

PSYC*4290, Course Outline: Winter 2025

General Information

Due to the ongoing COVID-19 pandemic some courses are being offered virtually and some face to face. **Psychology 4290 will be presented in the Face-to-Face format.** The course has a set day, time and location of class.

To prevent the spread of COVID-19, your classroom has been equipped with improved ventilation equipment. University of Guelph **strongly recommends** that you wear a protective mask in class to reduce the risk of catching or spreading COVID-19 and it also **strongly recommends** that all students, faculty, and staff receive updated vaccinations against COVID-19. (These were the guidelines as of July 1st, 2022.) However, please see the website listed below for the most recent information on COVID-19 requirements at University of Guelph and what to do if you become ill.

If you develop a cough or any respiratory illness symptoms, according to university guidelines you must wear a properly fitted (medical) mask in all public settings (including in class) for 10 days after the start of your symptoms.

<https://news.uoguelph.ca/covid-19/safety-practices/>

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 scale construction, as well as 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 psychology.

Credit Weight: 0.5

Academic Department (or campus): Psychology

Semester Offering: Winter 2025

Class Schedule: Tues, Thurs: 11:30AM - 12:50PM

Location: MCKN 117

Instructor Information

Instructor Name: Dr. Shayna Skakoon-Sparling, Ph.D.

Instructor Email: s.sparling@uoguelph.ca

*(please include **PSYC 4290** in subject of all emails). I will attempt to respond to emails within 48 hours, Monday through Friday.*

Office location: MacKinnon Extension, room 4016

Office hours: by appointment (virtual or face to face)

GTA Information

Name: Shruti Chandrashekhar Nadkarni

Email: snadkarn@uoguelph.ca

Office Hours: By appointment

Name: Ralitza Dimova

Email: rdimova@uoguelph.ca

Office Hours: By appointment

Course Content

Specific Learning Outcomes:

1. **Methodological Literacy:** The ability to understand, evaluate, and apply the appropriate methodology for rigorous psychological science.
2. **Quantitative Literacy:** Includes numeracy, and competence in working with numerical data.
3. **Visual Literacy:** The ability to effectively find, interpret, evaluate, use, and create images and visual media and content.
4. **Creative Thinking:** Includes applying key concepts related to scale development, identifying issues and creating plans to address problems, formulate questions relevant to the field of psychology and know how to gather appropriate evidence to explore research questions.
5. **Written Communication:** The ability to express one's ideas and summarize theory and research through a variety of writing styles (e.g., American Psychological Association [APA] style, term papers, posters).

Lecture Content:

The table below lists the content of the lectures, but lecture dates are tentative. In this class, as in all others, sometimes it takes more time to cover material than expected.

*Text readings should be done in advance of the associated lecture to ensure you are prepared for the in-class exercises that occur during the lectures.

Please note that an **outline** for each lecture will be posted on Courselink in advance of the lecture.

| Date | Topic & Readings | Activities |
|---|---|---|
| Week 1 <i>Jan 7 and 9</i> | <ul style="list-style-type: none"> - Orientation to the course - Constructs and basic statistics <p>Readings: Chapter 1</p> | Workshop 1 – Orienting to R, R Studio, and the tidyverse. |
| Week 2 <i>Jan 14 and 16</i> | <ul style="list-style-type: none"> - Measure development - Variance / SD <p>Readings: Chapters 3 and 5</p> | Workshop 2 – Cleaning data and calculating scale scores. |
| Week 3 <i>Jan 21 and 23</i> | <ul style="list-style-type: none"> - Correlation and covariance <p>Readings: None</p> | Workshop 3 – Examining item variance and covariance. |
| Week 4 <i>Jan 28 and Jan 30</i> | <ul style="list-style-type: none"> - Scaling - Percentiles - Interpreting scores <p>Readings: Chapter 2</p> | Workshop 4 – Scaling and Percentiles. |
| Week 5 <i>Feb 4 and 6</i> | <ul style="list-style-type: none"> - Introduction to reliability <p>Readings: Chapter 7</p> | Workshop 5 – Calculating reliability & Cronbach's alpha. |
| Week 6 <i>Feb 11 and 13</i> | <ul style="list-style-type: none"> - Creating a Qualtrics Survey - Estimating reliability <p>Readings: Chapter 8</p> | Workshop 6 – Creating your own scale in Qualtrics. |
| Week 7 | <i>Reading Week – No Classes</i> | |
| Week 8 <i>Feb 25 and 27</i> | <ul style="list-style-type: none"> - Item Response Theory - Exam 1 <p>Readings: None</p> | <i>Exam 1 in Class on Feb 27th</i> |
| Week 9 <i>March 4 and 6</i> | <ul style="list-style-type: none"> - Reliability and individual scores - Exploratory Factor Analysis <p>Readings: Chapter 12</p> | Workshop 7 – Conducting an exploratory factor analysis. |
| Week 10 <i>March 11 and 13</i> | <ul style="list-style-type: none"> - Item Analysis - Validity <p>Readings: Chapter 6</p> | Workshop 8 – Conducting an item analysis. |
| Week 11 <i>March 18 and 20</i> | <ul style="list-style-type: none"> - Guest Lecture with Dr. Paolo Palma - Validity <p>Readings: Chapter 11</p> | |
| Week 12 <i>March 25 and 27</i> | <ul style="list-style-type: none"> - Putting it all together: building and assessing scales - Project Work <p>Readings: None</p> | Workshop 9 - Graphing |
| Week 13 <i>April 1 and 3</i> | <ul style="list-style-type: none"> - Practical applications and adapting scales - Project Work <p>Readings: None</p> | |

