Psychology 4760

Tests and Measurements

Days: Tuesday Night
Time: 5:30pm-8:00pm
Semester: Spring 2012

Instructor: Dr. Joseph Horvat
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email: jhorvat@weber.edu

Office Hours: T/Th 6:45 AM- 7:30 AM, T/Th 10:15-10:45 AM, T 4:45 PM-5:30 PM, and by appointment.


SCHEDULE

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<td>25</td>
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PLEASE NOTE: This is a TENTATIVE SCHEDULE. This schedule WILL be revised during the semester. Students are responsible for any and all announcements and schedule changes made in class. In class announcements and schedule changes ALWAYS take precedence over this syllabus. Students are required to attend ALL class periods and are responsible for any schedule changes.

If you would like to sign up for a one (1) credit hour "lab" for this course, please see Aubrey (the departmental secretary) and she will sign you into that "lab." You will register for one hour of PSYCH 4830 and we will meet, on average, one hour per week outside of class. The "lab" will be comprised of additional practical applications of testing content and testing concepts learned in class. You will actually be given, and learn how professionals give, tests during this "lab" time.

March 20: Last day to drop the course with a “W” grade, declare CR/NC grades or to Audit a class.

ASSIGNMENTS: Due on the dates indicated above. While the material in the book will compliment the lectures to a certain degree, a substantial amount of new material will be included in lectures which will not be covered in the book. Likewise, not all of the material covered in the book will be covered in class. You are responsible for the material in the book as well as the material in the lectures. Try to keep up on your reading, not only because it will be mentioned and discussed in class from time to time, but also because rapid catch-up reading just prior to exams cannot take the place of a good, slow review. You will also have a couple of out-of-class assignments. The dates of these assignments will be given in class.

Remember, this is a tentative schedule and it WILL be changed during the semester. Students are responsible for any revisions announced in class. In class announcements always take precedence over this syllabus.

EXTRA CREDIT: There will be NO extra credit available in this course.

EXAMS: There will be a total of five (5) exams during the semester. Exam #1 will have two parts. The first part (Exam #1A) will be comprised of approximately 75 multiple choice questions. The second part (Exam #1B) will be comprised of several statistical problems. These two exams will be given on successive days. You will be allowed to use notes, books, calculators, etc. on the computational test (Exam #1B) only. Exam #1B will be a take home exam. Exams 2, 3 and 4 will be comprised of approximately 75 multiple choice questions each. The MC exams may be taken at any of the Testing Centers. Exam #1B will be a computational exam. Exam #1B is to be taken at home.

It has been my experience that most, if not all, students will earn an "A" on each exam.

You MUST begin your MC exams no later than 4:00 PM on the last day the exam is given. At 4:00 PM on the last exam day the university computers will automatically shut down the multiple choice exams and you will be prevented from taking the exam. NO LATE EXAMS
WILL BE GIVEN UNDER ANY CIRCUMSTANCE so make certain you take your exams during the proscribed dates and times.

Since all exams are to be taken outside of class time, we will save four (4) class periods during the semester. Also, since this is a Tuesday Night class we do not have to cancel class for holidays. That is why we will be able to take an extended spring break and why we will be able to end the class earlier in the semester. Please note that we will use any of our "saved" classes to make-up for missed classes due to weather or due to illness on the part of the instructor by adding days to the schedule.

Each exam will be worth approximately 12% toward your final grade.

LATE EXAMS: Remember, NO LATE EXAMS WILL BE GIVEN. If you must miss an exam, make certain you talk to me so that we can schedule your exam for an EARLIER day/date.

CRITIQUES: You will be required to turn in two single spaced two page typed critiques of a psychological test. You will have your choice among topics. Those students not selecting a test will be assigned a test by me. The exact details of these critiques will be discussed in class. The critique is due AT THE BEGINNING OF CLASS on the dates indicated on the schedule. NO LATE PAPERS WILL BE ACCEPTED OR WILL ANY NON-TYPED PAPERS BE ACCEPTED.

