

**St. Francis Xavier University
Department of Psychology
PSYC 292: Statistics for Psychological Research
Winter 2022 Course Syllabus**

We here at StFX acknowledge that we are on the traditional unceded territory of the Mi'kmaw people, known as Mi'kma'ki. Mi'kma'ki is also known as Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland & Labrador, and the Gaspé region in Quebec. In the 18th century, Mi'kmaq people and the British Crown entered historic Peace and Friendship treaties; these treaties were based on friendship, sharing, and peace. We are committed to reconciling and honoring these treaty relationships, as we are all Treaty people.

-Ms. Terena Francis, Coordinator of Indigenous Student Affairs, StFX

Instructor: Erin Mazerolle PhD, Annex 110B, emazerol@stfx.ca

Lab Instructor: Sherry Neville-MacLean MEd, Annex 109E, sneville@stfx.ca

Note: A separate lab syllabus will be distributed.

A Bit About Me

Welcome to Stats for Psych Research! I'm looking forward to us exploring statistics and how they help us convert data to knowledge. Like most psychology researchers, I use statistics extensively in my work. In my case, I'm a neuroimaging researcher with interests in brain function and structure in healthy control participants, as well as in persons with neurological diseases such as multiple sclerosis and tremor. I hope we can create a learning environment together that encourages critical thinking and supports diverse perspectives.

How to Contact Me

Questions about class material: Post to the Moodle Q&A discussion forum. I almost always respond to discussion posts within one working day. Other students can also try to help answer your questions.

Virtual extra help (office) hours with Dr. Mazerolle take place in our **Collaborate classroom**. They are first-come, first-serve and no appointment is necessary.

Tuesdays 9:45 AM – 10:45 AM

Thursdays 8:45 AM – 9:45 AM

Fridays 11:15 AM – 12:15 PM

<p>Extra help hours tip Put my hours in your calendar so you can keep track of when I'm available.</p>

Email: emazerol@stfx.ca

You must include PSYC 292 in the subject line or your email may be missed. I almost always respond to emails within two working days.

Email tips:

- If your email is about class material, post it to the Moodle Q&A discussion forum for a faster response.
- Make sure the purpose of your email is clear.
- If a response to your email will require more than a few sentences, visit extra help hours or make an appointment instead.
- If you would like to set up a meeting outside of extra help (office) hours, suggest a few dates and times that work for you.

Course Objectives

The overarching goal of this course is to empower students to be critical consumers and/or competent users of statistics. For some students, PSYC 292 will provide a foundation that will be directly relevant to the statistical aspects of their honour's thesis research and future research endeavours. For other students, the course material will improve their ability to understand and critically evaluate the statistical aspects of research they encounter in their life, be it reading the news, getting advice from a doctor, or interpreting research reports as part of their future careers in industry or healthcare.

Specifically, students will gain a theoretical understanding of basic statistical procedures used in psychological research and will learn how to apply these techniques. Lectures and lab sessions will include content on descriptive statistics, effect size, power, and inferential statistics including t-tests, correlation, and non-parametric procedures.

Course Format

The first two weeks of the Winter 2022 semester will take place online in our Collaborate classroom (accessible via Moodle). Starting the week of January 31, the class is expected to move to an in-person format in classroom MULH 4030. However, I will join the Collaborate classroom for all lectures, so you can join online if you are ill or need to isolate. If I am mildly ill or must isolate, we will have class online in our Collaborate classroom. Please check your email before coming to class in case of any last-minute changes.

Textbook and Lab Manual

There are no physical books for this course. Instead, a **free** e-book and companion lab manual will be used:

Crump, M. (2018). *Answering questions with data*.
PSYC 292 version: <https://www.erinmazerolle.com/statistics>

Crump, M., Krishnan, A., Volz, S., Chavarga, A. (2018). *Answering questions with data: the lab manual for R, Excel, SPSS, and JAMOV*.
PSYC 292 version (we will be using the JAMOV subsections of each lab activity):
<https://www.erinmazerolle.com/statisticsLab>

The e-book and lab manuals are distributed with [CC BY-SA 4.0 licences](#). This means that if you find mistakes or have suggestions, they can easily be incorporated into our e-book. You can share suggestions via email or use [Hypothes.is](#), a Chrome plug-in for annotating web pages.

