

University of Waterloo
Department of Psychology
Psych 397 Section 001 / Psych 389 Section 004
Research Methods in Personality and Clinical Psychology
Fall 2017
Tuesday 1:00-2:20pm, PAS 1237
Thursday 1:00-2:20pm, RCH 205

Instructor and T.A. Information

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Course Description

This course is organized around a series of seven related assignments, culminating in a poster presentation of the results of some original research. Students will gain experience with planning and conducting correlational and experimental research as well as analyzing and reporting the results of a research investigation. Classroom discussion will focus on issues particular to research in the personality and clinical psychology fields.

Prerequisite: PSYCH 257 or PSYCH 323R plus PSYCH 291 and PSYCH 292;
Honours Psychology or Make-up Psychology students.

Corequisite: PSYCH 391

Antirequisite: PSYCH 393, 395, 399

Course Goals and Learning Outcomes

This course is about the research methods commonly used in the scientific study of personality and clinical psychology. We will not be able to cover many important research designs (e.g. randomized controlled trials, single-case experiments, longitudinal designs, qualitative methods, and so on). Instead we will focus on a deeper appreciation for correlational and experimental methods.

Upon completion of this course, students should be able to:

- A. Conduct an efficient search for high quality research evidence to direct further research efforts.
- B. Understand the various approaches to psychological measure development, with a particular emphasis on construct-driven test development.
- C. Understand the basics of classical measurement theory.
- D. Understand the nomological network approach to construct differentiation and integration.
- E. Analyze correlational data with multiple regression / path analysis and report the results.
- F. Analyze experimental data with analysis of variance and report the results.
- G. Anticipate common data analytic and methodological considerations encountered in research in personality and clinical psychology.
- H. Prepare a poster presentation for disseminating the results of a research study.

Required Text

- Readings will be assigned for some classroom sessions and will be available through LEARN.
- Note: There are several assigned readings that have not yet been specified. Some readings will be selected based on the details of the class projects.

Course Requirements and Assessment

<u>Assessment</u>	<u>Date of Evaluation/Due Date</u>	<u>Weighting</u>
Information Literacy Assignment	Sep. 21	5%
Measure Development Assignment	Oct. 3	10%
Convergent and Discriminant Validity Assignment	Oct. 12	5%
Psychometric Analysis Assignment	Oct. 27	20%
Experimental Methods Assignment	Nov. 3, 10	25% in total
Multiple Regression & Path Analysis Assignment	Nov. 24	25%
Poster Presentation	Nov. 30 / Dec. 1	10%
SONA Participation Bonus Credit	Dec. 4 (final day of undergraduate classes)	4%

Information Literacy Assignment.

By completing this assignment you will develop competence in:

1. Identifying key sources of information to remain current in the field.
2. Comparatively evaluating articles/authors/journals.
3. Navigating the University of Waterloo library system.
4. Searching for information when search terms are imprecise.
5. Selecting from among key databases based on their relative merits for different tasks.

This assignment will prepare you for journal searches in preparation for several other assignments in the course, especially the measure development assignment, the convergent and discriminant validity assignment, and the experimental methods assignment.

Measure Development Assignment.

This is a small group assignment.

By completing this assignment you will gain an understanding of:

1. The importance of clear construct definitions in measure development.
2. The relation of domain specification to construct definition.
3. The connection between domain specification and convergent and discriminant validity.
4. Technical aspects of self-report item-writing.

This assignment will result in the development of a short measure that will be the subject for the convergent and discriminant validity assignment.

Convergent and Discriminant Validity Assignment.

By completing this assignment you will develop competence in:

1. Identifying constructs that overlap with the domain specification (see above).
2. Identifying constructs from which the new construct is importantly distinct (see above).

This assignment will result in the set of public domain measures to be used for online data collection. The data resulting from this study will be analyzed in the multiple regression and path analysis assignment (see below) and possibly in the psychometric analysis assignment (see below) as well.

Psychometric Analysis Assignment.

