

Course Schedule

IMPORTANT: ALL TIMES EASTERN - Please see the [University Policies](#) section of your Course Outline for details.

Week	Module	Readings	Activities and Assignments	Begin Date	End/Due Date	Weight (%)
Week 1	Module 01 : Introduction and Basic Concepts	Textbook: (Heiman, 2014) • Chapters 1 and 2	Groups for Assignment 1 created by Tech Support		Check after Friday, September 15, 2023 at 4:30 PM	
			Module 00 Math Skill Practice (Möbius)			2% (The highest 10 of 11 Möbius exercises will be counted towards your final grade.)
			SDS 250R Student Survey (LEARN)		Monday, September 11, 2023 at 4:00 PM	2% (The highest 10 of 12 Möbius quizzes, including the LEARN survey, will be counted towards your final grade.)
			Quiz 0: Basic Math Skills (Möbius)		Monday, September 11, 2023 at 4:00 PM	2%
Week 2	Module 02 : Frequency of Distributions	Textbook: (Heiman, 2014) • Chapter 2	Module 01 Review Exercises (Möbius)			2%
			Quiz 1 (Möbius)		Monday, September 18, 2023 at 4:00 PM	2%
Week 3	Module 03 : Central Tendency and Variability	Textbook: (Heiman, 2014) • Chapters 3 and 4	Assignment 1 Group Expectations Discussion (LEARN)			
			Module 02			2%

			Review Exercises (Möbius)			
			Quiz 2 (Möbius)		Monday, September 25, 2023 at 4:00 PM	2%
Week 4	Module 04: z-Scores and Central Limit Theorem	Textbook: (Heiman, 2014) • Chapter 5	Module 03 Review Exercises (Möbius)			2%
			Assignment 1 (LEARN)		Friday, September 29, 2023 at 4:00 PM	5%
			Quiz 3 (Möbius)		Monday, October 2, 2023 at 4:00 PM	2%
Week 5	Module 05: The Correlation Coefficient	Textbook: (Heiman, 2014) • Chapter 10-1, 10-2	Groups for Assignment 2 created by Tech Support		Check after Monday, October 2, 2023 at 4:30 PM	
			Online Midterm 1 (LEARN)	Monday, October 2, 2023 at 12:00 Noon	Tuesday, October 3, 2023 at 11:55 PM	5%
			Module 04 Review Exercises (Möbius)			2%
			Quiz 4 (Möbius)		Monday, October 16, 2023 at 4:00 PM	2%
Reading Week (Saturday, October 7, 2023 to Sunday, October 15, 2023)						
Week 6	Module 06: Linear Regression	Textbook: (Heiman, 2014) • Chapter	Assignment 2 Group Expectations Discussion (LEARN)			

		10-5, 10-6	Module 05 Review Exercises (Möbius)			2%
			Quiz 5 (Möbius)		Monday, October 23, 2023 at 4:00 PM	2%
Week 7	Module 07: Probability and Hypothesis Testing	Textbook: (Heiman, 2014) • Chapters 6, 7, and 10-3, 10-4	Module 06 Review Exercises (Möbius)			
			Assignment 2 (LEARN)		Friday, October 27, 2023 at 4:00 PM	5%
Week 8	Continue Module 07: Probability and Hypothesis Testing	Textbook: (Heiman, 2014) • Chapters 6, 7, and 10-3, 10-4	Module 06 Review Exercises (Möbius)			2%
			Quiz 6 (Möbius)		Monday, November 6, 2023 at 4:00 PM	2%
Week 9	Module 08: <i>t</i> -Test and Confidence Intervals	Textbook: (Heiman, 2014) • Chapter 8	Module 07 Review Exercises (Möbius)			2%
			Quiz 7 (Möbius)		Monday, November 13, 2023 at 4:00 PM	2%
Week 10	Module 09: <i>t</i> -Test with Two Samples	Textbook: (Heiman, 2014) • Chapter 9	Online Midterm 2 (LEARN)	Monday, November 13, 2023 at 12:00 Noon	Tuesday, November 14, 2023 at 11:55 PM	5%
			Module 08 Review Exercises (Möbius)			

			Quiz 8 (Möbius)		Monday, November 20, 2023 at 4:00 PM	2%
Week 11	Module 10: The One-Way Analysis of Variance (ANOVA)	Textbook: (Heiman, 2014) • Chapter 11	Module 09 Review Exercises (Möbius)			2%
			Quiz 9 (Möbius)		Monday, November 27, 2023 at 4:00 PM	2%
Week 12	Module 11: Chi Square and Other Nonparametric Procedures	Textbook: (Heiman, 2014) • Chapter 13	Module 10 Review Exercises (Möbius)			2%
			Quiz 10 (Möbius)		Monday, December 4, 2023 at 4:00 PM	2%
Final Examination						40%

Contact Information



Announcements

You are expected to check **Announcements** on the **Course Home** page on a regular basis. To ensure you are viewing the complete list of announcements, you may need to click **Show All Announcements**.