These critiques will be worth 30 points each. I would be surprised if you do not receive 26-30 points on each of these papers. In other words, you should earn an A on each of the critiques. I have attached a copy of two different test critiques on the Announcements page (Otis-Lennon Mental Abilities Test and Differential Aptitude Tests) along with a general form for the critiques. These two critiques will be worth approximately 20% of your final grade (10% each).

CRITIQUE/CLASS PRESENTATION: You will be required to present a psychological test critique to the class. This will be done during the last day of class. You will also need to turn in a typed critique of this test with the same requirements as those listed below. These critiques/presentations will be done in pairs. Exact policies as to this matter will be given in class. This presentation will be worth approximately 10% of your final grade. The presentation should last no long than 12 minutes.

PARTICIPATION: Part of your final grade (approximately 10% of your final grade) will be determined by your participation during the class. Participation will include such factors as attendance, class discussion, test administration attitude, etc.

GRADES: Your grades in this course will be determined by your performance on the exams (60% of your final grade), critiques (20%), class presentation (10%), and class participation (10%). Each exam will comprise approximately 12% of your final grade. Remember, there will be NO Extra Credit available in this course. Most students will earn an A for this class.
**EMAILS:** I generally answer email on Tuesdays and Thursdays only. If you email me after noon on Thursday, I will probably not be able to answer that email until the following Tuesday.

**CHEATING:** Cheating is BAD! Students who cheat in this course will be dealt with as harshly as possible. This will, at a minimum, mean that you will receive and “F” in the course. The proper administrators will also be notified and they will follow-up on any additional sanctions against that student.

**SSD:** Students with special needs should refer their special needs to the disability office on campus. The disability office will help you with any of your particular needs. Please feel free to talk to me about any special needs you may have. I will be happy to help where I am able.

**CORE VALUES STATEMENT:** This course might deal with material that may conflict with your core beliefs. In my judgment, this material is relevant to this class and has a reasonable relationship to my pedagogical goals. If you do not feel that you can continue in this course, please drop the course within the proscribed time period. Only under extreme circumstances am I willing to provide alternative assignments to the material in my syllabus. (See WSU Policy and Procedures Manual for further details). Remember, I am not trying to make you believe in or agree with what psychology teaches. I am only interested that you learn what psychology teaches.

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**Psychology 4760**

Tests and Measurements

To display the syllabus Syllabus, click "Syllabus" on the left hand menu.

If you would like to sign up for a one (1) credit hour "lab" for this course, please see me ASAP. You will register for one hour of PSYCH 4830 and we will meet, on average, one hour per week. The "lab" will be comprised of additional practical applications of testing content and testing concepts learned in class. You will actually be given, and learn how professionals give, tests during this "lab" time.

**Course Objectives:**

To have you learn the basic scientific concepts used in tests and measurements.

To help you apply to your everyday life theoretical concepts you will learn in this course.

To have you know the difference between a "good" test and a "bad" test.

To help you apply to other classes the scientific principles you will learn in this course.

To have you learn that psychology is an ethical science and that ethics take precedence over everything a psychologist does.
Test Critique Form

Most of this information can be found in the Mental Measurements Yearbook (MMY) or in the testing manual.

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Title: Name of the test.

TEST AUTHORS: Who developed the test.

PUBLISHER: Test publisher, date of initial publication and most recent revision.

KIND AND RANGE: General description of the test. Type of items, age groups, practical features, purpose, etc.

FORMS AND COST: How many forms and what is the cost of booklets, answer sheets, manual, etc.

ADMINISTRATION: Self administering or other (lay/professional) needed to administer, time required, special materials needed, special training required, etc.

RELIABILITY: Test-retest, alternate form, internal consistency, comments regarding reliability.

VALIDITY: Content validity, concurrent validity, predictive validity, construct validity as found in MMY or Manual.

STANDARDIZATION: Normative data available, kind and adequacy of norms for particular purposes, scoring procedures. How the test and scales were developed.

PURPOSE: Why was the test developed.

REVIEWS: Special merits/demerits of test (criticisms of test by reviewers in Mental Measurements Yearbook--two direct quotes from MMY).

COMMENTS: Your conclusions about the test based upon the above information.

Title: Otis-Lennon Mental Ability Test.

Authors: Arthur S. Otis and Roger T. Lennon.
Publisher: Harcourt, Brace and World, Inc., New York, N.Y.

