



ST. JEROME'S UNIVERSITY

St. Jerome's University in the University of Waterloo
Department of Sexuality, Marriage, and Family Studies

SMF 230 Winter 2023

Introduction to statistics for sexuality, marriage, and family studies

Time: Tuesdays and Thursdays, 10:00 to 11:20 AM

Location: SJ2 2001

1. INSTRUCTOR INFORMATION

Instructor: Carl Rodrigue
Office: SJU Sweeney Hall 2219
Phone: 519-884-8111 x28226
Office drop-in hours: Tuesdays and Thursdays from 8:30 to 9:30 AM and from 1:00 to 2:00 PM,
or by appointment
Email: carl.rodrigue@uwaterloo.ca

2. COURSE DESCRIPTION

The goal of this introductory statistics course is to help students understand the logic and appropriate application of commonly used descriptive and inferential statistics, with examples drawn from various disciplines relevant to sexuality, marriage, and family studies.

Prereq: One of SMF 204, 206, PSYCH 236.

Antireq: ARTS 280, ECON 221, ENVS 278, ISS 250R, KIN 222, PSCI 214/314, PSYCH 292, REC 371, SOC/LS 280, STAT 202, 206, 211, 221, 231, 241

3. COURSE OBJECTIVES

In this course, students will be introduced to the fundamental components, logic, and execution of basic descriptive and inferential statistics commonly used in the social sciences. A major goal of this course is to familiarize students with the basic skills required to conduct quantitative analyses in the social sciences, and to understand the fundamentals of basic quantitative research articles.

Current debates and best practices for statistical analysis will be highlighted in this course, and the literature on sexuality, marriage, and family studies will be frequently drawn from to provide examples. Students will utilize commonly used statistical software and will gain firsthand experience conducting statistical analyses.

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

1. Possess a basic understanding of how statistics are used to investigate questions of interest in disciplines relevant to the study of sexualities, relationships, and families.
2. Be able to use basic statistics in a research project.
3. Be able to read, understand, and interpret statistics: What statistics can tell us, what they cannot tell us, and how to apply a critical interpretation to statistical information.
4. Become critical consumers of statistical information presented in academic and non-academic contexts.
5. Acquire knowledge of fundamental statistical concepts and simple statistical techniques that can be used to build an understanding of more complicated techniques in the future.

4. REQUIRED MATERIAL

LEARN: The LEARN D2L platform is a critical resource to this course. You are encouraged to become highly familiar with how to access content and assignments. LEARN also serves as the central communication centre for our course. You will see that I post reminders, updates and other little items that catch my attention that I want to share with you. Please access a few times a week to stay current.

4.1. Readings

This course will only be using readings that are **free** to you via the University of Waterloo Library. These readings are available on Course reserves. You can find a link to Course reserves on the library homepage or on LEARN.

4.2. Statistical software

We will use SPSS (Statistical Product and Service Solutions) version 28. There are two options for you to access SPSS:

- Free remote access: As students, you have free remote access to SPSS and other software through your web browser. See the following link for instructions:
<https://uwaterloo.atlassian.net/wiki/spaces/ACOHD/pages/819858617/Remote+access+to+software>
- Renting: Here is a link for students who might want to purchase a six-month subscription to SPSS 28: <https://e5.onthehub.com/WebStore/OfferingDetails.aspx?o=18e78673-10bf-eb11-813b-000d3af41938&pmv=a4db50af-41be-eb11-813b-000d3af41938&ws=4c3b92f6-3b32-e611-941d-b8ca3a5db7a1&vsro=8>

4.3. World Values Survey – Wave 7, Canada

For your assessments, you will use data from the World Values Survey. “The World Values Survey (WVS) is an international research program devoted to the scientific and academic study of social, political, economic, religious and cultural values of people in the world.” In our case, we will specifically use data from the 7th wave in Canada. Data and research methods files are free to download: <https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp>

Click on the link and download the following files:

- WVS7 Questionnaire Canada 2020 English.pdf
- WVS7 Sample Design Canada 2020.pdf
- WVS7 Information about the team Canada 2020.pdf
- World Values Survey Wave 7 (2017-2020) Canada v3.0.pdf
- WVS Wave 7 Canada Spss v2.0.zip (then, extract the .sav SPSS database file)

