CNEP 6320: ADVANCED ASSESSMENT TECHNIQUES, PSYCHOMETRICS, AND EVALUATION
Texas A&M University - Corpus Christi
Department of Counseling and Educational Psychology
COURSE SYLLABUS

PROFESSOR: Dr. Joshua C. Watson
OFFICE: ECDC 151
TELEPHONE: 361-825-2739
EMAIL: joshua.watson@tamucc.edu
OFFICE HOURS: MTW 4:00-6:00 or by appointment

I. Course Description
This course provides an in-depth knowledge base of psychometric principles and measurement theory as applied to the design, evaluation, planning, and implementation of assessment processes at the individual, group, and program level. Advanced principles of instrument design (e.g., factor analytic techniques and item analysis procedures) will be utilized to explore critical issues in the validity and reliability of assessment instruments. Student will learn to apply these core principles of measurement in evaluation contexts relevant to contemporary counseling practices.

II. Rationale
Advanced use of technology is emphasized including web page development and distance learning. This course provides an in-depth framework for understanding the function of testing and measurement. A theoretical and practical knowledge of testing including advanced critiquing of current measures is emphasized. The course is available only for doctoral students.

III. State Adopted Proficiencies for School Counselors
Coursework may be applied toward LPC licensure in the state of Texas.

IV. TExES School Counselor Competencies

Competency 004 (Program Management): Leadership skills to plan, implement, and evaluate a comprehensive developmental guidance and counseling program.

Competency 007 (Assessment): Knowledge for helping clients setting short-term, intermediate, and long-term goals based on self-understanding and current information.

Competency 010 (Professionalism): The school counselor understands and complies with ethical, legal, and professional standards relevant to the profession.
V. Course Objectives and Learning Outcomes

A) Objectives

This course is designed to meet 2016 CACREP standards included in Section 2 (core counseling curriculum) and Section 6 (doctoral professional identity). The following standards are covered in this course. Standards shown in bold type represent the targeted course objectives that will be assessed in this course throughout the semester.

Core Curriculum Standards

- CACREP Standard 2-F-7-g: Statistical concepts, including scales of measurement, measures of central tendency, indices of variability, shapes and types of distributions, and correlations.
- CACREP Standard 2-F-7-h: Reliability and validity in the use of measurements.
- CACREP Standard 2-F-7-m: Ethical and culturally relevant strategies for selecting, administering, and interpreting assessment and test results.
- CACREP Standard 2-F-8-e: Evaluation of counseling interventions and programs.
- CACREP Standard 2-F-8-h: Statistical methods used in conducting research and program evaluation.

Doctoral Standards

- CACREP Standard 6-B-4-e: Models and methods of instrument design.
- CACREP Standard 6-B-4-f: Models and methods of program evaluation.
- CACREP Standard 6-B-4-h: Professional writing for journal and newspaper publication.

B) Learning Outcomes

This course infuses the Learning Objectives of CACREP Section 2 and Section 6 Standards, the state adopted proficiencies, and the TECEES competencies listed above to enable students to demonstrate understanding of the following objectives. Upon completion of the course, students will be able to:

- Demonstrate an in-depth knowledge and understanding of the historical, philosophical, and social backgrounds of assessment and psychometric principles as evidenced by achieving a
score of 80% or higher on each of the knowledge-based quizzes.

- Demonstrate an in-depth knowledge and understanding of the skills and competencies that test examiners must master including critical evaluation of tests/assessments as evidenced by achieving a score of 80% or higher on each of the knowledge-based quizzes.

- Demonstrate an in-depth knowledge and understanding of measurement, statistical, and research skills needed to select, administer, and interpret tests and assessment information as evidenced by achieving a score of 80% or higher on each of the knowledge-based quizzes.

- Critique tests and assessment techniques, including behavioral observations and computer-assisted programs as evidence by a score of 80% or higher on the test review assignment.

- Demonstrate knowledge and understanding of the legal aspects and requirements as well as ethical standards of assessment as demonstrated by a score of 80% or higher on the teaching presentation assignment.