By completing this assignment you will develop competence in:

1. Data integrity screening tools.
2. Identification of outliers and unusual observations.
3. Item analysis.
4. Reliability analysis.
5. Exploratory factor analysis.
6. Dealing with missing observations.

7. Common applications of classical test theory.

This assignment will use data collected as part of Research Experiences Group participation. You will analyze data based either 1) on a selection measure assessing constructs similar (but not identical) to the constructs that are the subject of all previous assignments, or 2) based on data collected as part of the convergent and discriminant validity assignment (see below).

Experimental Methods Assignment

By completing this assignment you will develop competence in:

1. Screening data for outliers and unusual observations.
2. Applying common methods for data reduction.
3. Analyzing experimental data.

This assignment will be based on data collected online or in a lab testing session (scheduled for Tuesday, Oct. 31). The results of this study may form the basis of the final poster presentation assignment.

Multiple Regression and Path Analysis Assignment

By completing this assignment you will develop competence in:

1. Screening data for unusual observations with a focus on influence statistics.
2. Analyzing and interpreting structural models.
3. Using multiple regression for statistical control.
4. Reporting results of multiple regression / path analysis.

This assignment will be based on data collected online as part of the convergent and discriminant validity assignment. This assignment may form the basis of the final poster presentation assignment.

Poster Presentation Assignment

By completing this assignment you will develop competence in:

1. Presenting results succinctly for a specialist audience.
2. Evaluating and commenting on the work of others.
3. Responding to the questions of others.

This assignment involves the presentation of the results of the experimental methods assignment or the multiple regression and path analysis assignment in a standard format common at scientific conventions. The final research fair is scheduled for Fri., Dec. 1, from 2-4p.m. (location TBA). This poster session will be held in conjunction with some of the other research methods courses. The poster session will involve circulating and asking questions of other presenters and being prepared to discuss your research with other interested attendees.

Research Participation Bonus Credits (Optional)

You may also earn bonus credits for participation in research (see “Research Experience Marks” below for details). Please note that students cannot earn more than 100% in the course so not all bonus credits earned may be applied to the final grade (up to 4%).

The Use of LEARN in this Course

LEARN will be used extensively in this course. LEARN will be used to post readings, assignments, and so on. Announcements will be made on LEARN and repeated in class. Email communication with the class will be conducted using LEARN. Dropboxes will be provided on LEARN for uploading assignments. Please check the uWaterloo Home Page as well as LEARN for important announcements should an emergency arise (such as a major snow storm). Please use your edu.uwaterloo email address and check email regularly for important and time-sensitive messages.

Course Outline

Week	Date	Topic	Notes
1	Sep. 7	Introduction to the Course	
2	Sep. 12	Discussion of Course Research Agenda	Read: Pine & Fox (2015) Skim: Hardt, Dragan, Kappis (2011)
2	Sep. 14	Information Literacy Session	Flexlab in Dana Porter Library
3	Sep. 19	Data Integrity / Data Cleaning Lecture & Demo	Read: Curran (2016), Maniaci & Rogge (2014)
3	Sep. 21	Self-Report Measurement (Lecture)	Information Literacy Assignment Due Sep. 21
4	Sep. 26	Lab: Group Measure Development	Read: Hogan & Tsushima (2016)
4	Sep. 28	Lab: Domain Specification and Item Writing	Read: Crocker & Algina (1986)
5	Oct. 3	Lab: Final Draft of Measure and Write-Up Due	Measure Development Assignment Due Oct. 3
5	Oct. 5	Construct Validity: Convergent and Discriminant Validity (Lecture & Lab)	Readings To Be Announced
6	Oct. 12	Lab: Complete Convergent & Discriminant Validity Assignment	Convergent and Discriminant Validity Assignment Due Oct 12

