

Anthropology 305: Anthropological Data Analysis

This course meets in Mi'kma'ki the territory of the Mi'kmaw Nation

Instructor: Terry Beaulieu

Email: tbeaulie@stfx.ca

Office: JBB 335H

Office Hours: Mon and Tue: 1:00-2:15 PM, Wed and Thur: 10:00-11:45 AM

Room: CO265

Class Times: Wed: 1:00-2:15 PM, Fri: 11:30 AM-12:45 PM

Prerequisite(s): ANTH 111/112 or permission of the instructor

Course Description:

Anthropological research often requires the analysis of numerical data. How to appropriately summarize and analyze quantitative data, though, can seem daunting. This course will help students understand how to approach quantitative data analysis by exploring basic principles and topics such as: identifying different types of data, summarizing quantitative data, exploring descriptive statistics, understanding data sampling and fundamental data analysis, as well as being introduced to elementary spatial statistics.

Course Learning Outcomes:

By the end of this course students should:

1. Be able to identify various data types and understand how to apply appropriate statistical procedures to each.
3. Recognize spatial data and understand certain statistical approaches specifically designed to deal with their unique character
3. Be able to more critically evaluate presentations of statistical data in popular publications and academic journal articles.
4. Understand different types of statistical procedures and know how and when it is appropriate to apply them.

Required Text:

Drennan, Robert D. (2010). *Statistics for Archaeologists: A Common Sense Approach* (2nd edition)..

Additional readings will periodically be assigned throughout the term, and will be made available on Moodle.

Evaluation:

Assignment	Weight	Due Date
Midterm Exam	30%	October 11
Moodle Exercises	30% (total)	Throughout Semester
Popular Media Review	10%	December 6
Final Exam	30%	TBA

The penalty for late work is 1% per day. Extensions will only be granted under special circumstances, and with the approval of the instructor.

The midterm exam will be an in-class exam held during normal class time. The exam format may include multiple choice, true/false, and short answer questions. Question will cover topics covered to that point in the course, and may be drawn from readings, lectures, and other materials presented in class to that point.

The final exam will be an in-person exam scheduled by the Registrar and will occur during the normal examination period. It will be of a similar format to the midterm exam and will cover topics covered from the midterm exam to the end of the course. Questions may be drawn from readings, lectures, class presentations, and other materials presented to the class.

Use of the textbook (or other printed material), notes, computers, cellphones, or other electronic devices is not allowed during the writing of the midterm or final exams unless approved by the instructor. Further information regarding exam formats and subjects covered will be provided in class.

Class Schedule:

Please note: the following is a tentative schedule. Time constraints or unforeseen circumstances may mean some topics on the outline may be moved or not covered, or that others may be added.

Week 1: (Sep 4) Introduction

No assigned reading.

(Sep 6) Introduction to statistics

Reading – Utts 2003, What Educated Citizens Should Know about Statistics and Probability

Week 2: (Sep 11, 13) Types of Data

Reading: VanPool and Leonard, 2011 – Chapters 1 and 2

Week 3: (Sep 18, 20) Summarizing Quantitative Data

Reading: Drennan - Chapter 1, Batches of Numbers

Week 4: (Sep 25) Descriptive Statistics: Mean, Median, Mode etc.

Reading: Drennan – Chapter 2, The Level or Center of a Batch

(Sep 27) Descriptive Statistics: Range, Variance and Standard Deviation

Reading: Drennan - Chapter 3, The Spread or Diversion of a Batch

Week 5: (Oct 2) Descriptive Statistics: Range, Variance and Standard Deviation (continued)

Reading: Drennan – Chapter 3, The Spread or Diversion of a Batch

(Oct 4) Data Analysis: Box and Dot Plots, and Data Transformations
Reading: Drennan – Chapter 4, Comparing Batches

Week 6: (Oct 9) Review
No assigned readings
(Oct 11) Midterm
No assigned readings

Week 7: (Oct 14-18) Study Break
No assigned readings

Week 8: (Oct 23, 25) Data Analysis and Analyzing the Shape of the Data Spread
Reading: Drennan – Chapter 5, The Shape or Distribution of a Batch
Chapter 6, Categories

Week 9: (Oct 30, Nov 1) Data Sampling
Reading: Drennan – Chapter 7, Samples and Populations
Chapter 11, Categories and Population Proportions

Week 10: (Nov 6, 8) t Tests and the Null Hypothesis
Reading Drennan – Chapter 12, Comparing Two Sample Means

Week 11: (Nov 13, 15) Assessing Best Fit
Reading: Drennan – Chapter 15, Relating a Measurement Variable to Another
Measurement Variable

Week 12: (Nov 20, 22) Measures of Association
Reading: Drennan – Chapter 16, Relating Ranks

Week 13: (Nov 27, 29) Introducing Spatial Statistics
Reading: Rogerson – Chapter 11, Spatial Data, Spatial Patterns, and Spatial
Regression

