

PSYC*3250, Course Outline: Fall 2017

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, factor analysis and test construction, and the measurement of ability, personality, and achievement. You will learn not only how to evaluate psychological tests and measures, but also construct and refine your own. This knowledge is essential for both future practitioners and researchers in the area of psychology.

Credit Weight: 0.5

Academic Department (or campus): Psychology

Semester Offering: F17

Class Schedule and Location: MWF 4:30pm to 5:20pm RICH 2520

Instructor Information

Instructor Name: Dr. Scott R. Colwell
Instructor Email: scolwell@uoguelph.ca
Office location: Macdonald Institute Building (MINS) 201A
Office hours: Wednesday 11:00am to 1:00pm

GTA Information

GTA Name: To be announced on CourseLink.
GTA Email:
GTA office location and office hours:

Course Content

Specific Learning Outcomes:

1. Evaluate the appropriateness of different psychological measurement approaches and rejects less acceptable methods to solving the problem. (Problem Solving)
2. Evaluate the accuracy and quality of data generated and analyses used by others (Quantitative Literacy)
3. Understand the use of numerical data. (Quantitative Literacy)

4. Demonstrate ability to interpret data/scores. (Quantitative Literacy)
5. Demonstrate a skill set in contemporary software programs and technological formats to serve a variety of functions (e.g., word processing, presentations, data analysis). (Technological Literacy)
6. Write with appropriate vocabulary, APA style adherence, proper referencing, and little grammatical, spelling or functional errors. (Written Communication)
7. Write in a sophisticated manner clearly conveying the message of the writer to a target audience. (Written Communication)
8. Conduct research in a manner congruent with ethical regulations (Ethical Issues in Research)

Lecture Content:

The table below lists the content of the lectures and the associated readings from the text.

Please note that these dates are tentative. Although exam dates will not change, it is possible that it may take more or less time to cover the various topics in a given year. Please refer to CourseLink regularly for any changes to the schedule. Note: All quizzes are to be completed online (CourseLink) and will be available at 8:30am on the Monday of the scheduled week and are due by 5pm on the Friday of that week.

Week	Date	Readings	Material Due
1	Sept 8	NOTE: This section does not begin until Monday September 11, 2017	
2	Sept 11	Course overview, requirements and software	
2	Sept 13	Ch. 1: Tests and measurements	
2	Sept 15	Review of software	Group self-enrolment due
3	Sept 18	Ch. 2: Testing and society	
3	Sept 20	Ch. 4: Basic concepts in measurement and statistics	
3	Sept 22	No class – start thinking about construct for project	Online Quiz #1 (2%)
4	Sept 25	Ch. 5: Scales, transformations, and norms	
4	Sept 27	Ch. 11: The process of test development	
4	Sept 29	Ch. 6: Reliability: The consistency of test scores	
5	Oct 2	Ch. 7: Using and interpreting information about test reliability.	
5	Oct 4	Scale development workshop	

5	Oct 4	Ch. 8: Validity of measurement: content and construct-oriented validation strategies.	Online Quiz #2 (2%) Construct Definitions & Scale Items Report (5%) due in-class.
6	Oct 9	No class scheduled (rescheduled to Dec 1)	
6	Oct 11	Ch. 8: Validity of measurement: content and construct-oriented validation strategies.	
6	Oct 13	Ch. 9: Validating for decisions: Criterion-related validity.	Online Quiz #3 (2%)
7	Oct 16	Ch. 9: Validating for decisions: Criterion-related validity.	
7	Oct 18	Midterm review	
7	Oct 20	Midterm: Covers everything to date	Midterm (25%)
8	Oct 23	In-class data collection	
8	Oct 25	In-class data collection	
8	Oct 27	In-class entering data using excel	Online Quiz #4 (2%)
9	Oct 30	In-class data analysis using R and R-Studio	
9	Nov 1	In-class data analysis using R and R-Studio	
9	Nov 3	In-class data analysis using R and R-Studio	
10	Nov 6	In-class analysis, selecting final scale items	
10	Nov 8	Time to work on project	
10	Nov 10	Time to work on project	Online Quiz #5 (2%)
11	Nov 13	Time to work on project	Individual Scale Development Report Due (25%) by 5pm.
11	Nov 15	Chapter 10: Item analysis (for binary scales)	
11	Nov 17	Chapter 10: Item analysis (for binary scales)	
12	Nov 20	Chapter 16: Issues in ability testing	
12	Nov 22	Chapter 16: Issues in ability testing	
12	Nov 24	Chapter 17: Personality testing	Online Quiz #6 (2%)
13	Nov 27	Chapter 17: Personality testing	
13	Nov 29	Review for final examination	
13	Dec 1	Extra help day (in-class)	

Labs: None

Seminars: None

Course Assignments and Tests:

