

University of Colorado Denver
RSEM 5110: Introduction to Measurement
Summer 2017
Hybrid

PROFESSOR: Robert (Bud) Talbot, PhD

MEETING DATES AND TIMES: Saturdays 8:00 -1:00; 6/10, 6/24, 7/8; plus online components

LOCATION: LW 1150

OFFICE HOURS: By appointment

OFFICE: LSC 727

VOICE and SMS: 303-668-1322

Course Description:

This introductory Masters-level course deals with the theoretical and historical bases for psychological measurement and its uses in education, counseling, and related fields. Particular attention is given to concepts of reliability, validity, norms, response sets and response styles, fairness and bias, and norm-referenced vs. criterion-referenced measurement. A variety of instruments that are used to measure human attributes and behaviors, in education and related fields, will be examined. Emphasis is on promoting wise and reflective use of measures in specific settings and for particular purposes.

Teaching and learning in a highly compressed format can be challenging. Participating in this course is kind of like going for a long-ish run: in a relatively short amount of time, we'll cover a lot of distance. Carrying through with that metaphor, I have divided this course into 9 "miles." Some of those miles will be relatively easy, while others are steep uphill. At the end of each mile is a challenge (assignment) to help you practice what you've learned and to prepare you for the next mile.

Text:

Drummond, R. J., & Jones, K. D. (2010). *Assessment procedures for counselors and helping professionals* (7th ed.). Upper Saddle River, NJ: Pearson.

Supplemental readings will be introduced throughout the course and will be available on Canvas where you can access and download the readings.

You will need a basic calculator or calculator app on your phone with a square-root button. My go-to Android calculator app is RealCalc, and in Chrome I often use the Cloudy calculator extension. There are plenty of good options available- ask if you need help choosing one.

Required Technology:

The course will rely heavily on Canvas. In addition, we will communicate using Slack (<http://slack.com>) which is an advanced and flexible messaging system that works on multiple platforms (Windows, Mac, Android, iOS, etc). You will receive an email (at your UCD address) inviting you to join our Slack team. Other than that initial email, THIS WILL BE AN EMAIL FREE COURSE. Expect to engage in discussions about assignments, readings, stats, and to stay in touch daily throughout the course using Slack. Virtual office hours will be held through Slack and you should communicate with me using Slack direct messages (DMs) instead of via email. Because this is a compressed course in which we do not meet face to face very much, it is imperative that we build a community online so we can all stay engaged. Course assignments will be submitted through Canvas.

Course Goals:

Students will be able to:

- Understand, explain, and apply basic statistical techniques used in measurement (e.g., levels of measurement, measures of central tendency, measures of variability, correlation)
- Describe essential characteristics of norm-referenced measurement, including the meaning of "norms" and understand and interpret types of scores typically used with norm-referenced measures
- Describe essential characteristics of criterion-referenced measurement, including types of scores typically used
- Describe, compare, and contrast several ways that "standards" are set
- Explain and apply the concepts of validity and reliability to the selection and use of measures for particular purposes
- Understand the concept of measurement error, identify typical sources of error, and use the standard error of measurement to interpret the scores of individuals
- Describe major extraneous factors that influence performance on measures
- Discuss the concept of bias (particularly culture bias and gender bias) and its importance in psychological measurement
- Interpret the results of item analyses conducted on both affective and cognitive measures
- Describe and evaluate a published measure, with particular emphasis given to its psychometric qualities and its appropriateness for a particular clinical or research use

Challenges (ie. assignments):

Homeworks (10% of total grade- graded for completion). Homework assignments are to be completed and are available for most of the content of the course. These will be available in Canvas.

Class Discussion, Participation, and Engagement in Slack (10% of total grade). A chunk of learning for this

course will happen in online discussions (in Slack) as we make connections between the readings, activities, and our experiences. In order to get the most out of our time together, every member is expected to come to engage in our Slack community throughout the week prepared with questions about the readings, worksheets, activities, and their applications. Careful reading and thoughtful contributions to discussions are expected. Each participant is responsible for responding to the Conversation Prompt and participating in the ongoing discussions of that prompts in each module. Read the discussion and pose questions to the respondents, pushing them to think more critically, to provoke new thoughts, or to extend the class's learning. You will earn 15 points each week for engaging in our discussions on Slack.

