

PSYC*3250, Course Outline: Fall 2016

General Information

Course Title: Psychological Measurement

Course Description:

This course is an introduction to the theory of psychological measurement and measurement procedures presently used in psychology. Coverage will include such topics as reliability, validity, test construction; and the measurement of ability, personality, attitudes, interest and achievement.

Credit Weight: 0.50

Academic Department (or campus): Psychology

Semester Offering: F16

Class Schedule and Location:

2:30-3:20pm - Monday, Wednesday, Friday, MacNaughton (MACN) 113

Instructor Information

Instructor Name: Grace Ewles

Instructor Email: gewles@uoguelph.ca

Office location and office hours: Wednesdays 9:30-11am, MacKinnon (MCKN) 542

(Office hours run Wednesday September 14th - Wednesday December 7th)

GTA Information

GTA Name: Dan van der Werf

GTA Email: dvanderw@uoguelph.ca

GTA office location and office hours: TBD

GTA Name: Sergey Mazuritsky

GTA Email: smazurit@uoguelph.ca

GTA office location and office hours: TBD

GTA Name: Brooke Charbonneau

GTA Email: charbonb@mail.uoguelph.ca

GTA office location and office hours: TBD

Course Content

Specific Learning Outcomes:

1. Demonstrate a clear understanding of psychological measurement principles through the application of key concepts. (LO1)
2. *Understand the use of numerical data. (LO2)*
3. *Demonstrate the ability to interpret data/scores. (LO3)*
4. *Demonstrate a comprehensive understanding of research ethics and the data collection process (LO4).*
5. *Demonstrate the ability to use statistical software programs, and associated word- and data-processing software to serve a variety of functions (e.g., word processing, data analysis). (LO5)*
6. *Demonstrate critical thinking in the interpretation of findings, in order to draw conclusions. (LO6)*
7. *Demonstrate an ability to communicate findings through the use of clear, concise writing, with a communication style appropriate for the target audience. (LO7)*
8. *Write using appropriate terminology, grammar, spelling, as well as APA referencing and formatting. (LO8)*
9. *Understand the importance and value of psychological measurement principles for both psychology as a discipline and society. (LO9)*

Lecture Content:

1. Introduction to Tests and Measurements
2. Testing and Society
3. Basic Concepts in Measurement and Statistics
4. Scales, Transformation, and Norms
5. The Process of Test Development
6. Reliability: The Consistency of Test Scores
7. Using and Interpreting Information about Test Reliability
8. Replication and Measurement Error
9. Validity of Measurement: Content and Construct-Oriented Validation Strategies
10. Validity for Decisions: Criterion-Related Validity
11. Personality Testing
12. Interest Testing
13. Ability Testing

Course Assignments and Tests:

For both exams and assignments, you are responsible for all material presented in the lectures, assigned textbook chapters, and additional readings. Please note that the lectures are designed to supplement the assigned readings, and not all lecture material will be covered in the textbook chapters.

<i>Assignment or Test</i>	<i>Due Date</i>	<i>Contribution to Final Mark (%)</i>	<i>Learning Outcomes Assessed</i>
<i>In-class Assignments</i>	<i>Submitted on CourseLink dropbox no later than 7pm on the date the assignment is given out in class</i>	<i>10% (2.5% per assignment; best 4 out of 5)</i>	<i>LO1, LO3, LO6, LO7, LO9</i>
<i>Construct Definition and Initial Items</i>	<i>Hard copy due at the beginning of class on Oct 12</i>	<i>1.5%</i>	<i>LO1</i>
<i>Construct Definition and Final Items</i>	<i>Hard copy due at the beginning of class on Oct 28</i>	<i>1.5%</i>	<i>LO1</i>
<i>Data Collection Quizzes</i>	<i>In class on Nov 2 and Nov 4</i>	<i>2%</i>	<i>LO4</i>
<i>Construct Development Paper</i>	<i>Submitted on CourseLink dropbox no later than 11:59pm on Nov 25</i>	<i>25%</i>	<i>LO1, LO2, LO3, LO5, LO6, LO7, LO8</i>
<i>Midterm</i>	<i>Oct 21 during class time</i>	<i>25%</i>	<i>LO1, LO3, LO6</i>
<i>Final Exam</i>	<i>Dec 16 2:30-4:30pm, location TBA</i>	<i>35%</i>	<i>LO1, LO3, LO6</i>