5. COURSE SCHEDULE

Weeks, dates, and modules	Topics and tasks
MODULE #1 The basics of statistics	
Week 1 January 10th January 12th	Topics <ul style="list-style-type: none"> • Introduction to the course • Descriptive statistics
Week 2 January 17th January 19th	Readings <ul style="list-style-type: none"> • Griffiths, P., & Needleman, J. (2019). Statistical significance testing and p-values: Defending the indefensible? A discussion paper and position statement. <i>International Journal of Nursing Studies</i>, 99. • Haig, B. D. (2003). What is a spurious correlation?. <i>Understanding Statistics</i>, 2(2), 125-132. Topics <ul style="list-style-type: none"> • Inferential statistics • Causality and statistical model building
Week 3 January 24th January 26th	Topics <ul style="list-style-type: none"> • SPSS lab: Introduction to SPSS • TEST: MODULE #1
MODULE #2 Tests of comparison	
Week 4 January 31st February 2nd	Topics <ul style="list-style-type: none"> • Chi-square and t-test • SPSS lab: Chi-square and t-test

Week 5 February 7th February 9th	Topics <ul style="list-style-type: none"> • Analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA) • SPSS lab: ANOVA and MANOVA
Week 6 February 14th February 16th	Topics <ul style="list-style-type: none"> • Group coaching session #1: Research project • TEST: MODULE #2
Reading week February 21st February 23rd	Reading week <ul style="list-style-type: none"> • No class • No class
MODULE #3 Tests of association and prediction	
Week 7 February 28th March 2nd	Topics <ul style="list-style-type: none"> • Correlation • SPSS lab: Correlation
Week 8 March 7th March 9th	Topics <ul style="list-style-type: none"> • Linear and logistic regression • SPSS lab: Linear and logistic regression
Week 9 March 14th March 16th	Topics <ul style="list-style-type: none"> • Group coaching session #2: Research project • TEST: MODULE #3
MODULE #4 Introduction to more advanced analyses	
Week 10 March 21st March 23rd	Topics <ul style="list-style-type: none"> • Group coaching session #3: Short oral presentation • Group coaching session #4: Research project • DEADLINE: SPSS EXERCISE BOOKLET
Week 11 March 28th March 30th	Topics <ul style="list-style-type: none"> • Short oral presentations #1 • Short oral presentations #2
Week 12 April 4th April 6th	Topics <ul style="list-style-type: none"> • Moderation and mediation • Choice: Exploratory factor analysis OR Latent class analysis • DEADLINE: SCIENTIFIC REPORT

University students are generally expected to devote 8-10 hours per week per course (inclusive of lectures [3 hours], readings, studying, and completing assessments). Thus, a reasonable amount of time for this course is approximately 8-10 hours/week.

6. COURSE REQUIREMENTS AND ASSESSMENT

6.1 Assessment schedule (in chronological order)

Assessments	Dates	Weighting
Test: Module #1	January 26th	10%
Test: Module #2	February 16th	15%
Test: Module #3	March 16th	15%
Weekly exercises	About once per week	10%
SPSS exercises booklet	March 23rd	10%
Group assessment: Research project		40%
Short oral presentation	March 28th or 30th	10%
Scientific report	April 6th	30%

6.2 Assessment description

Weekly exercises

Counting the introductory lecture, there are 10 lecture sessions in total. To progressively test your understanding of the content, you will individually complete a short set of exercises after each lecture session. You will have one week to complete them. After this period, I will upload the answer key on LEARN. You must submit a copy of your exercises on LEARN. Any attempt at honest completion by the due date earns you 1 point for each set of exercises, for a total of 10%.

Tests

Each test is open-book, which means that you may have access to your notes and course materials (including exercises). Each test will be held in class. Questions will be designed in various formats, including true or false, multiple choice, and short answer questions.

Group assessment – SPSS exercise booklet

In groups of three to four people, you will complete an exercise booklet that will allow you to practice using SPSS. View this assessment as a learning experience in view of your group assessment. I will give you time during SPSS labs to work on your SPSS exercises. For these exercises, you will be using the World Values Survey Wave 7 Canada database (see section 4.3 of the syllabus).

Group assessment – Research project

In groups of three to four people, you will carry out a research project using the World Values Survey Wave 7 Canada database (see section 4.3 of the syllabus). You will choose a set of variables and perform secondary statistical analyses on the data.

Scientific report

You will write a ten to-twelve-page report formatted like an empirical scientific paper. It will contain four sections: Introduction, Method, Results, Discussion. The instruction and correction sheet for this paper are provided on LEARN.

The paper must be formatted according to APA 7th edition guidelines:

- American Psychological Association (2019). *Publication Manual of the American Psychological Association* (7th ed.). American Psychological Association.

Information on these guidelines is freely available online:

- https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

An example of a formatted paper will be made available on LEARN.