Quizzes (35% of total grade). The quizzes are designed to help to assess your knowledge of the course content. Quiz content will mainly be based on the readings, worksheets, slides, and class discussion.

Exercise in Assessment (10% of total grade). Your textbook includes a CD with exercises (these are also in the files section in Canvas). You will be required to **complete one of these exercises**, submit your written work for a grade, and share your ideas with your colleagues during our last class. *You may not choose to the Beck Depression Inventory* since we will be reviewing this one together in class.

Written Critique of Existing Measure (35% of total grade). Identify an existing measure that purports to measure a psychological construct that you are particularly interested in, or used for a specific purpose--selection, screening, or placement--that is of interest to you. All measures that are discussed in other class assignments are not available for this assignment. Depending on your program of study, you may need to select your measure from lists generated by your program faculty. Please check Canvas for current lists. Assessments are available through the SEHD Assessment Library (<http://sites.google.com/site/ucdassessmentlibrary/>), or possibly through your place of work. You need to be sure to have access to the manual for the measure. Obtain a copy of the measure and supporting materials (e.g., the technical manual). If possible, one or more critical reviews of the measure (e.g., in the Mental Measurements Yearbook available through Auraria Library at <https://goo.gl/pdHaQB>) should also be obtained. Please refer to the outline of sections and rubric provided in the assignment in Canvas. *You may not choose to critique the Beck Depression Inventory or the DIBELS* (we will be reviewing these together in class). Your paper will be graded and also assessed in LiveText (no need to upload it to LiveText). I'll share an exemplar for this assignment with you in Canvas.

During our last face-to-face class, you will present your Critique of a Measure assignment in small groups. Please come prepared to present your report and share your insights. This is an informal sharing: no need for handouts or PowerPoint. The goal of the sharing is to learn about other assessments that you could possibly use in your future practice/teaching.

Final Course Grading Scale:

- 94-100% A
- 90-93% A-
- 87-89% B+
- 83-86% B
- 80-82% B-
- 70-79% C
- 0-69% F

In order to receive a course grade as indicated relative to the point distribution, all required activities and projects must be completed on time. No makeup or extra credit activities will be made available.

Wondering how much time you should be spending in this hybrid class?

This is a 3 credit hour course, therefore you should expect to spend "in class" -- 3 hours for 15 weeks/sessions = 45 hours, plus for every hour in class, you should spend about 1 hour outside of class reading and preparing. Therefore, in the whole course, you should expect to spend at least 90 total hours. Divided into our 4 week compressed schedule yields approximately 22.5 hours per week at a minimum. Of course, YMMV...

You are expected to:

- Be respectful of people and their ideas.
- Be prepared to participate in class discussions and activities.
- Be responsible by being on time to class, on time with your assignments, insightful about your comments, and active with your course readings.
- Ask questions!

Course Schedule:

MILE/ MEETING MODE	TOPICS	TO-DO/CHALLENGES
--------------------------	--------	------------------

<p>Mile 1</p> <p>6/10 F2F</p>	<p>Introduction to course</p> <p>Types/uses of measures</p> <p>Basic statistics</p> <p>Standard scores and the normal distribution</p> <p>Correlation</p>	<p><u>To-Do (before Class on 6/10):</u></p> <ul style="list-style-type: none"> ● Read: Syllabus and Guidelines for Instrument Critique ● Read: Drummond & Jones chapters 1-3 ● Get on Slack, introduce yourself, engage, ask questions <p><u>Challenges (after Class on 6/10):</u></p> <ul style="list-style-type: none"> ● Complete: CFSEI survey ● Complete: Stats HW
<p>Mile 2</p> <p>Online</p>	<p>Criterion-referenced scores</p> <p>Norm-referenced scores</p>	<p><u>To-Do:</u></p> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapter 4 ● View: slides ● View: Video ● Contribute: Slack discussions <p><u>Challenges:</u></p> <ul style="list-style-type: none"> ● Complete: Scoring HW
<p>Mile 3</p> <p>Online</p>	<p>Diverse population assessment</p> <p>Test-wiseness</p>	<p><u>To-Do:</u></p> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapter 15 and pages 317- 319 ● Read: Test-wiseness for Teachers and Students (Carter, 1998) ● Read: Formula Scoring of Multiple Choice Tests (Correction for Guessing) (Frary, 1988) ● View: slides ● Contribute: Slack discussions SAT Bias <p><u>Challenges:</u></p> <ul style="list-style-type: none"> ● Complete: CFSEI manual brief review
<p>Mile 4</p> <p>Online</p>	<p>Validity – 1985 Standards</p> <p>Validity – 1999 Standards</p>	<p><u>To-Do:</u></p> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapter 6 ● Read: Goodwin (2002) “Changing conceptions of measurement validity” ● Read: Goodwin and Leech (2003) “The meaning of validity in the new Standards for Educational and Psychological Testing: Implications for measurement courses” ● View: slides ● Contribute: Slack discussions CFSEI

		<u>Challenges:</u> <ul style="list-style-type: none"> ● Complete: Validity HW
Mile 5 6/24 F2F	Review concepts Reliability Standard Error of Measurement	<u>To-Do (before class on 6/24):</u> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapter 5 ● Read: Harvill (1991) "Standard Error of Measurement" ● Read: Brooke (1995) ● Contribute: Slack discussions <u>Challenges (after class on 6/24):</u> <ul style="list-style-type: none"> ● Complete: Quiz 1 (by June 26, 11:59 pm)
Mile 6 Online	Administering and interpreting test scores Ethics	<u>To-Do:</u> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapters 7 and 17 ● View: slides ● Contribute: Slack discussions <u>Challenge:</u> <ul style="list-style-type: none"> ● Complete: Reliability HW
Mile 7 online	Assessment areas	<u>To-Do:</u> <ul style="list-style-type: none"> ● View: slides ● Contribute: Slack discussions School Focused Students: <ul style="list-style-type: none"> ● Read: Drummond & Jones chapters 8 – 10 Counseling Focused Students: <ul style="list-style-type: none"> ● Read: Drummond & Jones chapters 11-12 <u>Challenges:</u> All: <ul style="list-style-type: none"> ● Complete and turn in Exercise in Assessment (by July 3, 11:59 pm) School Focused Students: <ul style="list-style-type: none"> ● Complete: Look through the DIBELS survey ● Complete: Read and review the DIBELS Test Manual Counseling Focused Students: <ul style="list-style-type: none"> ● Complete: Beck Depression Inventory ● Complete: Read and review the Beck Depression Inventory Test Manual

<p>Mile 8 Online</p>	<p>Assessment areas</p>	<p><u>To-Do:</u></p> <ul style="list-style-type: none"> ● View: slides ● Contribute: Slack discussions <p>School Focused Students:</p> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapter 14 <p>Counseling Focused Students:</p> <ul style="list-style-type: none"> ● Read: Drummond & Jones chapter 13 <p><u>Challenges:</u></p> <ul style="list-style-type: none"> ● Study: Sample Questions for Quiz #2
<p>Mile 9 7/8 F2F</p>	<p>Sharing critiques Course Summary</p>	<p><u>To-Do:</u></p> <ul style="list-style-type: none"> ● Sharing in Groups: Sharing of Critique of a Measure <p><u>Challenges (after Class on 7/8:</u></p> <ul style="list-style-type: none"> ● Complete: Quiz 2 (by July 10, 11:59 pm) ● Submit: Critique of a Measure Assignment (by July 15, 11:59 pm)

COURSE POLICIES

Late assignments:

In fairness to students who keep deadlines, in general, no late assignments will be accepted. However, only under extenuating circumstances and with prior consent of the instructor, assignments may be accepted with minus 10% of the possible points each day late. More points may be subtracted if you do not get prior consent for the late assignment. I reserve the right not to accept an assignment from any student who abuses this policy.