Week	Date	Topic	Notes
7	Oct. 17	Demonstration and Lab: Classical Test Theory and Data Analysis Demonstration	Readings To Be Announced
7	Oct. 19	Applications of Classical Test Theory (Lecture)	
8	Oct. 24	Lab: Psychometric Analysis	
8	Oct. 26	Experimental and Quasi-Experimental Methods	Readings To Be Announced Psychometric Analysis Assignment Due Oct. 27
9	Oct. 31	Data Collection Day	No Class – time reserved for possible data collection.
9	Nov. 2	Demonstration: Organizing and Cleaning the Data; Analyzing and Reporting Results	Reading To Be Announced Introduction and Methods for Experimental Methods Assignment Due Nov. 3
10	Nov. 7	Lab: Data Analysis	Results and Discussion for Experimental Methods Assignment Due Nov. 10
10	Nov. 9	Lecture & Demonstration: MR & Path Analysis	Reading To Be Announced
11	Nov. 14	Lab: Data Analysis for Multiple Regression and Path Analysis Assignment	
11	Nov. 16	Lab: Data Analysis Q&A	
12	Nov. 21	Lab: Data Analysis for Assignment	
12	Nov. 23	Poster Preparation Lab	Multiple Regression and Path Analysis Assignment Due Nov. 24

Week	Date	Topic	Notes
13	Nov. 28	Lab: Finalize Poster Presentations	
13	Nov. 30	Alternate Poster Session	Intended for those who cannot attend on Dec. 1
14	Dec. 1	Poster Session (Preferred)	Dec. 1 from 2 to 4pm, Location TBA

Accommodation for course requirements

- Students requesting accommodation for course requirements (assignments, midterm tests, final exams, etc.) due to illness should do the following:
 - Consult the University's examination regulations for information about procedures and policies for requesting accommodations
 - seek medical treatment as soon as possible
 - obtain documentation of the illness with a completed uWaterloo Verification of Illness Form
 - submit that form to the instructor within 48 hours. Students in Centre for Extended Learning (CEL) courses must submit their confirmation of the illness to CEL.
 - (if possible) inform the instructor by the due date for the course requirement that you will be unable to meet the deadline and that documentation will be forthcoming.
- In the case of a missed final exam, the instructor and student will negotiate an extension for the final exam, which will typically be written as soon as possible, but no later than the next offering of the course.
- In the case of a missed assignment deadline, midterm test, or quiz, the instructor will either:
 - waive the course component and re-weight remaining term work as he/she deems fit according to circumstances and the goals of the course, or
 - provide an extension.
- In the case of bereavement, the instructor will provide similar accommodations to those for illness. Appropriate documentation to support the request will be required.
- Students who are experiencing extenuating circumstances should also inform their academic advisors regarding their personal difficulties.
- Elective arrangements such as travel plans are not acceptable grounds for granting accommodations to course requirements per the uWaterloo Examination Regulations and Related Matters.

Official version of the course outline

If there is a discrepancy between the hard copy outline (i.e., if students were provided with a hard copy at the first class) and the outline posted on LEARN, the outline on LEARN will be deemed the official version. Outlines on LEARN may change as instructors develop a course, but they become final as of the first class meeting for the term.

Cross-listed course

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSYCH cross-list will count in the Philosophy major average, even if the course was taken under the Psychology rubric.

Important dates for the Fall 2017 academic term

Event	Date
Lectures begin:	Thursday, September 7
Last day to add a class:	Wednesday, September 20
Last day to drop, no penalty:	Wednesday, September 27
<i>UW holiday (Thanksgiving):</i>	Monday, October 9
<i>Study Days</i>	October 10-11
Make-up day (for Oct 10)	Thursday, October 12 (Tuesday schedule)
Make-up day (for Oct 11)	Friday, October 13 (Wednesday schedule)
Final exam schedule published:	Wednesday, October 18 (approximate)
Last day to drop, receive a WD:	Monday, November 20
Make-up day (for Oct 9)	Monday, December 4 (Monday schedule)
Lectures end:	Monday, December 4
Last day to drop, receive a WF:	Tuesday, November 21
Exams begin:	Thursday, December 7
Exams end:	Thursday, December 21

Religious holidays to be accommodated if requested

Requests for accommodation based on religious holidays must be submitted to the student's instructor(s) as soon as the conflict becomes apparent; in any case, no later than one week following the publication of the final exam schedule. Any unresolved disputes between instructors and students regarding the legitimacy of extenuating circumstances or the suitability of accommodations will be decided by the Associate Dean – Undergraduate Students.