- Demonstrate knowledge and understanding of models and methods of instrument design by utilizing specific analytical techniques to validate the psychometric properties of tests as demonstrated by a score of 80% or higher on the instrument development and validation assignment.

- Demonstrate advanced proficiency in the models and methods of assessment and use of data as demonstrated by a score of 80% or higher on the teaching presentation assignment.

- Demonstrate knowledge and understanding of models and methods of program evaluation as evidenced by achieving a score of 80% or higher on the meta-evaluation paper.

VI. Course Topics

- Historical perspectives of assessment and testing
- Statistical concepts related to test interpretation and development
- Concepts of validity and reliability
- Models and methods of instrument design and test development
- Intelligence assessments
- School and educational assessments
- Personality assessments
- Clinical and counseling assessments
- Neuropsychological assessments
- Career assessments
- Ethical, legal, and professional issues in assessments and testing
- Models and methods of program evaluation
- Reporting results in scholarly publications and presentations
VII. Instructional Methods and Activities

Textbook and additional assigned readings will be the primary basis for meaningful class discussions and activities. Since this course is a doctoral level research course in the counselor education program, course content will be presented in a manner that facilitates critical analysis and active engagement on the part of the student. Students are expected to complete all assigned course readings ahead of class meetings and come prepared to participate in a number of hands-on activities designed to enhance their assessment and evaluation proficiencies. In addition to meeting all course objectives laid out in this syllabus, students are required to become familiar with Blackboard as it will serve as the primary repository for the information and files to be used throughout this course. Students can access the Blackboard homepage for this course at: https://bb9.tamucc.edu/ using their TAMUCC login.

VIII. Evaluation and Grade Assignment

A) Major Course Assignments

Knowledge-Based Quizzes (20 points)

Students will be required to complete two knowledge-based quizzes during the semester. These knowledge-based quizzes will include a combination of objective (i.e., multiple-choice) and short-answer items and will cover the material presented in class as well as in all assigned course readings (textbook and other). Each knowledge-based quiz will assess your knowledge of prescribed content, and is worth 10 points. Tentative administration dates for the knowledge-based quizzes are included in the course schedule.

Test Review (10 points)

Each student will prepare a written review of a published assessment instrument of their choosing. This project is worth 10 points and requires students to submit a short paper that is a maximum of 4 pages. To complete this assignment, students will need to access information regarding assessments in the Mental Measurement Yearbook, which is located in the library and online library database.

Examples of test reviews can be found on the Association for Assessment and Research in Counseling (AARC) website (http://aarc-counseling.org/test-reviews). These examples should help you write your own review.

It is important that students discuss their opinion of the value of their chosen assessment based on their review of the instrument. This project will be evaluated on the basis of the completeness in which the instrument is reviewed. Students are expected to present their findings, in written APA format, in a review that addresses the four (4) aspects of an instrument delineated below. Each student should be prepared to upload their review to Blackboard and share their findings verbally with classmates in small group discussion format. This verbal presentation will be informal (think roundtable discussion) and last approximately 10 minutes.
Applied Instrument/Scale Development and Validation (40 points)

Using the principles presented in class, students will develop a self-report instrument designed to measure an identified construct. Students will be expected to pilot this instrument and report both the results and psychometric properties (e.g., internal consistency, validity, and reliability) of their instrument based on the pilot sample data collected. Students will be expected to recruit participants to complete their questionnaire and then conduct an analysis of the key psychometric properties of their instrument using SPSS software.

To begin, students will create an initial item pool of at least 25 items based on their identified construct of choice. After collecting pilot data and analyzing the psychometric properties of their new instrument, students will refine the instrument by trimming items and identifying factor structures based on conventions discussed in class. After developing their instrument, students will be expected to produce an APA-formatted manuscript and present their newly created instrument to the class. To facilitate learning, students and professor will work collaboratively
during scheduled class meeting times to replicate the practice of test design as it is applied in clinical settings.