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Online Quizzes	Online quizzes due by 5pm on the Friday of that week	5 @ 2% = 10% Best 5 of 6 quizzes taken	1 – 8
Midterm	October 20 th . Covers chapters 1, 2, 4-9, and 11.	25%	1 – 8
Scale Development Project	Oct 6: Construct Definitions and Scale Items. Due in-class. Nov 13: Individual Scale Development report. Due by 5:00 pm.	30% Construct Definitions and Scale Items (5%). Individual Project Report (25%).	1 – 8

Final examination date and time: Thursday December 7th, 2017 from 08:30AM - 10:30AM

Final exam weighting: 35%

[Examination Regulations](#)

Requirements for the Scale Development Project (30%)

A major component of the course involves creating your own psychological measure. The purpose of this project is to give you hands-on experience creating a psychological questionnaire, analyzing psychometric data, and writing up psychometric 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 Construct Definitions and Scale Items Report (5%) is a group report that is to be submitted by your group. Each member of the group will receive the grade the group received. The data analysis must be done individually and the final write-up is an individual assignment. The requirements and grading breakdown are outlined below.

IMPORTANT NOTE: Your scales must NOT (a) involve any personal, sensitive or incriminating topics or questions that could place participants at risk, (b) manipulate behavior of participants

beyond the range of “normal” classroom activity or daily life, (c) involve any physically invasive contact with the research participants, or (d) involve deception.

1. **Construct Definition and Scale Items Report (5%).** Your group is required to submit one report (one report per group) in-class on October 6. Late assignments will receive a grade on zero. The report is to be in 12pt font and double spaced. The report should consist of
 - a. a brief summary of the construct definition including the domain specification and justification (maximum of one-page double spaced max)
 - b. the items and scale (formatted as if you were using it to collect data).
 - c. the informed consent letter
2. **Data Collection (not graded).** Using your revised scale items and consent letter (from feedback provide from the above, you will collect your data in class on October 23rd and October 25th. You will need to collect data from a minimum of 50 classmates. 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.
3. **Data Analysis (not grade).** Using the data collected, you will be required to individually analyze the data for your scale.
4. **Individual Scale Development Report (25%).** You will individually write a scale-development style report based on the scale you created and data you collected in class. This manuscript will include an introduction, methods, and results/discussion section. You are not required to include a literature review. Further details on the exact format of this paper will be provided in a separate handout. Although data is collected as a group, it must be analyzed individually and the report must be written individually.

Course Resources

Required Texts:

Murphy, K.R. & Davidshofer, C.O. (2004). *Psychological Testing: Principles and Applications. Sixth Edition.* Pearson Education, Canada.

Note: A copy of this text has been placed on two hour reserve at the library.

Recommended Texts: None

Lab Manual: None

Other Resources: None

Field Trips: None

Additional Costs: None

Course Policies

Grading Policies

1. CLASS: To be successful at this course, it is strongly recommended that you attend all lectures. You are responsible for reading the assigned textbook material prior to attending class. Although the lectures will follow the textbook, they will not necessarily cover all of the material in the chapters. Additionally, material not found in the textbook may also be covered during the lecture.
2. CALCULATOR: Bring a stand-alone calculator to each class, midterm and the final examination. **Mobile phones and applications will not be permitted for use as a calculator for tests or the final examination.**
3. QUIZZES: All quizzes are to be completed online through CourseLink. Each quiz will be available at 8:30 am of the week indicated in the schedule and will be due by 5:00 pm on the Friday of that week. Each quiz will be closed at the end of the week and grades released. If you do not complete a quiz within the given time, you will be given a grade of zero for that quiz.

There are no make-up quizzes or shifting of missed quiz grades. The best 5 of 6 quizzes will be counted toward your final grade.

4. MIDTERM: There will not be a make-up for a missed mid-term. Academic consideration will be provided for documented requests for medical, psychological or compassionate reasons as defined in the university guidelines. Note, you will need to provide the appropriate documentation to your instructor. Academic consideration for missing the midterm will consist of spreading the weight (25%) as follows:
 - a) 10 of the 25 percentage points will be added to the online quizzes.
 - b) 10 of the 25 percentage points will be added to your Scale Development Project.
 - c) 5 of the 25 percentage points will be added to your final exam.
5. FINAL EXAMINATION: No notes or “cheat sheets” will be allowed in the final examination.

[Undergraduate Grading Procedures](#)

Course Policy on Group Work:

Each student is expected to complete the quizzes, midterm, the data analysis, the final scale development project, and final examination on their own. If there is evidence that students are collaborating while completing the quizzes, tests, and/or final examination, then those cases will be dealt with as per the regulations on Academic Misconduct.

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](#)

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 [Student Accessibility Services](#) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 54335 or email accessibility@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 3rd, 2017. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#), [Current Undergraduate Calendar](#)