to be a three to five page paper giving an overview of your topic area and any information you can find on methods of assessing your construct in the past.

2. Administration and scoring (Directions for administering your test and how to score the test) Specific administration and scoring procedures that could be followed by someone not familiar with your test or even testing in general.

3. Interpretation and results – Describe your norm group. How do you convert raw scores to standard scores or to a cut score. If you use a cut score, describe the rationale for the setting of the cut score? What is the standard error of measurement for the test? The norm group is a description of the test subjects. You will learn the statistical information necessary for this section in class.

4. Normative procedures - How did you create the test, what were the steps? Give a clear explanation as to how the test was developed.

5. Reliability - Correlation information between the first and second administrations of your test. How standard error of measurement was created and what does it represent? Don't forget when correlating the test that you are only able to correlate the matching 10 questions that were administered both times, there will be two questions dropped from your first version. Give a reason for dropping the two questions you chose to drop. Be careful when creating your second test not to reword or change the structure and approach of the remaining questions (for purposes of correlation).

6. Validity - Any justification of how your test might be valid and what more might be needed to prove it so. You may not have much information, but suggest ways the information might be developed.

7. A copy of the final version of your test. Do not include the originals of the tests completed by classmates!

Don't forget that the questions are to be in a Lickert (forced multiple choice) and should not be fill-in-the-blank, true/false, or yes/no!

This is not a research paper! This is the creation of a test manual to accompany your test. It is more of a book format and should stand alone as an explanation of your test and how to use it. It is also considered a marketing tool, therefore, make it appealing to the eye.

Starting Points on the Web

<http://faculty.vassar.edu/lowry/VassarStats.html> (statistics calculators)

<http://www.calculator.com> (statistics calculators)

<http://www.queendom.com/index.html> (online tests)

<http://www.psychologicaltesting.com> (online tests)

<http://faculty.uncfsu.edu/dwallace> (animated statistics demonstrations)

<http://kspope.com/> (articles, research and resources in psychology)

www.apa.org/science/faq-findtests.html (How to: Finding information on Psychological Tests)