Hardware

Because the computer labs at StFX are closed due to COVID-19, you will need your own laptop to participate in the lab sessions. Recommended minimum hardware requirements can be found here: <https://stfx.teamdynamix.com/TDClient/1764/Portal/KB/ArticleDet?ID=89348>

Software

Software that will be used in this class includes:

[Chrome](#) (free; please use Chrome for Collaborate sessions)

[OneDrive](#) (provided by StFX)

[JAMOVI](#) (free; open software for statistical analysis)

Excel (provided by StFX; [download the Microsoft Office Suite](#) or use [Office365 online](#))

[Google Sheets](#) (free)

[Hypothes.is](#) (free; a Chrome plug-in for annotating web pages)

Learning Management System

We will be using Moodle (<https://moodle.stfx.ca/>). On Moodle, you will find class announcements, readings, lecture slides, lecture recordings, surveys, forums, assignments, feedback forms, and more.

Recordings of Lectures and Lab Sessions

Please note that the course instructors may choose to record classroom and lab activities for various reasons, such as (but not limited to) sharing with a student who is experiencing COVID-19 symptoms and needs to self-isolate, providing recordings as study material to members of the class. Alternatively, students who have received prior written permission from the instructor or with an approved Accommodation Plan in place may record classes.

Whether it is instructor- or student-initiated classroom recording, it is important to protect intellectual property and maintain the privacy rights of individuals. The following list governs the use of recorded lectures by instructors and students in this class:

1. Recordings are provided to students who are unable to attend the class and are not meant to replace attendance in normal circumstances.
2. The instructor recording a class will do so using the Learning Management System approved by the university (Blackboard Collaborate).
3. The instructor may only approve the distribution of the recorded material to students who are enrolled in the course and only while the course is in progress.
4. All permitted recordings made by students are for personal academic use only. Unauthorized distribution or display of recorded lectures, in full or in part, to anyone inside or outside of the course (including other students) without additional permission from the instructor and any other presenters will be subject to disciplinary action.
5. The recorded lecture is treated as the intellectual property of the instructor.

- It is the instructor’s responsibility to ensure that any third-party intellectual property is used in accordance with the terms of the license governing the use of such intellectual property and applicable intellectual property laws.

Evaluation

The default evaluation scheme for this class is as follows:

Pre-assessment	1%	Due 18/01/2022
Syllabus quiz	1%	Due 21/01/2022
Class homework and in class activities	18%	Various – communicated in class and on Moodle
Take-home midterm exam	20%	Assigned 2022-03-01, due 2022-03-04
Take-home final exam	30%	Assigned 2022-04-12, due 2022-04-19
Participation, effort, and integrity	+/- 5%	Evaluated throughout the semester
Laboratory homework	15%	See lab syllabus
Laboratory project	15%	See lab syllabus

See below for other grading schemes you can “unlock” by completing **Choice Assignments**.

Class Homework

The class homework activities are designed to provide an opportunity for students to take an active role in exploring the topics. These frequent, low-stakes assignments are meant to help keep students on track with the course material.

Participation, Effort, and Integrity

Based on participation, effort, and integrity, your grade could increase or decrease by up to 5%.

Ways to demonstrate excellent participation, effort, and integrity include:

- Good communication with me (e.g., requesting extension via the Moodle form, letting me know you will be absent or need help, etc.)
- Helping others (e.g., responding on the Moodle Q&A forum, reporting errors in the open educational resources using [Hypothes.is](https://www.hypothes.is))
- Demonstrating engagement (e.g., contributing to in-class discussions)
- Coming to extra help hours when you need help

Poor participation, effort, and integrity might look like:

- Unexplained absences or frequent late arrivals
- Poor communication with me
- Not making an effort on in-class activities (surveys, etc.)
- Poor adherence to safety protocols (e.g., multiple reminders to wear your mask properly)
- Frequently emailing me questions that would be more appropriate for the Moodle Q&A forum
- Academic integrity violations

Attendance Policy

Please do not attend in person if you are ill or if public health guidelines recommend that you isolate. I will work with you to ensure you are not at a disadvantage due to illness- or isolation-related absences or online attendance.

If you will be away from class, please notify me, in advance if possible. It is university policy that the instructor notifies the dean when students have unexcused absences for three or more hours of instruction time (e.g., two or more lectures). In the past, notifying the dean has helped identify students that needed extra support.

Midterm and Final Exams

The midterm and final exams will be take-home format. You will be free to access any resource, such as the e-book, lecture slides, or internet. **Please note that there will be absolutely no extensions or late submissions accepted for the take-home final exam.**

To avoid academic integrity violations, read the following points carefully:

1. Any source other than the e-book or material covered in lectures and labs must be cited. Appropriate in-text citations must be included along with a reference section. If you are unsure about whether a citation is required, please ask.
2. You are asked to complete the take-home midterm and final exams on your own. Do not collaborate with other students to write exam answers.