The manuscript will be evaluated on the following elements:

A) Brief review of the relevant professional literature (minimum of five contemporary references) supporting the rationale for the instrument and the counseling settings in which it would be used (5 points)

B) Results of an item analysis (10 points)
   - Item-difficulty index
   - Item-reliability index
   - Item-validity index
   - Item-discrimination index

C) Results of a factor analytic application (20 points)
   - A detailed interpretation of the final factor solution (what does this mean)
   - Annotated SPSS results illustrating key decision points informing the interpretive solution derived
   - Recommendations for how this instrument can be used to inform the practice of counseling or counselor education

D) Professional writing conventions (5 points)
   - Grammatically correct and free from error
   - Adherence to APA style guidelines

**Teaching Presentation on an Assessment Topic (20 points)**

Each student will prepare a presentation that reviews basic principles and addresses at least one of the contemporary issues related to counseling assessment highlighted in the textbook chapters 9-16 as assigned by the professor. Students will be responsible for creating a complete lesson plan that includes at a minimum:

1. Discussion questions addressing a contemporary issue
2. At least one exercise and/or experiential application
3. Take-away recommendations or resources for the practicing counseling professional

This assignment is designed to help students develop and practice their presentation and teaching skills. Presenters should model best teaching practices for a masters/doctoral level course. Since all students are in training to be counselor educators, the presenters should be able to safely assume that all students have read the assigned material before their presentation and are prepared to participate in a lively class discussion. The presenter is expected to include material form at least one additional source not mentioned in the textbook in order to extend the learning of the class. Presenters will be required to discuss their plans for their presentation with the professor at least one class period in advance to scheduled date of presentation. The
presentation should be approximately 25-30 minutes in length and utilize PowerPoint or other electronic instructional aids. All slides and handouts must be posted on Blackboard before the presentation for students to access. In addition, the presenter is expected to produce six content questions (derived from both the text readings and their presentation content) which will be distributed after the presentation for students to address.

Students will be evaluated on the accuracy of the information presented, the quality of materials used, their ability to engage students in the learning process, and the creativity expressed in the overall design of the presentation. The presentation is worth a total of 20 points.

**Meta-Evaluation Paper (10 points)**

Students will be required to complete a ‘meta-evaluation’ by reviewing and evaluating the elements of an existing evaluation report provided to them by their professor. This activity is designed to orient students to the core principles of evaluation methodology and their usefulness in measurement and decision making. Examples will be provided in class to guide students in the crafting of their papers.

**B) Point Allocation**

<table>
<thead>
<tr>
<th>Area</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge-Based Quizzes</td>
<td>20</td>
</tr>
<tr>
<td>Test Review</td>
<td>10</td>
</tr>
<tr>
<td>Instrument Development &amp; Validation</td>
<td>40</td>
</tr>
<tr>
<td>Teaching Presentation</td>
<td>20</td>
</tr>
<tr>
<td>Meta-Evaluation Paper</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**C) Grade Distribution**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>80-89</td>
</tr>
<tr>
<td>C</td>
<td>70-79</td>
</tr>
<tr>
<td>D</td>
<td>60-69</td>
</tr>
<tr>
<td>F</td>
<td>Below 60</td>
</tr>
</tbody>
</table>

**IX. Course Schedule and Policies**

**A) Course Schedule**

See schedule for the current academic semester included at the end of this syllabus.

**B) Course Policies**

**Attendance**

Students are expected to attend each scheduled class session. While I believe class attendance to be important, I also realize that as adult learners, students have lives and responsibilities outside
the classroom. When unexpected events or emergencies such as personal illnesses, family crises, or a death in the family arise, I ask that you communicate with me as soon as possible so that I am aware of the situation and we can work together to devise a mutually agreeable course of action. Under these circumstances, absences will be considered “excused” upon receipt of appropriate documentation (doctor’s note, court paperwork, obituary, etc.) and written approval from your instructor. Additional excused absences will be granted for participation in a religious holy day as outlined in the University catalog.

