

**Psychology 4270/6270  
Psychological Testing  
Spring Semester 2011  
Mondays, 4:05 - 6:55 p.m., Room 217 J.S. Coon Building**

**Instructor: Prof. P. L. Ackerman**

Office: 227 J.S. Coon Building  
Office Hours: By appointment  
Phone: 404/894-5611 or 404/252-6011  
e-mail: pa30@prism.gatech.edu

**Teaching Asst.: Erin Marie Conklin**

**Charles Calderwood**

Office: 219 J.S. Coon Building  
Office Hours: 3-4pm Mondays and by appointment  
Phone: 404/385-0157  
e-mail: emc@gatech.edu (Erin Marie)  
calderwood@gatech.edu (Charles)

**Prerequisites:**

Course in psychological statistics.

**Course Description:**

Fundamentals of psychological testing. Topics include test construction and application issues. Historical and current theory and quantitative methods will be reviewed, including reliability and validity theory. Testing domains to be considered include: cognitive (aptitude, achievement, intelligence), affective (normal personality, psychopathology), and conative (interests, motivation). Applications to be considered include clinical diagnosis, educational and organizational selection, self-assessment, and counseling. Additional topics to be discussed include practical, ethical, and legal issues in psychological testing.

NOTE: This course is not designed to teach you how to clinically administer tests. Rather, it is a survey-level course that focuses on the basic issues in psychological testing, and will provide a review of many classic and modern psychological tests. You will have an opportunity to examine several tests in your own time, to familiarize yourself with the foundations of psychological testing.

**Required Texts:**

Anastasi, A., & Urbina, S. (1997). *Psychological testing. 7th Edition*. New York: Prentice Hall.

**General Course Information and Requirements:**

Class meetings will primarily be devoted to lectures by the instructor. Students are encouraged to ask questions and take part in discussion during regular class periods. A midterm exam and a cumulative final exam will be given. Also, one term paper will be required from each class member.

**Course Grading -- Psych 4270 only:**

Your grade for the course will be determined as follows:

|                       | <i>Weight</i> |
|-----------------------|---------------|
| Midterm Exam          | 30%           |
| Cumulative Final Exam | 40%           |
| Term Paper            | 30%           |
| -----                 |               |
| Class Project         | +10%*         |

\*The class project is a partly-optional activity. Some class time will be devoted to the class project (*where everyone will participate*), and other parts will be optional. Exemplary contributions to the project will result in a potential bonus of **up to one letter grade**. It is expected that only a few students will be involved to the degree associated with an exemplary contribution, but all students are invited to participate.

**Course Grading -- Psych 6270 only:**

Your grade for the course will be determined as follows:

|                       | <i>Weight</i> |
|-----------------------|---------------|
| Midterm Exam          | 25%           |
| Cumulative Final Exam | 35%           |
| Term Paper            | 25%           |
| Class Project         | 15%           |

\*The class project is not an optional activity for grad students.

**Class Project:**

Early in the first few weeks of the course, we will decide on a class project (note: it is also possible that there may be more than one project -- depending on the size of the class and amount of interest generated). The general plan is to generate a “new” psychological test. We will take the project through many of the steps that are involved in developing and validating a psychological test. That is, we will first investigate the construct that we choose -- by examining extant measures of the construct. Then we will decide how to develop a new measure, by selecting an item format or formats, developing try-out items, and designing scales. Depending on the class size, we will try-out the new measure, perhaps with other measures to provide convergent and discriminant validity indices. Then, we will code the data, analyze the test properties, and prepare a final write-up. Depending on the scope of this project, there may be opportunities for student involvement in the data analysis, and possible future writeup for presentation or publication. [Limited class time will be devoted to the project, such as for try-out of the items, and presentation of the results.]

**Term Paper:**

One of the important goals of this advanced course in psychological testing is to be able to be a critical consumer of psychological tests. To be a critical consumer, you must be able to

evaluate the theoretical and empirical adequacy of test source materials (e.g., manuals), review materials, and empirical journal articles that use the test in question. The term paper will require you to critically evaluate one psychological testing instrument.

**This term paper will be due at the beginning of class, on the last day of class, April 25, 2011.** The term paper is to present a critical review of a published psychological test in a specific context/application. The review is to integrate information from various sources (other test reviews and original empirical research with the test).

**NOTE: The paper will need to answer all of the following questions:**

1. What is the test and what application is being considered? (Be specific: e.g., if the test is the “Miller Analogies Test,” the application might be “selection for graduate students in psychology”)
2. Briefly describe the test
3. Is the test reliable for the application? (Which kinds of reliability are important for the application you have chosen, and does the test satisfy these reliability concerns?)
4. Is the test valid for the application? (What kinds of validity are important for the application you have chosen, and does the test satisfy these validity concerns? For example, you should provide a summary of convergent and discriminant validity.)
5. What are the competitors (if any) for the test?
6. How does the test perform for the particular application? You should list both strengths and weaknesses? (This requires your own conclusions, and justification clearly based on the evidence you present -- not the opinions of other reviewers, and not just a ‘gut feeling.’)