Course Assignments and Tests:

| Assignment or Test | Due Date | Contribution to Final Mark (%) | Learning Outcomes Assessed |
|------------------------------------|------------|--------------------------------|----------------------------|
| Assignment 1 | Jan 20 | 3.5% | 1,4 |
| Assignment 2 | Feb 3 | 3.5% | 1,2,4 |
| Assignment 3 | Feb 14 | 3.5% | 1,2,4 |
| Assignment 4 | Feb 24 | 3.5% | 1,2,4 |
| Assignment 5 | March 10 | 3.5% | 1,2,4 |
| Assignment 6 | March 21 | 3.5% | 1,2,4 |
| Exam 1 | Feb 27 | 23% | 1-4 |
| Exam 2 | April 11 | 20% | 1-4 |
| Scale Development Project – Part 1 | January 29 | 10% | 1-5 |
| Scale Development Project – Part 2 | Feb 14 | 2% | 1-5 |
| Scale Development Project – Part 3 | April 4 | 24% | 1-5 |

Final examination date and time: April 11, 2025. 11:30- 1:30pm

Final exam weighting: 20%

Course Resources

Required Texts:

Bandalos, D. L. (2018). *Measurement theory and applications for the social sciences*. Guilford Publications.

Your textbook is available from the University of Guelph Bookstore and the Co-Op Bookstore – I have also reserved some copies at the library.

There is a shortcut to our course reserve books at the library in the “content” section of our Courselink site.

The cost of the required text for this course (see above) is \$132.50 at the UGuelph Bookstore. At the Co-op Bookstore you can purchase a copy of the textbook for \$124.50. Students are welcome to use second-hand copies of the textbook or purchase the textbook from alternate locations; I encourage you to shop around. *Please note that prices at other locations may differ from those at the bookstore and prices at the bookstore are subject to change.*

Other Resources:

Courselink website (also called D2L). The Courselink website will be used to present online resources, Drop Box, and our class message boards.

Software: We will also use the software [R](#) and [RStudio](#) (both free), please see the installation instructions in your handout for Workshop 1.

Course Policies

Attendance

Attendance is not mandatory; however, some of the material presented in lecture is not in the text and there will be questions based on lecture material on exams. You are responsible for material in the lecture as well as the text. Before every lecture an outline of the topics to be discussed during the lecture will be posted on Courselink in a folder called "Lecture Outlines". These outlines are not meant to serve as a replacement for attending class and taking notes. Note that if you need to miss a class, you should arrange to collect notes from one (or more) of your classmates.

Grading Policies

[Undergraduate Grading Procedures](#)

Scale Design Project – Group Work: You will conduct first portion of the scale design project in groups of 5 people. You must join a group by January 14th and notify our TA Shruti of your group member composition. If you do not join a group by this date, you will be randomly assigned to a group.

Course Policy on Group Work:

Unless otherwise noted, you must work individually on your projects and submit written work this based on your own thoughts and work. For the scale design project, you should work together as a group only to create a) a construct definition and b) the items that reflect that construct definition. Because you will work together to create these items, they are a group submission. However, you must also write an overview of the process used to create the construct definition and items – this should be done on your own. You should NOT work with others when writing the rationale for your construct definition and items. Though, of course, you may well reference some similar papers, given the nature of the project.