For absences that are not excused, the follow attendance policies are in place:

- Students are permitted only one unexcused absence without penalty during the semester. Upon a second unexcused absence, students will incur a 10% reduction in their final grade.
- Following a third unexcused absence, students will either receive a failing grade for the course or be administratively dropped from the course.
- Arriving late or leaving early to class is discouraged. Two such instances will count as an unexcused absence.
- Students sleeping or acting unprofessionally in class will be asked to leave. Should a dismissal result in the student missing more than 50% of the class period, an unexcused absence will be issued.

Professionalism

By enrolling in a graduate program you have begun your professional career. As such, the expectation is that you will conduct yourself as a professional. A significant part of being a professional is being respectful to your peers and instructor at all times. Examples of disrespectful, and unprofessional, behavior include: talking in class, not paying attention, criticizing others’ thoughts and beliefs, falling asleep, or texting/talking on a phone. While it is understandable that there may be times when you are not in total agreement with your peers or instructor, respect for the academic environment and the professional degree being pursued should always be acknowledged.

Statement of Civility

Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. The University’s goal is to provide you with a high quality educational experience that is free from repression. To assist in meeting this goal, you are responsible for following the rules of the University, city, state, and federal government. You are expected to behave in a manner that is dignified, respectful, and courteous to all people; regardless of gender, ethnic/racial origin, religious background, age, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

Late Submissions of Student Work

All assignments are to be submitted online to the course Blackboard page prior to the beginning of class on the due date specified in the course calendar (see end of syllabus).
Assignments not received prior to the beginning of class will be considered late. A letter grade deduction will be applied to all late submissions that were not discussed with your instructor in advance. Assignments not turned in 30 days after the due date will no longer be accepted and students will receive a zero for that particular assignment.

**Extra Credit**

As a general rule, extra credit opportunities will not be extended in this course. Course grades should be reflective of the proficiency level students are able to demonstrate through all course assignments and assessments. Requests to award additional points without just cause or to assign alternative/additional work for credit will be denied.

**Academic Integrity and Plagiarism**


University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism (plagiarism is the presentation of the work of another as one's own work).

Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to the course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanction to any student involved. Penalties that the instructor might possibly apply to individual cases of academic dishonesty include:

- Written reprimand
- Requirement to re-do work in question
- Requirement to submit additional work
- Lowering of grade on work in question
- Assigning grade of "F" to work in question
- Assigning grade of "F" for course
- Recommendation for more severe punishment, such as dismissal from program or University

If the faculty member determines that assigning a grade of "F" to the course is the appropriate penalty and this disciplinary action occurs prior to the deadline for dropping courses, the student forfeits his/her right to drop the course in question.

If the faculty member recommends more severe punishment, such as dismissal from the program or from the University, the faculty member will notify the appropriate chair/college dean, who in turn will notify the Office of Student Affairs. If dismissal from the University is recommended, the Office of Student Affairs will follow its procedure for such cases.

The faculty member must file a record for each case of academic dishonesty, including a description of the disciplinary action taken, along with any materials involved, with his or her
college dean, who will forward a copy to the Office of Student Affairs. The office of the academic dean of the college in which the offense took place will maintain records of all cases of academic dishonesty reported for a period of five years. The Office of Student Affairs will also maintain records of such cases for a period of five years. The Office of Student Affairs will inform the Graduate Dean as appropriate.

Any student who has been penalized for academic dishonesty has the right to appeal the judgment or the penalty assessed. Students who wish to appeal an academic dishonesty decision should contact the Office of Student Affairs for guidance on the appropriate steps for initiating the process.

**Dropping a Class**

My hope is that you never find it necessary to drop this or any other class during your program of study. With that being said, I realize events sometimes occur that make dropping a course a necessary and wise decision. If you ever find yourself in a situation like this, I ask that you consult with me before you decide to drop the course to be sure it is your best option. Should dropping the course prove to be the best action for you to take, it is **your responsibility** to initiate the drop process by going to the Student Services Center and filling out a course drop form. Simply discontinuing your attendance and participation WILL NOT automatically result in your being dropped from the class, and a final grade will be issued.