**[Target length: 15-20 pages]**

NOTE: Try to avoid tests that have hundreds or thousands of reliability/validity studies -- they make it very difficult to review the literature in a reasonable time frame. Also, you should avoid tests that have only a few references -- they make the review difficult because there is too little information available. **To help you select an appropriate test for the term paper in a timely manner, you must submit your proposed “test” to Prof. Ackerman (either by e-mail or on paper) by one week after the mid-term examination.**

References are to be cited using APA style. (For such information, you should consult the following reference: *Publication Manual of the American Psychological Association: 5th Edition*. (2001). Washington, DC: APA.) Although the term paper will not specifically be graded on the basis of grammar or spelling, poorly written papers are very difficult to read; it is often hard to see good ideas in a jumble of misspelled words, with stream-of-consciousness writing, and so on. Therefore, it is important to pay attention to style in addition to content in the preparation of your paper. Quotations from other sources should be used extremely rarely -- they only detract from the paper. **LATE TERM PAPERS WILL BE DOCKED 5 POINTS FOR EACH DAY LATE.**

**Test Library**

Through the generous support of the School of Psychology, we have been able to setup a small test library that contains several commercial psychological tests (ability, personality, interest, and so on) and technical materials (e.g., test manuals). Later in the semester a handout with a listing of these measures will be distributed. Some will be available for research purposes (e.g., for term paper background materials), and a few will be available for self-administration. Given that these are “controlled items” -- access will be limited, and it will not be possible to make copies of these materials.

**MEETING TOPICS AND ASSIGNMENTS**

Note: Whether we get to all of the topics at the desired dates is critically dependent on class discussion and the depth of treatment accorded to the various topics, and on the time and effort dedicated to the class project. However, the assigned readings and dates for completion of the readings will not change.

Date: 1/10/11

- Topics: 1A. Overview and an historical review of psychological testing
- a. Overview of course
  - b. Early history (to 1905)
  - c. Educational Testing
  - d. Occupational Testing
  - e. Clinical Testing
- 1B. Sources of information in Psychological Testing

Readings:

- A&U Chapter 1: Nature and Use of Psychological Tests  
A&U Chapter 2: Historical Antecedents of Modern Testing

*Date: 1/17/11 -- MLKJr. Birthday Holiday -- NO CLASS*

Date: 1/24/11

- Topic: 2. Test and Measurement Theory
- a. Basic statistics review
  - b. Classical Test Theory and Item Response Theory
  - c. Reliability theory and reliability assessment

Readings:

- A&U Chapter 3: Norms and the Meaning of Test Scores  
A&U Chapter 4: Reliability

Date: 1/31/11

- Topic: 3. Validity
- a. Validity theory and validity assessment
  - b. Bandwidth/Fidelity Dilemma
  - c. Bayes Theorem, base rates and the Barnum Effect
  - d. Factor Analysis

Readings:

- A&U Chapter 5: Validity: Basic Concepts
- A&U Chapter 6: Validity: Measurement and Interpretation

Date: 2/7/11

- Topics: 4a. Conclusion of Validity topic
- 4b. Methodology and Statistics for Test Construction
- a. Test construction (types of tests and methods for creation)
  - b. Item analysis

Readings:

- A&U Chapter 7: Item Analysis

Date: 2/14/11

- Topics: 5. Intelligence and its Assessment
- a. Intelligence theory
  - b. Individual Measures

Readings:

- A&U Chapter 8: Individual Tests
- A&U Chapter 11: Nature of Intelligence

Date: 2/21/11

- Topics 6. Intelligence and its Assessment, continued
- a. Group measures
  - b. Multiple ability batteries (achievement and aptitude assessment)
  - c. Cross-cultural testing
  - d. Neurological assessment

Readings:

- A&U Chapter 10: Group Testing
- A&U Chapter 12: Psychological Issues in Ability Testing

Date: 2/28/11 **Mid-Term Examination -- 1st half of class**

- Topic 7. *Second half of class.* Gender, SES, Race/Ethnic Group differences and other considerations in Ability Testing

Date: 3/7/11

- Topics     8.    Personality and its Assessment
- a.    Personality theory
  - b.    Clinical approaches (empirical vs. rational)
  - c.    Clinical vs. statistical prediction
  - d.    Normal personality assessment
  - e.    Typologies vs. Continua
  - f.    Projective, self-report, and behavioral assessment

Readings:

A&U    Chapter 13: Self-Report Personality Inventories

A&U    Chapter 15: Projective Techniques

Date: 3/14/11

- Topics     9.    Interests and their Assessment
- a.    Empirical approaches (e.g., Strong-Campbell)
  - b.    Theory-based approaches (e.g., Holland)
  - c.    Applications of interest assessment (e.g., counseling, classification)

Readings:

A&U    Chapter 14: Measuring Interests and Attitudes

*Date: 3/21/11 Spring Break (3/21/11-3/25/11) -- No class on 3/21*

Date: 3/28/11

- Topics     10. Ethical and Legal Issues in Psychological Testing -- Part I
- a.    American Psychological Association/ American Educational Research Association/ National Council on Measurement in Education guidelines
  - b.    Equal Employment Opportunity Commission regulations
  - c.    Americans with Disabilities Act
  - d.    Significant legal cases in psychological testing

Readings:

A&U    Chapter 18: Educational and Social Considerations in Testing

Date: 4/4/11

- Topic       11. Ethical and Legal Issues in Psychological Testing -- Part II

Date: 4/11/11

- Topic:     12. Other Assessment Techniques
- a.    Styles and Types
  - b.    Biodata
  - c.    Self-Concept
  - d.    Performance Tests
  - e.    Emotional Intelligence

Readings:

A&U    Chapter 16: Other Assessment Techniques

Date: 4/18/11

- Topic      13. Other Psychological Testing Applications
- a. Integrity testing
  - b. Attitude assessment
  - c. Tests for special populations
  - d. Cross-cultural assessment

Readings:

A&U Chapter 17: Major Contexts of Current Test Use

Date: 4/25/11

- Topic      14. Group Project Presentation(s)  
Summary/Review/Loose Ends

**FINAL EXAMINATION -- Friday, May 6, 2:50 p.m. - 5:40 p.m.**