Dates	Religious holiday
Thursday, September 21 Friday, September 22	Rosh Hashanah (Jewish)
Saturday, September 30	Yom Kippur (Jewish) Ashura (Islam)
Thursday, October 19	Diwali (Sikh, Hindu)
Saturday, November 4	Guru Nanak's Birthday (Sikh)
Wednesday, December 13	Aga Khan's Birthday (Islam Ismaili)

*tentative: the actual timing of Muslim events is subject to the sighting of the moon immediately before.

Elective arrangements (e.g., travel plans), co-op interviews, and employment are not considered acceptable grounds for granting accommodations for academic course requirements.

If you miss a class due to a minor illness or other problems, please check your course outline for information regarding attendance requirements and make sure that you are not missing a test/exam. Cover any readings and arrange to borrow notes from a classmate; professors can't give personalized lectures for students who miss class. (If you miss class for a legitimate reason – e.g., death in the family, illness – Dr. Oakman will of course be pleased to answer any questions during office hours after you have borrowed and reviewed lecture notes from a classmate.)

Late Work

Assignments submitted late will receive a 1 mark penalty each day it is submitted after the due date. For example, if you submit your Independent Article Critique (worth 10%) two days late, 2 marks will be subtracted from your mark out of 10. If you submit the Independent Article Critique four days late, 4 marks will be subtracted from your mark out of 10. Course requirements scheduled during the first two weeks of classes can be made up for those who enrol during those weeks.

Attendance Policy

Attendance is required in order to complete the assignments and is strongly recommended for success in the course.

Electronic Device Policy

You are welcome to bring electronic devices to the class to be used for course-related activities. Please turn cell phones to silent mode or turn them off entirely.

Retention Policy for Unclaimed Course Work

Graded final examination papers as well as unclaimed graded assignments, essays, and midterm tests for this course will be kept in storage in the Psychology Department for a maximum of 16 months after the final grades have been submitted to the Registrar's Office. After that time, these documents will be destroyed in compliance with UW's confidential shredding procedures. Note that final examination papers are not returned to students.

Concerns about the Course or Instructor (Informal Stage)

We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs ([Richard Eibach](#)) is available for consultation and to mediate a resolution between the student and instructor. Contact information is as follows:

Richard Eibach
Email: reibach@uwaterloo.ca
Phone: 519-888-4567 ext. 38790

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 and 71 below for further details.

Academic Integrity

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See the [UWaterloo Academic Integrity webpage](#) and the [Arts Academic Integrity webpage](#) for more information.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties check [Guidelines for the Assessment of Penalties](#).

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. [Read Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt, please be certain to contact the department’s administrative assistant who will provide further assistance.

Appeals: A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if

there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Concerns About a Course Policy or Decision

Informal Stage. We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Richard Eibach) is available for consultation and to mediate a resolution between the student and instructor: Email: reibach@uwaterloo.ca; Ph 519-888-4567 ext. 38790

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See [Policy 70](#) and [72](#) below for further details.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt, please be certain to contact Richard Eibach, the Associate Chair for Undergraduate Affairs who will provide further assistance; reibach@uwaterloo.ca.

Appeals: A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#)

Accommodation for Students with Disabilities

Note for students with disabilities: The [AccessAbility Services](#) office, located on the first floor of the Needles Hall extension (1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

Mental Health Services

Mental Health Services aim is to provide holistic programming and services to help you lead a healthy and balanced life. We strive to provide a secure, supportive environment for students of all orientations and backgrounds.

Students suffering from problems with anxiety, depression, problems with sleep, attention, obsessions or compulsions, relationship difficulties, severe winter blues, etc.,

may make an appointment by phone or in person. Appointments are usually available within two days of initial contact with one of our medical doctors. All contacts are completely confidential.