Additionally, for the item analysis in the final project – you may conduct the item analysis as a group. But you must write-up the result of that item analysis individually. If you prefer, you may conduct the item analysis and other related analyses on your own to ensure your own submitted work best represents your individual efforts.

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

Electronic recording of classes by students is expressly forbidden without consent of the instructor. When recordings are permitted (that is, you have asked for the presenter's permission and they have said yes) these 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

Disclaimer:

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email. This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

Email communications

Ontario legislation on the right to disconnect from work requires employers to create a written policy. Correspondingly, University of Guelph has developed a written [Disconnecting from Work Policy](#) and a corresponding [FAQ](#). Following from this policy, email responses to student questions will only be sent during business hours Monday to Friday. The instructor will endeavour to respond to student questions within 2 business days.

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](#)

Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments

University Policy on the Use of AI Technologies

Students' work must reflect their unique intellectual capacity and demonstrate the application of critical thinking and problem solving. Unauthorized use of AI to complete assessments violates the fundamental intellectual purposes of the University and does not demonstrate student achievement of course learning outcomes.

Submission of materials completed by AI, without permission of the instructor, constitutes an offence under the University's academic misconduct policies, either as a form of plagiarism or the use of unauthorized aids.

Acceptable use of AI should be determined by the course instructor and may vary across disciplines, programs and types of assessments. In setting out course requirements and assessment criteria, the instructor should specify allowable uses of AI, if any, through the course outline and/or the learning management system (e.g., CourseLink). Clarity about the acceptable use of AI is critical for students and instructors. Students are responsible for appropriately referencing how and to what extent they have used AI in assessments in keeping with University and course requirements.

**Please note that the use of AI is not permitted for PSYC*4290.*

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](#)

Student Feedback Questionnaire

These questionnaires (formerly course evaluations) will be available to students during the last 2 weeks of the semester. Students will receive an email directly from the Student Feedback Administration system which will include a direct link to the questionnaire for this course. During this time, when a student goes to login to CourseLink, a reminder will pop-up when a task is available to complete.

[Student Feedback Questionnaire](#)

Drop date

The last date to drop one-semester courses, without academic penalty, is Friday April 4, 2025. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#).

Instructors must provide [meaningful and constructive feedback, at minimum 20% of the final course grade, prior to the 40th class day](#). For courses which are of shorter duration, 20% of the final grade must be provided two-thirds of the way through the course.

Additional Course Information

Course instructors are allowed to use software to help in detecting plagiarism or unauthorized copying of student assignments. Plagiarism is one of the most common types of academic misconduct on our campus. Plagiarism involves students using the work, ideas and/or the exact wording of other people or sources without giving proper credit to others for the work, ideas and/or words in their papers. Students can unintentionally commit misconduct because they do not know how to reference outside sources properly or because they don't check their work carefully enough before handing it in. 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.

In this course, your instructor will be using Turnitin.com to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to prevent plagiarism in the College of Social and Applied Human Sciences.

A major benefit of using Turnitin is that students will be able to educate and empower themselves in preventing misconduct. In this course, you may screen your own assignments through Turnitin as many times as you wish before the due date. You will be able to see and print reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.

A Note on The Grading of This Course:

Grades and other evaluations reflect your performance in a course. In other words, your mark is something that you earn based on the quality of your work; it is not something assigned to you at random by the instructor or your TAs. Sometimes you can work really hard on an assignment or test and still receive a grade lower than what you hoped for because your work did not meet the requirements. Similarly, I could try really hard to knit a sweater and the result may still not fit the wearer how I hoped it would, no matter the amount of time or effort I felt I had expended.

Your TAs and I take time to carefully evaluate the performance of all of our students throughout the course. Still, there are a handful of students every semester who insist on contacting us to argue their grades, without being able to present strong evidence for a grading error. Many instructors find these types of attempts to negotiate for a higher grade a sign of disrespect. Additionally, it can be interpreted as a sign that the student thinks that their instructor or TA doesn't carefully evaluate grading and performance. I

understand that this may not be your intention, but nonetheless, be mindful when sending emails.

This does not mean that you should not feel welcome to raise any concerns you may have about your assignments or exams, I wish only for you to be aware that unfounded negotiation can be a detriment to your reputation as a student. If you feel that an error has been made in the grading of an exam or assignment, I encourage you to raise your concerns with us; however, I will ask that you be able to present strong evidence of a grading error if you do so. Importantly, if you are unclear about the value of an assignment (or extra credit) for any course, please take time to clarify with your instructor and/or your TAs well before the end of the semester or the due date of an assignment.