1. Exams (25% Midterm, 35% Final)

Students will be required to write one in-class midterm exam (October 21st, 2:30-3:20pm in class), and one 2-hour final exam (Friday December 16th, 2:30-4:30pm). Midterm and final exams may include multiple choice, short answer, and/or problem-solving. Both the midterm and final exam will be cumulative.

2. Measure Development Project (total of 30%)

The major project for this course involves you developing a psychological measure. This project is designed to provide you with a hands-on opportunity creating a construct definition, developing initial items, creating a psychological questionnaire, analyzing psychometric data, and writing up the findings. You will work in groups of 3-5 people to create a questionnaire designed to measure a psychological construct of your choice. Data will be collected during class time with PSYC 3250 students acting as research participants. **The final construct development paper is an individual assignment.** See below for a detailed breakdown of the grading.

*In this course, you will be conducting research with human participants. Therefore, it is required that you become familiar with [human research ethics and the ethics review process here at the University of Guelph](#). In particular, your projects **must not** 1) involve*

any personal, sensitive or incriminating topics or questions that could place participants at risk, 2) manipulate behaviour of participants beyond the range of 'normal' classroom activity or daily life, 3) involve any physically invasive contact with research participants, and 4) involve deception.

For more information, please visit:

<http://www.uoquelfh.ca/research/services-divisions/ethics>

Part A) Construct Definition and Scale Items (total: 3%)

- **Initial items and construct definition due Oct 12 at the beginning of class (1.5%)**
- **Final items and definitions due Oct 28 at the beginning of class (1.5%)**

As a group (i.e., one paper per group), you are required to submit an initial list of your scale items, as well as a definition of your construct, and a brief description of the domain specification and justification. You will hand in a hard copy of your initial items and construct definition at the beginning of class on October 12th. You will receive feedback from the instructor and TAs on your definition and items. This feedback will help you finalize your questionnaire. Your items and definition will be graded for completeness, appropriateness, and quality. Submissions handed in after class time will receive a mark of zero.

Once you receive the feedback on your items and construct definition, you will have an opportunity to discuss the feedback in-class with the TAs. You will then incorporate the feedback and hand in a final version of your questionnaire for data collection. A hard copy of your group's final construct definition and items is due at the beginning of class on October 28th. Your items and definition will be graded for completeness, incorporation of feedback, appropriateness, and quality. Submissions handed in after class time will receive a mark of zero. All items will be combined into a single booklet with one informed consent form in preparation for data collection.

Part B) Data Collection (2%)

Data collection is essential to ensuring you have data to analyze for your final project. Data collection is anonymous and voluntary but strongly encouraged so that groups will have data to analyze. There is no penalty for not participating in data collection. A short quiz worth 1% will occur on both days of data collection (total 2%). Should you decide not to participate in data collection, an alternative written assignment will be provided in lieu of the in-class quiz (please refer to the Academic Consideration on page 10 for more detail).

Part C) Measure Development Paper (25%)

The final measure development paper is **an individual assignment**. This is an APA-style manuscript based on the scale you created and the data you collected in class. The manuscript will include an introduction, methods, results, and discussion section. You will be required to conduct a literature review outlining the importance, significance, and theoretical relevance of your psychological measure. The methods section will outline the procedures you used for measure development and data collection. The results section will outline the psychometric analysis you conducted using the data associated with your scale (collected in class), and a

write up of the results. The discussion will include an overview of the findings, your conclusions, and a description of the steps required to validate your measure. **Please remember that the final write-up in an individual assignment.** Final construct development papers are to be submitted no later than 11:59pm on Friday November 25th. Late assignments will receive a penalty of 10% per day (i.e., 2.5% of the final grade per day). For example, a paper handed in at 12:30am on November 26th (i.e., 30 minutes late) will receive a maximum grade of 22.5 out of 25.