Week 14: (Dec 4) Study Class
No assigned readings
(Dec 6,) Review
No assigned readings
Popular Media Review Due

Assignments: Explanations and Guidelines

Popular Media Review: A review of a popular media article must be submitted by the final day of class (December 6). Students must locate and review a popular news media article (online or print) that includes some type of statistical information. The review should identify the type of data presented in the article, any types of statistical operations used in summarizing the data, and whether the statistical operations employed are appropriate for the data. There also should be an assessment on the use of the statistical data in the article. For example, does the use of the statistics help explain the issue being discussed, or does it just confuse the issue. Are the statistics irrelevant to the matter being discussed, or are the statistics being misused to misrepresent the issue? The review will be marked out of 10 and should be no more than one page in length. Further details about the assignment will be provided in class.

Moodle Exercises: A series of exercises to be completed on Moodle will periodically be assigned during the semester. The exercises will be designed to illustrate the concepts and techniques being discussed in class. Further information, including specific due dates, will be provided in class.

Important Dates:

September 4 – First day of classes
September 13 – Last day to change first-term or full-year courses
September 30 – National Day for Truth and Reconciliation (no classes)
October 14-18 – Fall study break (no classes)
October 30 – Last day to drop first-term three-credit courses
December 6 – Last day of classes for first term
December 9-18 – First term final exam period

Other Information:

Class Participation.

To get the most out of your university experience you should come prepared to all classes. Readings are intended to be read prior to class, and you should be ready to actively engage in the classroom environment by asking questions, exchanging ideas, and participating in class discussions. Please be mindful that materials covered in this class can sometimes be challenging or disturbing. While a free exchange of ideas is encouraged, class discussions must remain respectful. If you need assistance participating in the course, do not hesitate to contact the instructor.

Intellectual Property and Copyright Information.

The course materials are designed for use in Anthropology 305 at St FX University and are the property of the instructor, unless otherwise stated by the instructor. Copying this material for distribution, online posting, or selling of this material to third parties without permission is subject to Canadian Copyright Law and is strictly prohibited. Visit the [StFX copyright guide](#) for more information.

Academic Integrity and Academic Misconduct

Please ensure that you are aware of the policy on [Academic Integrity](#). Please make note of the change in wording of the section on 'Cheating' passed by Senate this year. Section 3.8.2b (v) now reads "Possession of unauthorized aids or assistance". This means that the students do not need to be caught USING a device like a cell phone or smart watch (for example) during a test or exam to be in violation of the policy. Simply having the unauthorized device on your person during the test or exam is a violation of the policy. The use of artificial intelligence aids - such as ChatGPT - are also expressly prohibited for all graded assignments and exams in this course..

Equitable Learning.

Everyone learns more effectively in a respectful, safe and equitable learning environment, free from discrimination and harassment. Instructors and students are invited to work together to create a classroom space – both real and virtual – that fosters and promotes values of human dignity, equity, non-discrimination, and respect for diversity. Please feel free to talk with your course instructor about your questions or concerns about equity in our classroom or in the StFX community in general. Should students have additional questions, they are encouraged to talk to the Chair/Coordinator of the Department/Program or the [Human Rights and Equity Team](#).

Accommodation

If you have a disability and would like to request accommodations, please contact the instructor during the first week of the semester so that your accommodations may be provided in a timely manner. Centre for Accessible Learning (CAL) provides assistance in determining and facilitating appropriate accommodations for students with verified disabilities. The [Tramble Centre for Accessible Learning](#) welcomes students with documented permanent disabilities and offers them a student-centered program of support. Located in Room 108 of the Angus L. Macdonald Library, new and returning students meet with program staff to discuss options for support. Deadline for registering with the Centre is two weeks prior to the end of classes each semester and 3 Business Days' notice is required for booking all accommodated tests and exams.

Phone 902.867.5349

Email: tramble@stfx.ca

Course Drop Date.

Students may drop a course, online in Banner, on or before October 30, 2024. After this date students are not permitted to drop courses without permission from their Dean. A course discontinued but not officially dropped is treated as a failure and will affect the student's end-of-year average. Simply informing the professor, or merely ceasing to attend class, is not sufficient. Refer to sec. 3.1 in the Academic Calendar for policies regarding course drops.

Other Resources

As part of a successful undergraduate experience at St. Francis Xavier University, we encourage you to make your health and wellness a priority. StFX provides several on-campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. For example, to support physical activity, all students receive membership to the [StFX Campus Recreation Centre](#) as part of their registration fees. Numerous cultural events are offered throughout the year. Please check out the [Department of Music web page](#), [The StFX Art Gallery](#), [Theatre Antigonish](#), [Antigonight](#), [Town of Antigonish Recreation](#), [County of Antigonish Recreation](#), and [Keppoch Mountain](#) for various events.