Discussions

Discussion topics can be accessed by clicking **Connect** and then **Discussions** on the course navigation bar above.

Contact Us

Who and Why	Contact Details
<p>Instructor</p> <ul style="list-style-type: none"> Course-related questions (e.g., course content, deadlines, assignments, etc.) Questions of a personal nature 	<p>Post your course-related questions (statistics, questions, deadlines, etc) to the Ask the Instructor discussion topic. This allows other students to benefit from your question as well.</p> <p>Questions of a personal nature can be directed to your instructor.</p> <p>Instructor: Hsiao D'Ailly hdaily@uwaterloo.ca</p> <p>Your instructor checks email and the Ask the Instructor discussion topic frequently and will make every effort to reply to your questions within 24–48 hours, Monday to Friday.</p>
<p>Technical Support, Centre for Extended Learning</p> <ul style="list-style-type: none"> Technical problems with Waterloo LEARN 	<p>learnhelp@uwaterloo.ca</p> <p>Include your full name, WatIAM user ID, student number, and course name and number.</p> <p>Technical support is available during regular business hours, Monday to Friday, 8:30 AM to 4:30 PM (Eastern Time).</p> <p>IST Knowledge Base: For Students </p>
<p>Learner Support Services, Centre for Extended Learning</p> <ul style="list-style-type: none"> General inquiries WatCards (Student ID Cards) 	<p>Student Resources </p> <p>extendedlearning@uwaterloo.ca +1 519-888-4002</p> <p>Include your full name, WatIAM user ID, student number, and course name</p>

- Examination information and number.

Course Description and Learning Outcomes

Course Description

The primary goal of this course is to help students become informed consumers of quantitative information in social science research. Emphasis will be placed on understanding basic principles of statistics and learning when and how to apply them.

Learning Outcomes

By the end of this course, you should be able to

- explain how statistics are used in social science research to organize quantitative information, test hypotheses, and report research findings;
- identify variables in a data set and the level of measurement for each variable;
- use various descriptive statistics, tables, and graphs to summarize quantitative information, including data that you collect yourself, or data presented to you through different sources;
- describe the logic of hypothesis testing procedures and the use of inferential statistics in social research;
- use appropriate statistics to answer different research questions and test different hypotheses involving one or two variables; and
- read with ease basic quantitative information, including tables and graphs, and research "findings," including hypothesis testing results in academic journals and the general media.

This online course was developed by Dr. Hsiao D'Ailly, with instructional design and multimedia development support provided by the Centre for Extended Learning.

About the Course Author

Dr. Hsiao D'Ailly

Educational Background

Hsiao obtained her BA from Taiwan National Normal University. She completed both her Master's degree in Education and PhD in Psychology at the University of Western Ontario. Hsiao also held a two year SSHRC post-doctoral fellowship at the Psychology department at UW before coming to Renison.

Current Research

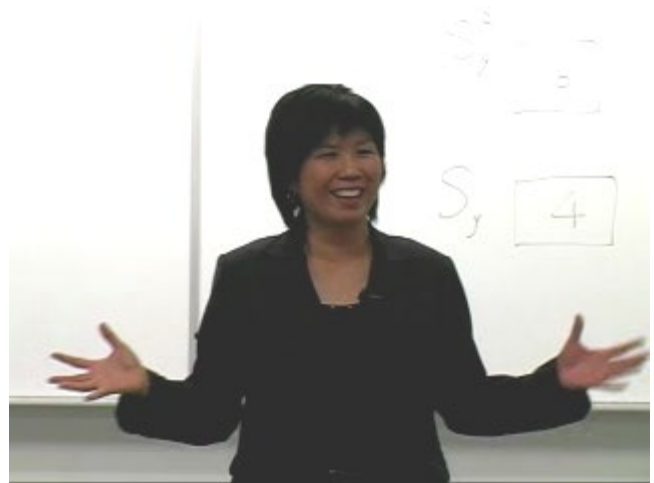
Immigrant adaptation, community-based research, and cross-cultural psychology.

Philosophy of Teaching

Hsiao believes that only "meaningful learning" is true learning. She encourages students to always see the applications of their new knowledge in real life situations. Her philosophy of teaching fits well with the constructivist theory of learning, believing that learning is an active process in which students construct new ideas or concepts based upon their current and past knowledge.

Hobbies/Interests/Sports

When not involved in research, Hsiao likes to listen to music, play music, read, watch movies, walk with friends, go to new places, and see new things.





Materials and Resources

Textbook

Required

1. Heiman, G.W. (2014). *Behavioral Sciences STAT (2nd Edition)*. Toronto: Houghton Mifflin.

For textbook ordering information, please contact the [W Store | Course Materials + Supplies](#) .