Kind & Range: Group intelligence tests for grades Kindergarten through twelve.

Forms: 2 forms; 6 levels; manual ('67, 23 pages); for grades 4 and over; technical handbook ('69, 52 pages); supplementary technical data report ('70, 2 pages); $2 per hand-book; $2.25 per specimen set of any one level; postage extra.

A) Primary 1, Kgn.; 1967-1969; forms J ('67, 8 pages); K ('68, 8 pages). manual for Forms J ('67, 21 pages); K ('68, 21 pages). norms booklet for Forms J ('67, 4 pages); K ('68, 4 pages); $6.50 per 35 tests; scoring service $0.90 per test; (30-45 minutes).

B) Primary 2, grades 1.0 -1.5; 1967-1969; 2 editions; Forms J ('68, 8 pages); K ('68, 22 pages). manual for Forms J ('67, 22 pages); K ('68, 22 pages). norms booklet for Forms J ('67, 4 pages); K ('68, 4 pages). (30-45 minutes).

1. hand score able edition, $6.50 per 35 tests; scoring service $0.90 per test.

2. machine score able edition, $9 per 35 tests; MRC scoring service, $0.36 and over per per test.

C) Elementary 1, grades 1.6-2.9; 1936-69; 2 editions

Forms J ('67, 12 pages); K ('68, 12 pages). Manual for Forms J ('67, 23 pages; K(69, 23 pages); norms booklet for Forms J ('67, 6 pages); K('68, 6 pages); (55-60 minutes).

1. hand scorable edition, $9.30 per 35 tests; Scoring service, $1.00 per test.

2. machine scorable edition, $9.30 per 35 tests; MRC scoring service, 42¢ and over per test.

D) Elementary 2, grades 4-6: 1936-69; Forms J('67, 8 pages('68, 8 pages); norms booklet for Forms J(' 6 pages); K('68, 6 pages); $6.80 per 35 tests; separate answer sheets

(Digitek,Harbtor, IBM 850, IBM 1230) may be used; $2.80 per 35 Digitek or IBM answer sheets; $3.00 per 100 Harbor answer cards; 70¢ per Digitek or IBM scoring stencil;Harbor or IBM scoring service; 21¢ and over per Test; (40-45) minutes.

E. Intermediate, grades 7-9; 1936-69; Forms J('67, 8);K('68 8) pages); norms booklet for Forms J('67, 6 pages); Answer sheets, prices, and time same as for elementary 2 level.

F. Advanced, grades 10-12; 1936-69; Forms J('67,8 ages);K('68,8 pages); norms booklet for Forms J('67, 6 pages);K('68, 6 pages); answer sheets, prices and time same as for elementary 2 level.

ADMINISTRATION: Self-administering.

RELIABILITY: The test coefficients for reliability range from .94-.96 for split-half corrected by Spearman-Brown formula, and between .93-.95 for Kuder-Richardson Formula.
VALIDITY: Validity may be obtained by comparing against other accepted measures of general mental ability or scholastic aptitude. (No other information is given in the manual.)

STANDARDIZATION: The basic sampling unit was the school system. Approximately 200,000 pupils in 1177 school systems drawn from all 50 states participated in standardization. Standardization was designed to yield a stratified random-cluster sample of pupils enrolled in grades K-12. Approximately 0.4 percent of the total school population in the United States was used.

PURPOSE: To provide a comprehensive, carefully articulated assessment of general mental ability, or scholastic aptitude, of pupils in American schools.

REVIEWS: John E. Milholland, Seventh Mental Measurements Yearbook.

"The construction and norming of this test bespeaks adherence to the highest level of current standards. Sophisticated authorship apparently backed by the publisher's determination to spare no effort of expense has resulted in a product of exceptional merit."

Arthur E. Smith, Seventh Mental Measurements Yearbook.

"The methods of scoring are flexible and probably meet the needs of any user. Extensive care and planning are evident in choosing the sample of standardization. Intelligence or scholastic ability is highly correlated with socio-economic level. In the new Otis-Lennon series a comparison of median family income and education completed for sampled school systems and for adults in the general population were virtually identical.