Contact Health Services

Health Services Building

Call 519-888-4096 to schedule an appointment

Call 1-866-797-0000 for free 24/7 advice from a health professional

Contact Counselling Services

Needles Hall Addition, NH 2401

Call 519-888-4567 x 32655 to schedule an appointment

counserv@uwaterloo.ca

Counselling & Psychological Services

<https://uwaterloo.ca/counselling-services/>

Student Success Office

<https://uwaterloo.ca/student-success/>

Writing Centre

<https://uwaterloo.ca/writing-centre/>

The Writing and Communication Centre (WCC) works with students as they develop their ideas, draft, and revise. Writing and Communication specialists offer one-on-one support in planning assignments, synthesizing and citing research, organizing papers and reports, designing presentations and e-portfolios, and revising for clarity and coherence.

You can make multiple appointments throughout the term, or you can drop in at the Library for quick questions or feedback. To book a 50-minute appointment and to see drop-in hours, visit www.uwaterloo.ca/wcc. Group appointments for team-based projects, presentations, and papers are also available.

Territorial Acknowledgement

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River.

Research Experience Marks Information and Guidelines

Experiential learning is considered an integral part of the undergraduate program in Psychology. Research participation is one example of this, article review is another. A number of undergraduate courses have been expanded to include opportunities for Psychology students to earn grades while gaining research experience.

Since experiential learning is highly valued in the Department of Psychology, students may earn a **"bonus" grade of up to 4%** in this course through research experience. Course work will make up 100% of the final mark and a "bonus" of up to 4% may be earned and will be added to the final grade if/as needed to bring your final grade up to 100%.

The two options for earning research experience grades (participation in research and article review) are described below. Students may complete any combination of these options to earn research experience grades.

Option 1: Participation in Psychology Research

Research participation is coordinated by the Research Experiences Group (REG). Psychology students may volunteer as research participants in lab and/or online (web-based) studies conducted by students and faculty in the Department of Psychology. Participation enables students to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience. Please be assured that all Psychology studies have undergone prior ethics review and clearance through the Office of Research Ethics.

Educational focus of participation in research

To maximize the educational benefits of participating in research, students will receive feedback information following their participation in each study detailing the following elements:

- Purpose or objectives of the study
- Dependent and independent variables
- Expected results

- References for at least two related research articles
- Provisions to ensure confidentiality of data
- Contact information of the researcher should the student have further questions about the study
- Contact information for the Director of the Office of Research Ethics should the student wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which s/he participated.

Participation in LAB studies has increment values of 0.5 participation credits (grade percentage points) for each 30-minutes of participation. Participation in ONLINE studies has increment values of .25 credits for each 15-minutes of participation. Researchers will record student's participation, and at the end of the term the REG Coordinator will provide the course instructor with a credit report of the total credits earned by each student.

How to participate?

Study scheduling, participation and grade assignment is managed using the SONA online system. All students enrolled in this course have been set up with a SONA account. You must get started early in the term.

[Participating/SONA information: How to log in to Sona and sign up for studies](#)

**** Please do not ask the Course Instructor or REG Coordinator for information unless you have first thoroughly read the information provided on this website.****

More information about the REG program is available at:

[REG Participants' Homepage](#)

Option 2: Article Review as an alternative to participation in research

Students are not required to participate in research, and not all students wish to do so. As an alternative, students may opt to gain research experience by writing short reviews (1½ to 2 pages) of research articles relevant to the course. The course instructor will specify a suitable source of articles for this course (i.e., scientific journals, newspapers, magazines, other printed media). *You must contact your TA to get approval for the article you have chosen before writing the review.* Each review article counts as one

percentage point. To receive credit, you must follow specific guidelines. The article review must:

- **Be submitted before the [last day of lectures](#). Late submissions will NOT be accepted under ANY circumstances.**
- Be typed
- Fully identify the title, author(s), source and date of the article. A copy of the article must be attached.
- Identify the psychological concepts in the article and indicate the pages in the textbook that are applicable. Critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-effect relations, errors in reasoning, etc. Provide examples whenever possible.
- Clearly evaluate the application or treatment of those concepts in the article.
- Keep a copy of your review in the unlikely event we misplace the original.