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Psychology 407	Psychometrics	Winter 2016
<b>Instructor:</b>	Rima Tarraf	<b>Lecture Location:</b> SA 121
<b>Phone:</b>	226-927-2275 (cell)	<b>Lecture Days/Time:</b> TR 14:00-15:15
<b>Email:</b>	rima.tarraf@gmail.com	<b>TA</b> Nicole Larson
<b>Office:</b>	TBA	<b>Email</b> nicolelynnlarson@gmail.com
<b>Office Hours:</b>	By appointment	<b>Lab Location &amp; Time</b> Lab 1: SS 018 M 11:00-12:50 Lab 2: SS 018 W 12:00-13:50

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### Course Description and Goals

An introduction to the theory and application of methodological and statistical issues in psychological assessment. Topics include: theories of psychological measurement, scale development, item analysis, item bias, reliability, validity, and test fairness.

### Prerequisites

Psyc 200 – Principles of Psychology I  
Psyc 201 – Principles of Psychology II  
Psyc 312 – Experimental Design and Quantitative Methods for Psychology

### Antirequisites

Psyc 307 – Applied Psychology

### Required Text

Coaley, K. (2014). *An introduction to psychological assessment and psychometrics* (2<sup>nd</sup> edition).

Thousand Oaks, CA: Sage. Available at the University of Calgary Bookstore.

Additional readings may be assigned for each topic. They will be available through D2L. This material will be covered by the quizzes unless stated otherwise.

### Evaluation

The course grade will be based on a two quizzes, a paper, a presentation, five laboratory assignments, and participation. Students must achieve a passing grade on both the class and lab components to pass this course.

**Quizzes.** There will be two 1-hour quizzes consisting of multiple choice questions and shorts answer. The quizzes will cover material in the text as well as lecture and extra material that is NOT covered explicitly in the text. The first quiz is worth 10% and will be held on February 11. The second quiz is worth 20% and will be held on March 29. Both quizzes will be held in regular class time. In general, material that is covered only in the laboratory sessions (i.e., not in class) will not be covered on the quiz, however, there

will be some exceptions to this trend that will be announced in class before the quiz. No outside aids allowed during quizzes.

**Paper.** An APA formatted paper will be due on due **April 13, 2016 by 4:00 p.m.** and must be in hard copy form. More details on the content and structure of the essay and late penalties will be provided early in the semester. A class presentation for each student, directly related to the essay topic, will be scheduled during the last four weeks of the semester. Details regarding the structure of the presentation, length of time, etc., will be provided by the instructor early in the semester. The essay and presentation combined will account for a total of 35% of the final grade. (30% essay plus 5% presentation). They can be turned in at the Department of Psychology Office's green box outside Administration 255. Papers received after the due date will be reduced 10 points (out of 100) for each day they are late, including weekends. There are NO exceptions to this.

**Participation.** It is expected that students will attend class, will become actively involved in discussions and will prepare for class by doing the assigned readings and reflecting upon them. Active participation and attendance is also expected in the laboratory sessions. A total of 10% of the final grade will be accounted for by participation (5% from class participation plus 5% from laboratory participation).

**Laboratory component.** The laboratory component of the course will take place on Mondays and Wednesdays starting January 18. The lab component will be worth 25% of the final grade (in addition to the 5% for laboratory participation as mentioned above). Details on the breakdown of this 25%, the format of the assignments, and the due dates will be provided during the labs.

#### **Laboratory Assignment Topics**

1. Assignment 1: Correlation & Regression
2. Assignment 2: Item Analysis
3. Assignment 3: Factor Analysis
4. Assignment 4: Reliability
5. Assignment 5: Item Bias

#### **Distribution of Credit for Final Grade:**

Quiz 1:	10%
Quiz 2:	20%
Presentation:	5%
Paper	30%
Lab Assignments:	25% (grade will be based on five assignments)
Participation	10%

#### **Department of Psychology Grade Distribution Policy**

The distribution of grades in Psychology courses (the percentage of A grades, B grades, etc.) will be similar to the distribution of grades in other courses in the Faculty of Arts. The Department monitors the grade distributions of 200-, 300-, and 400-level courses in the Faculty to ensure that the grade distributions in Psychology courses are comparable. Based on these reviews, students can expect that 1) up to 30% of grades in 200- and 300-level psychology courses will be "A" grades (A+, A, and A-), and 2) up to 40% of grades 400-level psychology courses will be "A" grades.