Incomplete

Incomplete grades (I) are not given to replace low grades. To be eligible for an incomplete grade, students must (1) have successfully completed at least 75% of the course requirements, (2) have special circumstances (verification required) that preclude the student from attending classes and/or completing graded assignments, and (3) make arrangements to complete missing assignments with the original instructor before more than one year has elapsed since the end of the semester in which the course was taken.

SEHD Incomplete Process

1. Students must be in close communication with the instructor PRIOR to the end of the semester regarding special circumstances precluding them from successfully completing the remainder of the course. Faculty may assign students an incomplete grade of "I" to signify that special circumstances beyond the student's control prevented the student from completing a small portion of the course (no more than 25%) and that a final grade cannot yet be assigned.
2. IT IS THE STUDENT'S RESPONSIBILITY TO COLLABORATE WITH THE INSTRUCTOR TO COMPLETE AN INCOMPLETE AGREEMENT FORM (<http://www.ucdenver.edu/academics/colleges/SchoolOfEducation/CurrentStudents/Pages/CurrentStudentResources.aspx>) prior to the end of the semester for which the incomplete is given. A copy of the form, signed by both the student and the instructor should be submitted to the SEHD Student Services Center (LSC 701). Both the student and instructor should also keep a copy. The instructor sets the conditions under which the course work can be completed and the time limit for completion. The student is expected to complete the requirements within the established deadline. If the missing assignments are not completed within the allotted time, the "I" converts to an F on the student's transcript. Students making up an incomplete should not re-register for the course.
3. Upon completion of the missing course work, a Change of Record Form is completed by the original instructor to change the "I" to a letter grade. Faculty should work with the

Faculty Services Center to complete the Change of Record Form.

Plagiarism Policy

As stated in the UCD Course Catalog -

Plagiarism is the use of another person's distinctive ideas or words without acknowledgment. The incorporation of another person's work into one's own requires appropriate identification and acknowledgment, regardless of the means of appropriation. The following are considered to be forms of plagiarism when the source is not noted:

- word-for-word copying of another person's ideas or words
- the mosaic (the interspersing of one's own words here and there while, in essence, copying another's work)
- the paraphrase (the rewriting of another's work, yet still using their fundamental idea or theory)
- fabrication (inventing or counterfeiting sources)
- submission of another's work as one's own
- neglecting quotation marks on material that is otherwise acknowledged Acknowledgement is not necessary when the material used is common knowledge.

More information on this can be found at

<http://catalog.ucdenver.edu/content.php?catoid=6&navoid=530&returnto=search>

If a student is found to have plagiarized, the student will fail the assignment and receive an overall grade of F for the course.

Accommodations/Access

The University of Colorado at Denver is committed to providing reasonable accommodation and access to programs and services to persons with disabilities. Students should contact the Disability Service Office. Any other person requiring accommodation in order to access services at UCD, either on or off campus, should request accommodation from the individual or office responsible for providing the program or service. This request should be made in a timely fashion to allow the individual or office adequate opportunity to provide reasonable accommodation.

CACREP Standards

ASSESSMENT—studies that provide an understanding of individual and group approaches to assessment and evaluation in a multicultural society, including all of the following:

CACREP Standard	Activities	Assessment
a. historical perspectives concerning the nature and meaning of assessment;	Reading: Drummond & Jones chapter 1 Class Lecture Class Discussion	Quiz 1
b. basic concepts of standardized and nonstandardized testing and other assessment techniques, including norm-referenced and criterion-referenced assessment, environmental assessment, performance assessment, individual and group test and inventory methods, psychological testing, and behavioral observations;	Reading: Drummond & Jones chapters 2 and 4 Worksheet: Worksheet on Norm-referenced vs. Criterion-referenced Measures Class Lecture Class Discussion	Exercise in Assessment Quiz 1 Written Critique of Existing Measure
c. statistical concepts, including scales of measurement, measures of central tendency, indices of variability, shapes and types of distributions, and correlations;	Reading: Drummond & Jones chapter 3 Worksheet: Worksheet on Descriptive Statistics Class Lecture Class Discussion	Exercise in Assessment Quiz 1 Written Critique of Existing Measure