3. In-class Assignments (4 x 2.5% = 10%; best 4 out of 5)

There will be a total of 5 in-class assignments for you to complete. Your grade will be based on your best 4 out of 5 assignments (i.e., you cannot receive a grade exceeding 10%); it is strongly encouraged that you complete all assignments but you must complete four of them. This process is designed to take into account illnesses and other extenuating circumstances. Each assignment is worth 2.5% and must be submitted through CourseLink dropbox. The final due date for each assignment is 7pm on the day the in-class assignment was handed out. Late in-class assignments will receive a grade of zero. These assignments are designed to be completed within class time, and to provide you with an opportunity to apply the skills you are learning in class.

Summary Table with Due Dates

(Note: readings and lecture topics may be subject to change – readings will be posted at least one week in advance)

<i>Week</i>	<i>Date</i>	<i>Lecture</i>	<i>Reading</i>	<i>Due/Comments</i>
1	Sept 9	Course Overview		
1	Sept 12	Introduction to Testing	Chapter 1	
1	Sept 14	Testing and Society	Chapter 3	
2	Sept 16	In-class Assignment #1		Assignment #1 due by 7pm in dropbox via CourseLink
2	Sept 19	Basic Concepts in Measurement and Statistics	Chapter 4	
2	Sept 21	Scales, Transformations, and Norms	Chapter 5	
3	Sept 23	In-class Assignment #2		Assignment #2 due by 7pm in dropbox via CourseLink
3	Sept 26	Test Development Part 1 – Defining a Construct	TBA	
3	Sept 28	Test Development Part 2 – Item Generation	TBA	
4	Sept 30	Construct Development Project - Group Formation & Team Contract		

<i>Week</i>	<i>Date</i>	<i>Lecture</i>	<i>Reading</i>	<i>Due/Comments</i>
4	Oct 3	<i>Construct Definition and Scale Creation Workshop Part 1</i>	<i>Chapter 11</i>	<i>Instructor and TAs will help you develop your construct definitions</i>
4	Oct 5	<i>Construct Definition and Scale Creation Workshop Part 2</i>		<i>Instructor and TAs will help you develop your construct definitions</i>
5	Oct 7	<i>Assessment of Unique Groups (e.g., people with disabilities, children, etc.)</i>	<i>TBA</i>	
5	Oct 10	<i>Thanksgiving – No Class</i>		<i>Class rescheduled to Friday Dec 2</i>
5	Oct 12	<i>Classical Test Theory and Reliability</i>	<i>Chapter 6</i>	<i>Hard copy of initial construct definition and items due at the start of class (2.5%)</i>
6	Oct 14	<i>Using and Interpreting Information about Test Reliability</i>	<i>Chapter 7</i>	
6	Oct 17	<i>In-class Assignment #3</i>		<i>Assignment #3 due by 7pm in dropbox via CourseLink</i>
6	Oct 19	<i>Midterm Review</i>		
7	Oct 21	<i>Midterm</i>		
7	Oct 24	<i>Construct Definition Feedback and Review</i>		<i>Instructor and TAs will be available to review feedback</i>
7	Oct 26	<i>Validity of Measurement</i>	<i>Chapter 8</i>	
8	Oct 28	<i>Validity for Decisions</i>	<i>Chapter 9</i>	<i>Hard copy of final construct definition and items due at the beginning of class (2.5%)</i>
8	Oct 31	<i>In-class Assignment #4</i>		<i>Assignment #4 due by 7pm in dropbox via CourseLink</i>
8	Nov 2	<i>Data Collection</i>		<i>In-class quiz (worth 1%)</i>
9	Nov 4	<i>Data Collection</i>		<i>In-class quiz (worth 1%)</i> <i>Last day to drop without academic penalty</i>
9	Nov 7	<i>Item Analysis Part 1</i>	<i>Chapter 10</i>	
9	Nov 9	<i>Item Analysis Part 2</i>		
10	Nov 11	<i>Construct Development Project: Entering Data/ Data Analysis</i>		<i>Come to class with SPSS loaded onto your computer</i>
10	Nov 14	<i>Construct Development Project: Data Analysis</i>		<i>Come to class with SPSS loaded onto your computer</i>