#### **Department of Psychology Criteria for Letter Grades**

Psychology professors use the following criteria when assigning letter grades:

A+ grade: *Exceptional Performance*. An A+ grade indicates near perfect performance on multiple choice and short answer exams. For research papers/essays/course projects/presentations, an A+ grade is awarded for exceptional work deserving of special recognition and is therefore not a common grade.

A, A- Range: *Excellent Performance*. Superior understanding of course material. Written work is very strong in terms of critical and original thinking, content, organization, and the expression of ideas, and demonstrates student's thorough knowledge of subject matter.

B Range: *Good Performance*. Above average understanding of course material. Written work shows evidence of critical thinking and attention to organization and editing but could be improved in form and/or content.

C Range: *Satisfactory Performance*. Adequate understanding of course material. Knowledge of basic concepts and terminology is demonstrated. Written work is satisfactory and meets essential requirements but could be improved significantly in form and content. Note: All prerequisites for courses offered by the Faculty of Arts must be met with a minimum grade of C-.

D range: *Marginally meets standards*. Minimal understanding of subject matter. Written work is marginally acceptable and meets basic requirements but requires substantial improvements in form and content. Student has not mastered course material at a level sufficient for advancement into more senior courses in the same or related subjects.

F grade: *Course standards not met*. Inadequate understanding of subject matter. Written work does not meet basic requirements. Student has not demonstrated knowledge of course material at a level sufficient for course credit.

### Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

As stated in the University Calendar, it is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades.

To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

### Tentative Lecture Schedule

Date	Topic/Activity/Readings/Due Date
T Jan 12	Winter term lectures begin. Overview
R Jan 14	Ch. 1 - Introduction to Individual Differences and Psychometrics
T Jan 19	Ch. 2 - Basic stats
R Jan 21	Ch. 4 - Basic stats

<i>F Jan 22</i>	<i>Last day to drop Winter Term half-courses.</i>
<i>M Jan 25</i>	<i>Last day to add or swap Winter Term half courses. Last day for change of registration from audit to credit or credit to audit.</i>
T Jan 26	Designing and writing measures (extra material to be distributed by email)
R Jan 28	Designing and writing measures (extra material to be distributed by email)
T Feb 2	Sampling (extra material to be distributed by email)
R Feb 4	Factor analysis (extra material to be distributed by email)
T Feb 9	Factor analysis (extra material to be distributed by email)
<b>R Feb 11</b>	<b>Quiz 1</b> – covers ch.1, basic stats, designing & written measures, sampling, & factor analysis
<i>Feb 14-21</i>	<i>Reading Week. No lectures. University open (except Family Day).</i>
<i>M Feb 15</i>	<i>Alberta Family Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.</i>
T Feb 23	Ch. 5 - Reliability
R Feb 25	Ch. 5 - Reliability
T Mar 1	Ch. 6 - Validity
R Mar 3	Ch. 6 - Validity
T Mar 8	Ch. 6 - Validity
R Mar 10	Ch. 10 - Ethics (response bias and test bias)
T Mar 15	Ch. 10 - Ethics (response bias and test bias)
R Mar 17	APA Style
T Mar 22	Ch. 7 - Test Reviews (intelligence)
R Mar 24	Ch. 8 - Test Reviews (personality)
<b>T Mar 29</b>	<b>Quiz 2</b> – covers chapters 5, 6, 7, 8, 10, and any extra material assigned for those classes
R Mar 31	Student Presentations
T Apr 5	Student Presentations
R Apr 7	Student Presentations
T Apr 12	Student Presentations
<b>W Apr 13</b>	<i>Winter Term Lectures End. Last day to withdraw from full courses and Winter Term half courses.</i>  <b>Paper Due</b>
<i>Apr 16-27</i>	<i>Winter Term Final Examinations.</i>

### Reappraisal of Grades

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class; no reappraisal of term work is permitted after the 15 days. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a

letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

### **Plagiarism and Other Academic Misconduct**

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

### **Academic Accommodation**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit [www.ucalgary.ca/access/](http://www.ucalgary.ca/access/).

Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor.

The full policy on Student Accommodations is available

at [http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy\\_0.pdf](http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy_0.pdf).

Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than 14 days after the start of this course.

### **Absence From A Test/Exam**

Makeup tests/exams are **NOT** an option without an official University medical excuse (see the University Calendar). A completed Physician/Counselor Statement will be required to confirm absence from a test/exam for health reasons; the student will be required to pay any cost associated with this Statement. Students who miss a test/exam have up to 48 hours to contact the instructor and to schedule a makeup test/exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. Except in extenuating circumstances (documented by an official University medical excuse), a makeup test/exam must be written within 2 weeks of the missed test/exam during exam make-up hours provided by the department <http://psychology.ucalgary.ca/undergraduate/exam-and-course-information#mues>. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred

exam [http://www.ucalgary.ca/registrar/exams/deferred\\_final](http://www.ucalgary.ca/registrar/exams/deferred_final). Under no circumstances will this be accommodated by the department.

### **Travel During Exams**

Consistent with University regulations, students are expected to be available to write scheduled exams at any time during the official December and April examination periods. Requests to write a make-up exam because of conflicting travel plans (e.g., flight bookings) will NOT be considered by the department. Students are advised to wait until the final examination schedule is posted before making any travel arrangements. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam [http://www.ucalgary.ca/registrar/exams/deferred\\_final](http://www.ucalgary.ca/registrar/exams/deferred_final). Under no circumstances will this be accommodated by the department.

### **Freedom of Information and Protection of Privacy (FOIP) Act**

The FOIP legislation disallows the practice of having student's retrieve tests and assignments from a public place. Therefore, tests and assignments may be returned to students during class/lab, or during office hours, or via the Department Office (Admin 255), or will be made available only for viewing during exam review sessions scheduled by the Department. Tests and assignments will be shredded after one year. Instructors should take care to not link students' names with their grades, UCIDs, or other FOIP-sensitive information.

### **Course Credits for Research Participation:**

#### **Course Credits for Research Participation (Max 2% of final grade)**

Students in most psychology courses are eligible to participate in Departmentally approved research and earn credits toward their final grades. **A maximum of two credits (2%) per course, including this course, may be applied to the student's final grade. Students earn 0.5% (0.5 credits) for each full 30 minutes of participation.** The demand for timeslots may exceed the supply in a given term. Thus, students are not guaranteed that there will be enough studies available to them to meet their credit requirements. Students should seek studies early in the term and should frequently check for open timeslots. Students can create an account and participate in Departmentally approved research studies at <http://ucalgary.sona-systems.com>. The last day to participate in studies and to assign or reassign earned credits to courses is **April 13, 2016**.

### **Evacuation Assembly Point**

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at <http://www.ucalgary.ca/emergencyplan/assemblypoints>  
Please check this website and note the nearest assembly point for this course.

### **Student Organizations**

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS). They are located in Administration 170 and may be contacted at 403-220-5567.

**Student Union VP Academic:**  
**Student Union Faculty Rep.:**

Phone: 403-220-3911  
Phone: 403-220-3913

[suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca)  
[socialscirep@su.ucalgary.ca](mailto:socialscirep@su.ucalgary.ca)

### **Student Ombudsman's Office**

The Office of the Student Ombudsmen provides independent, impartial and confidential support for students who require assistance and advice in addressing issues and concerns related to their academic careers. The office can be reached at 403-220-6420 or [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca) (<http://www.ucalgary.ca/provost/students/ombuds>)

### **Safewalk**

The safewalk program provides volunteers to walk students safely to their destination anywhere on campus. This service is free and available 24 hrs/day, 365 days a year.  
Call 403-220-5333.

### **Important Dates**

The last day to drop this course with no "W" notation and **still receive a tuition fee refund** is **January 22, 2016**. Last day for registration/change of registration is **January 25, 2016**. The last day to withdraw from this course is **April 13, 2016**.