COMMENTS: While the test seems to be appropriate for assessing the abilities of school aged children, one must use this instrument with caution. While the reliabilities are adequate, validity measures are less than stellar. Updating, with appropriate validity measures, will make this an outstanding instrument.

NOTE: This review was too long but was acceptable because of the indentations that were used.

Title: Partner Relationship Inventory (Research Edition)

Authors: Carol Noll Hoskins

Publisher: Consulting Psychologists Press, Inc.

Kind & Range: Relationship stability evaluation for married couples.
**Forms & Cost:** A) Long Form (two alternate forms); (10-30 minutes); '88. B) Form I (either 1A or 1B); (10-30 minutes); '88. C) Form II (includes 6 alternate forms); (10-30 minutes); '88. $18 per 25 Long Form test booklets; $15 per 25 self-score able short form test booklets (select 1A or 1B); $14 per 25 scoring forms (select form); $22 per manual (30 pages); $23 per specimen set.

**Administration:** Self-administration.

**Reliability:** The manual author does not provide a complete listing of reliability data. Based on test-retest comparison, reliability coefficients range from .26 to .95. Correlations between partner scores range from .49 to .58. Split half reliability coefficients were determined for Forms 1A and 1B using the Spearman Brown formula and range from .75 to .92.

**Validity:** Content validity is based on the opinions of two judges. The qualifications of these judges is not mentioned. In terms of construct validity, appropriate negative correlations between each of the category scores and a marital adjustment scale are reported. Two other correlational studies are cited as providing evidence of convergent and divergent validity but no details are provided.

**Standardization:** The standardization of each form of the PRI is based on small convenient samples. the author appropriately cautions users that the norms are not representative of all couples and are only references for comparison.

**Purpose:** Designed to assess interactional, emotional, and sexual needs in a relationship and to point to areas of conflict.

**Reviews:** Bradley Elison, Partial Hospitalization Program Team Leader, Virginia Treatment Center for Children, Virginia Commonwealth University, *Eleventh Mental Measurement Yearbook*.

"The PRI seems to have potential as a useful tool in both clinical and research applications. In order for this potential to be realized a substantial amount of research and clarification is needed . . . Normative data relevant to a broader range of couple populations are needed and should include different ethnic groups from different socioeconomic classes, and groups of non-married couples. Rationale and evidence are also needed to support the cutoff scores used in interpretation of the PRI . . . [T]he manual must be organized in a manner that helps the user differentiate data relevant to specific forms of the inventory."

Stephen Olejnik, Professor of Educational Psychology, University of Georgia, *Eleventh Mental Measurement Yearbook*.

"Scores on this instrument are virtually meaningless. A much larger and more representative sample of couples is needed . . . [M]ore evidence is needed to support the
belief that high scores on this instrument truly do reflect conflict in a relationship. At best, responses to this inventory might be used by counselors to begin discussion in a clinical setting . . . [T]he research studies supporting the theory on which the instrument is based were conducted more than 20 years ago. Because society has changed considerably since that time, more recent research is needed to provide current support for the theory.

Comments: As the prevalence of rising divorce rates continued to manifest itself in our society, a valid and reliable instrument to assess a relationship’s strengths and weaknesses would serve a beneficial purpose. The PRI appears to provide a step in the right direction, but the criticisms of this instrument must be addressed. These criticisms include: obtaining a larger and more representative sample, clarification of the manual to ease the examiner’s confusion, and updating the research to include mid-

This question will be similar to your computational exam (Exam 1B).

Homework for Exam #1.

44 69
38 46
56 51
54 44
66 53
52 49
46 43
36 35
44 37
60 69
22 31
72 47
56 45
From the data above calculate the Mean, Median, and Mode for both X and Y. Calculate the Standard Deviations of X and of Y. What would be the z scores of X and Y for subjects 3, 14, 26, 28, 30? Given these z scores which test did the respective students do better on?

Using this same data, graph a scatter plot (you **MUST** use graph paper). What can you conclude from this data? Calculate the Correlation, Regression, Y Intercept, and Slope. Plot the line of regression. Given a value of X=42 what is the predicted value of Y?

Given a value of Y=37 what is the predicted value of X? What can you conclude about his X predicted?