<i>Week</i>	<i>Date</i>	<i>Lecture</i>	<i>Reading</i>	<i>Due/Comments</i>
10	Nov 16	Personality Testing	Chapter 17	
11	Nov 18	In-class Assignment #5		Assignment #5 due by 7pm in dropbox via CourseLink
11	Nov 21	Ability Testing	Chapter 13	
11	Nov 23	Work Period for Construct Development Project		
12	Nov 25	Work Period for Construct Development Project		Final Measure Development Paper due no later than 11:59pm via dropbox on CourseLink.
12	Nov 28	Interest Testing	Chapter 16	
12	Nov 30	Achievement Testing	TBD	
	Dec 2	Q&A for Final Exam		Rescheduled from October 10 th Holiday
Final Exam Period	Dec 16 th 2:30-4:30pm	Final Exam		

Final examination date and time:

Friday December 16th, 2016; 2:30-4:30pm; Room TBA

Final exam weighting: 35%

Final Examination regulations are detailed at: [Examination Regulations](#)

Course Resources

Required Texts:

Murphy, K., & Davidshofer, C. (2005). *Psychological testing: Principles and applications* (6th Ed). Upper Saddle River, NJ: Prentice Hall.

Additional required readings will be posted on CourseLink.

Other Resources:

We will be using SPSS for data analysis.

Course Policies

Grading Policies

Only 4 of the 5 in-class assignments will be counted for a maximum of 10% of your final cumulative grade.

Initial construct definitions and items, and the revised construct definitions and items must both be submitted at the designated times (see summary table for due dates). Submissions handed in outside of class time at either stage will result in a grade of zero (0%) for this component of the Measure Development Project (3%).

The final Measure Development Paper must be submitted via dropbox on CourseLink no later than Friday November 25th at 11:59pm. Late submissions will receive a penalty of 10% per day. Weekends count as two days.

[Undergraduate Grading Procedures](#)
[Graduate Grade interpretation](#)

Please note that these policies are binding unless academic consideration is given to an individual student.

Course Policy on Group Work:

Development of construct definition and items will be completed in groups of 4-5 students. Measure development final papers must be written individually. Exams and assignments must be completed on an individual basis.

Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

University Policies

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:

[Academic Consideration, Appeals and Petitions](#)

In-class Assignments. As noted above, only 4 of the 5 in-class assignments will count towards the final grade. This is designed to take into account possible reasons for missing an assignment (e.g., illness, etc.) Consequently, medical notes will only be considered if more than one in-class assignment is missed.

Data Collection Quizzes. *If a student is unable to write the data collection quiz due to a documented illness or should they opt not to participate in data collection, an alternative written assignment will be provided. This assignment would count towards one missed data collection quiz.*

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:
[Academic Misconduct Policy](#)

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the [Student Accessibility Services](#) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 54335 or email csdexams@uoguelph.ca or the [Student Accessibility Services Website](#)

Course Evaluation Information

Please refer to the [Course and Instructor Evaluation Website](#)

Drop date

*The last date to drop one-semester courses, without academic penalty, is Friday November 4th, 2016. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#).
[Current Undergraduate Calendar](#)*

Communication with Instructor and Teaching Assistants

The instructor and teaching assistants will reply to your emails within 48 hours, not including weekends. If you have questions that require an in-person discussion, please attend the instructor's office hours or arrange for a one-on-one meeting. Please note the instructor and TAs will not be responding to emails in the 24 hours prior to an assignment deadline, midterm, or final exam. Please make an effort to attend review sessions, workshop sessions, and office hours before an assignment deadline or exam to receive feedback and ensure you have enough time to have your questions or concerns addressed.