Short oral presentation

In this short oral presentation, you will showcase a first complete draft of your scientific report. This presentation will allow me to comment on your work and introduce you to scientific communication strategies for quantitative studies. In a format similar to what is usually found in scientific conferences, you will have a maximum of eight minutes to discuss your main ideas. The presentation will contain the same four sections of an empirical scientific paper.

An example of a short oral presentation will be made available on LEARN.

7. RULES FOR GROUP WORK IN ASSIGNMENTS

When working on a group assignment, a [Group Assignment Checklist](#) must be completed and submitted with the assignment.

8. PROCEDURES CONCERNING ACCOMMODATIONS FOR MEDICAL REASONS

The Faculty of Arts has implemented new procedures starting January 1, 2023 for students needing accommodations for medical reasons. Students will now be required to access the central portal [Accommodations and Illness page](#) for a variety of medical issues – such as self-

declarations of illness, pandemic declarations, or to upload your completed Verification of Illness Form (VIF).

You can [self-declare an absence](#) on Quest for pandemic-related reasons or short-term reasons. A short-term absence, is for any reason, that is a maximum length of 48 hours. (see link for more details). Here are the highlights:

- The declaration of a short-term absence is available to all undergraduate students taking courses at the University of Waterloo.
- Only one short-term absence can be self-declared per academic term.
- All of your instructors will be notified by email of your absence, as indicated in Quest.
- You are excused from all assessments due during the absence window.
- You are required to reach out to your instructors within the first 24 hours to discuss possible accommodations for missed due dates.

For other medical issues (particularly if longer than 48 hours) you can obtain a [Verification of Illness Form \(VIF\)](#) for other conditions and follow the instructions for submission of a VIF and/or supporting documentation. The VIFS will be reviewed in the Arts Undergraduate Office (AUO) for appropriate dates and signatures before being accepted.

Once you have self-declared or submitted an VIF ALL of your professors will be notified by the AUO and the length of your incapacitation.

Students are asked NOT to send VIFs or other medical documentation directly to their professors. Submitting only to the AUO allows students some privacy. Accommodations will then be negotiated with the Arts Undergraduate Office who will assist in providing direction to the professor on needed student accommodations. Many professors already are used to this system with the Access Ability office.

9. COVID-19 MANAGEMENT AND CONTINGENCY PLANS

9.1 Student COVID-19 cases

- Students should be instructed not to come to class or other in-person activities if they are experiencing COVID-19 symptoms or are required to self-isolate.
- In the event of absence due to influenza-like illness or required self-isolation, students shall submit an Illness Self-declaration. Students can find the Illness Self-declaration form in the Personal Information section of Quest. A doctor's note for accommodation is not required. Direct students to contact the COVID-19 Support and Advice line to report their illness.
- If students cannot attend classes due to self-isolation, accommodations will be arranged, such as the ability to attend classes online in a synchronous format.

9.2 Alternate arrangements due to COVID-19-related cancellations of in-person classes

- **Short-term and longer-term cancellation of in-person classes, whether for the particular course or University-wide:** Lectures will be held online in an asynchronous format and made available on LEARN. Supervision sessions will be held online in a synchronous format during usual class hours.
- **Cancellation of in-person tests:** Tests will be re-scheduled at a later date. They will be held during usual class hours. Any lecture that has been replaced by examinations will be held online in an asynchronous format and made available on LEARN.

10. ATTENDANCE POLICY

If you miss a class, you are responsible for obtaining notes and information from the missed lecture (e.g., from another student). Other than clarification or elaboration questions, I will not “re-teach” if you miss material.

Ideally, you should arrive a few minutes in advance to class. Arriving late disturbs everyone.

11. POLICY ON LATE WORK, MISSED ASSIGNMENTS, AND MAKE-UP TESTS

Any assignment submitted after the due date/time will be subject to a 5% penalty per day (including weekends), except under documented grounds for compassionate consideration.

Time starts to run as soon as the assignment misses said date and time. Assignments will not be accepted after 10 days past the original due date (unless you have made arrangements with me directly). Any assignment submitted after this cut-off will receive a grade of zero (0).

If you need a rescheduling of course assessments for legitimate medical, religious, or compassionate reasons, it is your responsibility to inform me prior to the deadline or exam session. You must provide acceptable documentation to support such reasons (e.g., official letter from a physician or a therapist). Those who were ill who contact me after the deadline or exam session will generally not be granted a rescheduling unless the illness incapacitated them, i.e. making it impossible for the student to contact me prior to the deadline or exam session.