Backing Up Your Work

It is the student's responsibility to frequently back up all their work. It is strongly recommended that you save copies of all your assignments/lab assignments/notes/etc. in two different physical locations, so that computer failures are less likely to cause you to lose your work. You may choose to do this any way you wish. StFX provides students with a OneDrive license which can be used to automatically save your files to both your local computer and the cloud. Information on OneDrive can be found here:

<https://stfx.teamdynamix.com/TDClient/1764/Portal/Requests/ServiceDet?ID=20109>

You may also consider Dropbox or Google Drive. **I have personally had two hard drives fail simultaneously – please learn from my misfortune and back up your work to the cloud.**

Students with Disabilities

If you anticipate needing accommodations in this course, please inform me. Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with The Tramble Centre for Accessible Learning, if they have not already done so. Students who suspect they may have disabilities should contact The Tramble Centre for advice and referrals. In order to access The Tramble Centre programs and supports, students must follow The Tramble Centre policy and procedures. For more information, check

<https://www2.mystfx.ca/accessible-learning/> or contact The Tramble Centre at 108 Angus L. MacDonald Library, phone: (902) 867-5349, email: tramble@stfx.ca.

Student Success Centre

The Student Success Centre offers free help to all students wishing to improve their academic and writing skills. You can visit the Student Success Centre's website for more information or to schedule an appointment: <https://www2.mystfx.ca/student-success/student-success-centre>

Late Assignments and Extensions

Late work will be penalized 5 percentage points for each day or part thereof. Once 10 days have passed, a mark of zero will be assigned.

Deadline extensions must be requested via the [Moodle form](#). You will receive an email letting you know whether your extension request has been approved. Extensions are available in a number of situations, including but not limited to:

- Emergencies.
- Requests made at least 24 hours in advance of the deadline.
- Longer-term issues (e.g., if you are fully or partially away from your studies due to extended illness, unexpected caretaking responsibilities, etc.).

Inaccurately estimating the amount of time an assignment will take to complete is not grounds for a last-minute extension. Data loss and/or computer problems are only grounds for an extension in extreme circumstances.

Please note that there will be absolutely no extensions or late submissions accepted for the take-home final exam.

Laptop and Cell Phone Usage

All students are encouraged to bring their laptops to every class. Please do not use it for non-PSYC 292 purposes while in class. Please make sure your speakers are muted. Furthermore, you are generally required to shut off your cell phone when class starts. However, some exceptions apply. If you must be reachable at all times, please make sure to keep your phone on vibrate and quietly leave the classroom before taking your call.

E-Mail

You are expected to maintain a working StFX email account; please check that account at least once per work day. Important notices will be sent to these e-mail addresses.

University Policy on Academic Integrity

St. Francis Xavier University values academic integrity. Therefore, all students must understand the meaning and consequences of such academic offences as plagiarism, cheating, tampering, and falsification under Section 3.8 of the Academic Calendar. The complete university policy and procedures document is available for viewing or downloading from the following website: <https://www2.mystfx.ca/registrars-office/academic-integrity> - **Please read this site!**

University Policy on Equitable Learning Environment

Everyone learns more effectively in a respectful, safe, and equitable learning environment, free from discrimination and harassment. I invite you to work with me to create a classroom space that fosters and promotes values of human dignity, equity, non-discrimination, and respect for diversity. Please feel free to talk with me about your questions or concerns about equity in our classroom or in the StFX community in general. If I cannot answer your questions or help you address your concerns, I encourage you to talk to the Chair of the Department or the Human Rights and Equity Advisor. The Human Rights and Equity Advisor is Megan Fogarty (mfogarty@stfx.ca, 902-867-5306).

Other Resources to Support Students

A list of resources to support students has been compiled by the StFX Health and Counselling Centre [here](#).

StFX's Sexual Violence Prevention & Response Advocate, Heather Blackburn (hblackbu@stfx.ca) is available to anyone on campus impacted by sexual violence. She can hear confidential disclosures, provide information about reporting options, and help you connect to the right support services to meet your needs. For more information about the services and supports available for those impacted by sexualized violence, please visit this [website](#).

Please note that I will keep any information you share with me private to the greatest extent possible, however, I am required to share information regarding sexual violence in some situations (such as if a member of StFX staff or faculty perpetrated the violence).

Drop Date

Students may drop a course on or before 2022-03-22. This must be completed on Banner or else you will receive a grade for the course.

Possible Contingencies

Given the dynamic nature of the COVID-19 pandemic, it is possible that major changes to this course may have to be implemented at any time, including moving the course online if required. Should any changes be needed, they will be communicated in class (if possible) and on Moodle. Any such changes will be made with a commitment to meeting learning objectives, maintaining education quality, and ensuring fair and equitable treatment of our PSYC 292 community. I greatly appreciate your flexibility and welcome your feedback regarding any changes we need to make.

