COURSE OVERVIEW

Measurement is fundamental to psychological research and application. However, measurement also represents one of the greatest obstacles that psychology faces, both in terms of daily practice and in terms of the reputation of the discipline. Many of the concepts in which we are interested such as moods, attitudes, and abilities are abstract and ambiguous; attempting to quantify them is what psychometrics is all about.

The purpose of this course is to introduce you to the central concepts of psychological measurement. I will take a “nuts and bolts” approach, covering the critical aspects of psychometric theory including test construction, item analysis, reliability, validity, and item response theory. Emphasis will be put on learning the logic and assumptions of various concepts and methods along with providing ample opportunity to apply them. My objective is for each of you to gain a comprehensive understanding of the basic concepts of psychometrics, in terms of underlying theory as well as application. The format of the course will include a combination of lecture, class discussion, and projects.

COURSE EVALUATIONS

Your grade will be based on your performance on: % of Total Grade
(a) In-class midterm exam 25
(b) Measure development project 30
(b) Take-home projects 45

I will discuss the specifics of each of these and the due dates in class.
I will determine final course grades using the scale below

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<thead>
<tr>
<th>Grade</th>
<th>Minimum Score</th>
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<tbody>
<tr>
<td>A+</td>
<td>98-100</td>
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<tr>
<td>A</td>
<td>93-97</td>
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<tr>
<td>A-</td>
<td>90-92</td>
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<tr>
<td>B+</td>
<td>87-89</td>
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<tr>
<td>B</td>
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<td>73-76</td>
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<td>C-</td>
<td>70-72</td>
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<td>67-69</td>
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<tr>
<td>D-</td>
<td>60-62</td>
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<tr>
<td>F</td>
<td>Below 60</td>
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**ADMINISTRATIVE STUFF**

**Required Text:** In lieu of a textbook, we will be using a compendium of notes that I (and others over the years) have compiled. You will be required to purchase it. It will cost around $35.

**Important Dates:**
- September 4th: Last day to add the course
- September 28th: Last day to drop the course
- October 28th: No class (Columbus Day break)
- November 22nd: No class (Thanksgiving break)
- Dec 18th at 10:30 am: Measure development project due

**Honor Code Statement:** All aspects of this course are bound by the George Mason University Honor Code which states that, “Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.” Any student who engages in scholastic dishonesty, inadvertently or not, will be reported directly to the Honor Committee.

**Students with Disabilities:** If you are a student with disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 709-993-2474. All academic accommodations must be arranged through that office.

**E-mail:** Official Communications via GMU E-mail: Mason uses electronic mail to provide official information to students. Examples include communications from course instructors, notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Students are responsible for the content of university communication sent to their mason e-mail account, and are required to activate that account and check it regularly.

**Blackboard:** I will be posting the readings, projects, etc. on Blackboard. If you have not previously used this system, you might wish to access this link for help, https://itservices.gmu.edu/services/view-service.cfm?customel_dataPageID_4609=5409
TOPICS AND READINGS

Below are the topics we will cover as well as the readings that you should complete prior to our discussing the corresponding material in class.

**Introduction to Testing and Measurement**
1) Part 1 in Notes

**Test Construction**
1) “Overview of the Test Construction Process” Section in Notes

**Other Resources (No need to read these for class)**
6) “Test Development and Revision Chapter” in *Standards for Educational and Psychological Testing*.
7) [http://www.jpsm.umd.edu/jpsm/courses/pdfsylab/surv630_syllabus.pdf](http://www.jpsm.umd.edu/jpsm/courses/pdfsylab/surv630_syllabus.pdf)

**Scaling and Measurement**
1) “Types of Measurement and Basic Statistical Concepts” Section in Notes

**Test Administration**
(*We will not really discuss these readings much in class, but they are very useful*).
1) “Test Administration, Scoring, and Reporting” Chapter of *Standards for Educational and Psychological Testing*.

**Item Analysis**
1) “Item Analysis” Section in Notes
Reliability
1) “Classical Test Theory and Reliability” Section in Notes

Optional Readings

Item Response Theory (IRT) and Relevant Applications
1) “Latent Trait Theory” Section in Notes

Validity
1) “Validity” Section in Notes

Test Bias, Fairness, and Using Test Scores

Other Resources (*Just skim for class)