Telephone calls from a health care provider are not acceptable to warrant a missed examination. Paper documentation is required. A non UW-Health Services note must contain the same information that is available on the UW Health Services Illness Verification form. See the following link for instructions: <https://uwaterloo.ca/campus-wellness/health-services/student-medical-clinic/verification-illness-services>

If you feel that you have a medical or personal problem that is interfering with your work or has the possibility to interfere with your work (e.g., chronic, recurring stress-induced migraines; anxiety; stress-induced allergies; medication that is impeding studying), you should contact me or your academic advisor (and/or Accessibility Services Office) as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. In general, retroactive requests for grade revisions on medical or compassionate grounds will not be considered (from the University of Waterloo website: if a student completes an exam while ill, the grade stands). Making an instructor aware of pre-existing conditions prior to a request for accommodation based on that condition is a wise course of action.

12. CORRESPONDENCE

When emailing me, you should include “SMF 230” in the subject line along with indication regarding the email (e.g., “SMF 230 : Question on SPSS”). You should use your UWaterloo email address to do so, since hotmail accounts sometimes delay routing of the messages or simply do not deliver messages. You should begin an email with an appropriate salutation (e.g., “Hi!”) and end it with an appropriate closing (e.g., “Thank you!”). You should end the email with your given and last names, and student number.

Also, please note:

- I will usually respond to your email within 48 hours, excluding weekends. If you have not heard from me within 48 hours, please resend your email. Beware of last-minute requests: I cannot guarantee that I will be able to respond in time. Starting your assignments in advance is a good way to prevent such an issue.
- Before asking me about the course schedule, course content, and assessments, you should go through the syllabus.
- Do not email me to ask when the grades will be posted. All you need to know is that I endeavour to complete the grading as quickly as possible.

13. ELECTRONIC DEVICE POLICY

In the spirit of creating a respectful classroom environment conducive to learning, I ask that you restrict your laptop and smartphone use to classroom activities such as notetaking, accessing LEARN, etc. to avoid distracting the people around you. Please turn your phones to off or silent. In a shared learning environment, messaging, tweeting, googling, watching videos, emailing, etc. are distracting to other students and to myself. Your respectful consideration of others is very much appreciated.

14. GRADING SYSTEM

Assigned Letter Grades	Percentage Values	Average Calculation Values
A+	90-100	95
A	85-89	89
A-	80-84	83
B+	77-79	78
B	73-76	75
B-	70-72	72
C+	67-69	68
C	63-66	65
C-	60-62	62
D+	57-59	58
D	53-56	55
D-	50-52	52
F+	42-49	46
F	35-41	38
F-	0-34	32

15. IMPORTANT DATES TO REMEMBER

Copied from the U Waterloo website: https://uwaterloo.ca/registrar/important-dates/list?academic_term=50&academic_year=266&audience=202&date=All&page=1

Title	Description	Date
Classes begin	<u>Laurier</u> may have a different schedule - visit their website for applicable start dates.	Jan 9, 2023
Reserves removed	Reserves on most classes will be removed on this date, opening remaining spaces to all students. See <u>Schedule of Classes</u> for spaces.	Jan 16, 2023
Add Period ends	Last day to add a class. See <u>how to add or swap classes in Quest</u> .	Jan 20, 2023
Not Fees Arranged (NFA) holds applied	Not Fees Arranged (NFA) holds applied to students who are not yet Fees Arranged for the term. Undergraduate students: Find out more about how this <u>hold will</u>	Jan 21, 2023

	<u>impact your course registration process for future terms.</u>	
Last day to drop a class from the academic record	The Drop Period ends. Classes dropped prior to or on this day will be removed from the academic record. See how to <u>drop a class in Quest</u> .	Jan 27, 2023
Tuition and fee refund deadline - 100%	See <u>Student Financial Services website</u> .	Jan 27, 2023
Drop with WD begins	WD (Withdrew, no credit granted) grade assigned for class(es) <u>dropped</u> during this period.	Jan 28, 2023
Tuition and fee refund deadline - 50%	See <u>Student Financial Services website</u> .	Feb 17, 2023
Reading Week	All classes cancelled; offices closed on the weekends and the holiday Monday. Undergraduate students: view the <u>Undergraduate Studies Academic Calendar</u> for more details. Graduate students: view the <u>Graduate Studies Academic Calendar</u> for more details.	Feb 18 to 26, 2023
Family Day	All classes cancelled and offices closed.	Feb 20, 2023
Drop with WD ends	Last day to <u>drop</u> a class and receive a WD (Withdrew, no credit granted) grade.	Mar 24, 2023
Drop with WF begins	WF (Withdrew/Failure, no credit granted, value 32) grade assigned for class(es) dropped during this period. Engineering students: Visit <u>course load and withdrawal</u> in the Undergraduate Calendar for specific regulations.	Mar 25, 2023
Good Friday	No final examinations are held and offices closed.	Apr 7, 2023
Classes end	<u>Laurier</u> may have a different schedule - visit their website for applicable end dates.	Apr 10, 2023
Make-up day for Good Friday	The loss of a Friday class on April 7 will be made up by following a Friday schedule on April 10.	Apr 10, 2023