For your convenience, you can compile a list of required and optional course materials through [BookLook](#)  using your Quest userID and password. If you are having difficulties ordering online and wish to call the Waterloo Bookstore, their phone number is +1 519-888-4673 or toll-free at +1 866-330-7933. Please be aware that textbook orders **CANNOT** be taken over the phone.

Resources


- Library services for [Co-op students on work term and students taking online courses](#) 

Grade Breakdown

The following table represents the grade breakdown of this course.

Activities and Assignments	Weight (%)
Module Review Exercises (Best 10 of 11)	20%
Online Quizzes and SDS 250R Survey (Best 10 of 12)	20%
Assignments (2 x 5%)	10%
Online Midterms (2 x 5%)	10%
Final Examination	40%

Official Grades and Course Access

Official Grades and Academic Standings are available through [Quest](#) .

Your access to this course will continue for the duration of the current term. You will not have access to this course once the next term begins.

Course Policies

Late Assignments

Late assignments will not be graded unless there is a documented illness or family emergency.

Online Midterms

You may only take the midterms once. You may not retake a midterm. In cases of severe illness or other extenuating circumstances, with supporting documents, the weighting for the online midterm may be allocated to the final exam.

University Policies

Submission Times

Please be aware that the University of Waterloo is located in the **Eastern Time Zone** (GMT or UTC-5 during standard time and UTC-4 during daylight saving time) and, as such, the time that your activities and/or assignments are due is based on this zone. If you are outside the Eastern Time Zone and require assistance with converting your time, please try the [Ontario, Canada Time Converter](#).

Short-Term Absences

Review the University of Waterloo's [Accommodations](#) policy for more details.

Additionally, undergraduate students have the option to self-declare a short-term absence during the formal lecture period by following the [Undergraduate student short-term absences](#) process outlined by the Registrar's Office.

Please follow the instructions above and contact your instructor for applicable accommodations.

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. **If you have not already completed the online tutorial regarding academic integrity you should do so as soon as possible.** Undergraduate students should see the [Undergraduate Academic Integrity Module](#) and graduate students should see the [Graduate Academic Integrity Module](#) website.

Proper citations are part of academic integrity. Citations in CEL course materials usually follow CEL style, which is based on APA style. Your course may follow a different style. If you are uncertain which style to use for an assignment, please confirm with your instructor or TA.

For further information on academic integrity, please visit the [Office of Academic Integrity](#).

Turnitin

Turnitin.com: Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin® in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

[Turnitin® at Waterloo](#)

Discipline

A student is expected to know what constitutes [academic integrity](#) to avoid committing an academic offence, and to take responsibility for their 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 instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties, check [Guidelines for the Assessment of Penalties](#).

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 they have a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Grievance

A student who believes that a decision affecting some aspect of their 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.

Final Grades

In accordance with [Policy 46 - Information Management](#), Appendix A - Access to and Release of Student Information, the Centre for Extended Learning does not release final examination grades or final course grades to students. Students must go to [Quest](#) to see all final grades. Any grades posted in Waterloo LEARN are unofficial.

AccessAbility Services

[AccessAbility Services](#), located in Needles Hall, 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 accommodation to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term and for each course.

Accessibility Statement

The Centre for Extended Learning strives to meet the needs of all our online learners. Our ongoing efforts to become aligned with the [Accessibility for Ontarians with Disabilities Act \(AODA\)](#) are guided by University of Waterloo accessibility [Legislation](#) and policy and the [World Wide Web Consortium's \(W3C\) Web Content Accessibility Guidelines \(WCAG\) 2.0](#). The majority of our online courses are currently delivered via the Desire2Learn Learning Environment. Learn more about [Accessibility at D2L](#).

Use of Computing and Network Resources

Please see the [Guidelines on Use of Waterloo Computing and Network Resources](#).

Copyright Information

UWaterloo's Web Pages

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Other Sources

Respect the copyright of others and abide by all copyright notices and regulations when using the computing facilities provided for your course of study by the University of Waterloo. No material on the Internet or World Wide Web may be reproduced or distributed in any material form or in any medium, without permission from copyright holders or their assignees. To support your course of study, the University of Waterloo has provided hypertext links to relevant websites, resources, and services on the web. These resources must be used in accordance with any registration requirements or conditions which may be specified. You must be aware that in providing such hypertext links, the University of Waterloo has not authorized any acts (including reproduction or distribution) which, if undertaken without permission of copyright owners or their assignees, may be infringement of copyright. Permission for such acts can only be granted by copyright owners or their assignees.

If there are any questions about this notice, please contact the University of Waterloo, Centre for Extended Learning, Waterloo, Ontario, Canada, N2L 3G1 or extendedlearning@uwaterloo.ca.