**Communication**

Each TAMUCC student has access to an individual e-mail account assigned to them by the university. This is the primary method through which your instructor will communicate with you throughout the semester. At the beginning of the course, students should make sure they have activated their account and make plans to check the account regularly. Students can expect to receive a response to their queries from their instructor within 48 hours (excluding weekends and university-recognized holidays).

**X. Textbooks**


Optional Texts (recommended but NOT required):

XI. Bibliography

The following citations represent a sampling of the knowledge base supporting course content.


**XII. Grade Appeals**

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**XIII. Disability Accommodations**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office at (361) 825-5816.

**XIV. Academic Continuity**

In the event of an unforeseen adverse event such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi, this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.
XV. Course Assignment Evaluation Rubrics

(See course Blackboard page for rubrics and additional information on assignments and projects)

Tentative Course Schedule (Summer 2015)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic and Assigned Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 7</td>
<td>Introduction to course</td>
</tr>
<tr>
<td></td>
<td>Psychological testing and assessment</td>
</tr>
<tr>
<td></td>
<td>Historical, cultural, legal/ethical considerations</td>
</tr>
<tr>
<td></td>
<td>Cohen, Swerdlik, &amp; Sturman: Chapters 1-2</td>
</tr>
<tr>
<td>July 9</td>
<td>Review of basic statistical and measurement concepts</td>
</tr>
<tr>
<td></td>
<td>Use of tests</td>
</tr>
<tr>
<td></td>
<td>Reliability and Validity</td>
</tr>
<tr>
<td></td>
<td>Cohen, Swerdlik, &amp; Sturman: Chapters 3-7</td>
</tr>
<tr>
<td>July 14</td>
<td>Classical test theory</td>
</tr>
<tr>
<td></td>
<td>Generalizability theory</td>
</tr>
<tr>
<td></td>
<td>Introduction to test development</td>
</tr>
<tr>
<td></td>
<td>Cohen, Swerdlik, &amp; Sturman: Chapter 8</td>
</tr>
<tr>
<td></td>
<td><strong>Test Review Due (upload to Blackboard)</strong></td>
</tr>
<tr>
<td>July 16</td>
<td>Exploratory factor analysis (EFA)</td>
</tr>
<tr>
<td></td>
<td>Confirmatory factor analysis (CFA)</td>
</tr>
<tr>
<td>July 21</td>
<td>Instrument design and validation consultation session I</td>
</tr>
<tr>
<td></td>
<td><strong>Mini-Examination #1</strong></td>
</tr>
<tr>
<td>July 23</td>
<td>Instrument design and validation consultation session II</td>
</tr>
<tr>
<td>July 28</td>
<td>Program evaluation and meta-evaluation techniques</td>
</tr>
<tr>
<td></td>
<td>Intelligence and educational testing</td>
</tr>
<tr>
<td></td>
<td>Cohen, Swerdlik, &amp; Sturman: Chapters 9-11</td>
</tr>
<tr>
<td>July 30</td>
<td>Assessment of personality</td>
</tr>
<tr>
<td></td>
<td>Clinical and counseling assessment</td>
</tr>
<tr>
<td></td>
<td>Cohen, Swerdlik, &amp; Sturman: Chapters 12-16</td>
</tr>
<tr>
<td></td>
<td><strong>Instrument Design Project Due (upload to Blackboard)</strong></td>
</tr>
<tr>
<td>August 4</td>
<td>Teaching Presentations (1-5)</td>
</tr>
<tr>
<td></td>
<td><strong>Meta-Evaluation Paper Due (upload to Blackboard)</strong></td>
</tr>
<tr>
<td>August 6</td>
<td>Teaching Presentations (6-10)</td>
</tr>
<tr>
<td></td>
<td><strong>Mini-Examination #2</strong></td>
</tr>
</tbody>
</table>