<p>d. reliability (i.e., theory of measurement error, models of reliability, and the use of reliability information);</p>	<p>Reading: Drummond & Jones chapter 5; Harvill (1991) "Standard Error of Measurement"; Brooke (1995) Worksheet: Reliability Worksheet Class Lecture Class Discussion</p>	<p>Exercise in Assessment Quiz 2 Written Critique of Existing Measure</p>
<p>e. validity (i.e., evidence of validity, types of validity, and the relationship</p>	<p>Reading: Drummond & Jones chapter 6; Goodwin</p>	<p>Exercise in Assessment</p>

<p>between reliability and validity);</p>	<p>(2002) "Changing conceptions of measurement validity"; Goodwin and Leech (2003) "The meaning of validity in the new Standards for Educational and Psychological Testing: Implications for measurement courses" Worksheet: Validity Worksheet Class Lecture Class Discussion</p>	<p>Quiz 1 Written Critique of Existing Measure</p>
<p>f. social and cultural factors related to the assessment and evaluation of individuals, groups, and specific populations; and</p>	<p>Reading: Drummond & Jones chapters 11, 12, 13, and 15 Class Lecture Class Discussion</p>	<p>Exercise in Assessment Quiz 2 Written Critique of Existing Measure</p>
<p>g. ethical strategies for selecting, administering, and interpreting assessment and evaluation instruments and techniques in counseling.</p>	<p>Reading: Drummond & Jones chapters 7, 15, and 17; Test-wisness for Teachers and Students (Carter, 1998); Formula Scoring of Multiple Choice Tests (Correction for Guessing) (Frery, 1988) Class Lecture Class Discussion</p>	<p>Exercise in Assessment Quiz 2 Written Critique of Existing Measure</p>

Rubric for Critique of a Measure Assignment

	Above Proficient	Proficient	Below Proficient
I. Identification of measure	In addition to criteria for proficient, the information for identification of the measure has information that was found through other sources (e.g., Mental Measurements Yearbook, internet, etc.).	The information for identification of the measure has been taken from the manual and is correct.	The information for identification of the measure is missing or incorrect.
II. Description of measure CACREP-2009-2.6.8.Assessment.b	In addition to criteria for proficient, the description of the measure is well written. The student's assessment of the information correct and complete.	The description of the measure is accurate and complete. The student's assessment of the information correct and complete.	The description of the measure is incomplete, inaccurate, or missing. The student's assessment of the information is incomplete, inaccurate, or missing.
III. Support for measure CACREP-2009-2.6.8.Assessment.c CACREP-2009-2.6.8.Assessment.d CACREP-2009-2.6.8.Assessment.e	In addition to criteria for proficient, the support for the measure is well written. The student's assessment of the information correct and complete	The support for the measure the measure is accurate and complete. The student's assessment of the information correct and complete.	The support for the measure is incomplete, inaccurate, or missing. The student's assessment of the information is incomplete, inaccurate, or missing

<p>IV. Reviewer's overall judgments of the measure CACREP-2009-2.6.8.Assessment.f CACREP-2009-2.6.8.Assessment.g</p>	<p>In addition to criteria for proficient, the reviewer's overall judgments of the measure are well written.</p>	<p>The reviewer's overall judgments of the measure are appropriate and complete.</p>	<p>The reviewer's overall judgments of the measure are incomplete, inaccurate, or missing.</p>
<p>V. Bibliographical references about the measure</p>	<p>In addition to criteria for proficient, there are no APA errors</p>	<p>The references have few APA errors and are complete.</p>	<p>The references have multiple APA errors, and/or are incomplete, inaccurate, or missing.</p>