If you are struggling in the class for any reason and/or if you face a family or personal crisis and require accommodation, please contact me. I am always willing to find ways to support your successful completion of the class.

Choice Assignments

Choice assignments are designed to provide students with opportunities to explore the material in different formats and contexts. They also provide students opportunities to improve their mark and de-weight their exams. Absolutely no extra credit will be assigned outside of the choice assignments.

You may opt to complete 0-4 of the following choice assignments.

- Due 2022-02-11 at 9:45 AM: **Lumen learning modules**
 - How to Read Research, Psych in Real Life, Statistical Thinking
- Due 2022-03-11 at 9:45 AM: **Critique a primary research article that reports a statistical test**
- Due 2022-03-25 at 9:45 AM: **Critique a media report of a primary research article that reports a statistical test**
- Due 2022-04-12 at 8:15 AM: **Create a concept map, infographic, or decision tree comparing and contrasting the inferential statistics we learned in 292**

Guidelines, rubrics, and submission links for the choice assignments can be found on the course Moodle. **Absolutely no late choice assignments will be accepted, and no extensions will be granted for choice assignments.**

Your grade will be calculated differently depending on how many choice assignments you do. **Note:** Your grade will be calculated using the “unlocked” grading scheme **only** if it results in a higher grade; otherwise, the default grading scheme will be used.

0 choice assignments: see default grading scheme above

1 choice assignment: your grade on the choice assignment will get added directly to your class homework grade, up to a class homework grade of 18%.

2 choice assignments: unlock grading scheme level 1

Pre-assessment	1%	Due 18/01/2022
Syllabus quiz	1%	Due 21/01/2022
Class homework and in class activities	18%	Various – communicated in class and on Moodle
Choice assignments	3%	See above
Take-home midterm exam	18.5%	Assigned 01/03/2022, due 04/03/2022
Take-home final exam	28.5%	Assigned 12/04/2022, due 19/04/2022
Participation, effort, and integrity	+/- 5%	Evaluated throughout the semester
Laboratory homework	15%	See lab syllabus
Laboratory project	15%	See lab syllabus

3 choice assignments: unlock grading scheme level 2

Pre-assessment	1%	Due 18/01/2022
Syllabus quiz	1%	Due 21/01/2022
Class homework and in class activities	18%	Various – communicated in class and on Moodle
Choice assignments	6%	See above
Take-home midterm exam	17%	Assigned 01/03/2022, due 04/03/2022
Take-home final exam	27%	Assigned 12/04/2022, due 19/04/2022
Participation, effort, and integrity	+/- 5%	Evaluated throughout the semester
Laboratory homework	15%	See lab syllabus
Laboratory project	15%	See lab syllabus

4 choice assignments: unlock grading scheme level 3

Pre-assessment	1%	Due 18/01/2022
Syllabus quiz	1%	Due 21/01/2022
Class homework and in class activities	18%	Various – communicated in class and on Moodle
Choice assignments	9%	See above
Take-home midterm exam	15.5%	Assigned 01/03/2022, due 04/03/2022
Take-home final exam	25.5%	Assigned 12/04/2022, due 19/04/2022
Participation, effort, and integrity	+/- 5%	Evaluated throughout the semester
Laboratory homework	15%	See lab syllabus
Laboratory project	15%	See lab syllabus

Class Schedule (subject to change):

Week	Topics	Readings
1	Introduction and review	Chapter 1
2	Data management	Moodle readings
3	Graphing and visualizing data	Chapter 2
4	Descriptive statistics (central tendency and variation/dispersion)	Chapter 2
5	Probability & distributions, sampling distributions, central limit theorem	Chapter 3
6	Study break	
7	Estimating population parameters, confidence intervals, take-home midterm	Chapter 3
8	Inference	Chapter 4
9	T-tests	Chapter 5
10	T-tests, correlation	Chapters 5, 6
11	Correlation, p-values	Chapter 6, Moodle readings
12	Effect size, power, statistics communication	Chapter 7
13	Extra help, review, and feedback	N/A

Please note: Although it is intended that the topics will be covered as above, some revision of the schedule may take place as deemed necessary. Any changes will be indicated in class and on Moodle.

Course Materials License Information

With the exception of class and lab session recordings **which are not intended to be distributed**, all PSYC 292 course materials created by me are distributed in accordance with the Attribution-NonCommercial-ShareAlike Creative Commons license (for more details, see <https://creativecommons.org/licenses/by-nc-sa/4.0/>). Third-party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.