Pre-examination study days		Apr 11 to 12, 2023
Drop with WF ends	Last day to <u>drop</u> a class without a petition and receive a WF (Withdraw/Failure, no credit granted, value 32) grade.	Apr 12, 2023
Final examinations begin	First day of the final examination period.	Apr 13, 2023
In-person exam days for online courses	Winter 2023 term dates.	Apr 14 to 15, 2023
In-person exam days for online courses	Winter 2023 term dates.	Apr 19, 2023
In-person exam days for online courses	Winter 2023 term dates.	Apr 22, 2023
Co-operative work term ends	Actual dates may vary depending on employer or student requirements.	Apr 28, 2023
Final examinations end	Last day of the final examination period.	Apr 28, 2023
Grades begin to appear in Quest	Registered students can <u>view their unofficial term grades</u> in Quest. Note: Not all grades will be available on this date.	Apr 29, 2023
Standing decisions and official grades are available in Quest	Registered students can view their official and complete term grades, along with academic standing, in Quest.	May 19, 2023

16. OTHER IMPORTANT INFORMATION

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. Check www.uwaterloo.ca/academicintegrity/ for more information.

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 the St. Jerome's University Policy on [Student Petitions and Grievances](#). When in doubt, please be certain to contact the St. Jerome's Advising Specialist, Student Affairs Office, who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing an academic offence, and to take responsibility for their actions. Check www.uwaterloo.ca/academicintegrity/ for more information. 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 Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under the St. Jerome's University Policy on [Student Discipline](#). For information on categories of offences and types of penalties, students should refer to University of Waterloo [Policy 71, Student Discipline](#). For typical penalties, check the [Guidelines for the Assessment of Penalties](#).

Appeals: A decision made or penalty imposed under the St. Jerome's University Policy on Student Petitions and Grievances (other than a petition) or the St. Jerome's University Policy on Student Discipline may be appealed if there is a ground. A student who believes they have a ground for an appeal should refer to the St. Jerome's University Policy on [Student Appeals](#).

Note for students with disabilities: [AccessAbility Services](#), located in Needles Hall (Room 1401) at the University of Waterloo, 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 AccessAbility Services at the beginning of each academic term.

17. OTHER STATEMENTS

A. MENTAL HEALTH SERVICES

All of us need a support system. The SJU faculty and staff encourage students to seek out mental health support if they are needed.

On Campus:

- Counselling Services: counselling.services@uwaterloo.ca / 519-888-4567 x32655
- **MATES**: one-to-one peer support program offered by Federation of Students (FEDS) and Counselling Services
- Health Services Emergency service: located across the creek from Student Life Centre

Off campus, 24/7:

- **Good2Talk**: Free confidential help line for post-secondary students. Phone: 1-866-925-5454
- Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-4300 x6880
- **Here 24/7**: Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- **OK2BME**: set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 x213

Full details can be found online on the Faculty of Arts [website](#).

Download [UW and regional mental health resources \(PDF\)](#)

Download the [WatSafe app](#) to your phone to quickly access mental health support information

B. 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. St. Jerome's University is situated on the Haldimand Tract, the land promised to the Six Nations that includes ten kilometres on each side of the Grand River.

C. CHOSEN/PREFERRED NAME

Do you want professors and interviewers to call you by a different first name? Take a minute now to verify or tell us your chosen/preferred first name by logging into [WatIAM](#).

Why? Starting in winter 2020, your chosen/preferred first name listed in WatIAM will be used broadly across campus (e.g., LEARN, Quest, WaterlooWorks, WatCard, etc). Note: Your legal first name will always be used on certain official documents. For more details, visit [Updating Personal Information](#).

Important notes:

- If you included a preferred name on your OUAC application, it will be used as your chosen/preferred name unless you make a change now.
- If you don't provide a chosen/preferred name, your legal first name will continue to be used.

D. INTELLECTUAL PROPERTY

Students should be aware that this course contains the intellectual property of their instructor, TA, and/or St. Jerome's University. Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student's educational experience. **However, sharing this intellectual property without the intellectual**

property owner's permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA, and/or St. Jerome's University for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA, or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).