



**Anthropology 3014
Quantitative Anthropology
FALL 2020**

Class Times: Tues & Thurs 1:00 – 2:30 pm
Location: Zoom Live (meeting links on course website)

Instructor: Dr. Jessica Metcalfe, jmetcal1@lakeheadu.ca
Office: BB 2001 D (not used regularly this term)

Teaching Assistant: Nick Kunczewicz, nkunczewi@lakeheadu.ca

Note: Please contact the instructor and TA either via the email addresses above or the online Discussion Board. Please do not send 'emails' through mycourselink as they do not get forwarded to our LU email addresses. Do not hesitate to contact either of us to schedule a live Zoom-based meeting.

Course Description/Overview: This course is a hands-on introduction to applying quantitative methods to anthropological research. Students will gain practical experience designing, conducting, and critically analyzing research that uses quantitative data. Skills developed through this course are not only vital for a career in research but are also critical for many non-academic careers.

Prerequisites: Third year standing or higher, or permission of the instructor and the Chair of the Department of Anthropology.

Course Learning Objectives: By the end of this course, students will be able to:

- Compile data in spreadsheets and examine data using appropriate statistical methods and data visualization strategies
- Interpret and critique quantitative data analyses
- Design quantitative approaches to answer specific answer research questions
- Work collaboratively and provide constructive feedback

Class Format: This is a synchronous online course, so to receive the maximum benefit you should attend Zoom classes at the appointed times. Participation marks will accrue for regular attendance and active participation. Some of the work is collaborative, so your fellow students will be depending on your active participation. Classes will be recorded and posted online and in-class activities will be made available online as much as possible, so that people who are absent do not fall behind. However, please contact the instructor immediately if regular live/synchronous attendance will be difficult for you.

Video/Audio Recording: In the context of remote instruction and participation, video and audio recordings of class activities will be made to ensure access by students who

were unable to attend class. The recordings are confidential and are intended only for the use of the course students and instructors. They may otherwise not be used or disclosed. During recording, to protect others' privacy, each student should ensure that no one else is present in the location where they are being recorded without that non-student's consent. The recordings are made under the authority of sections 3 and 14 of *The Lakehead University Act, 1965*. Questions about the collection of the images and sounds in the recordings may be directed to Dr. Todd Randall, Dean of Science and Environmental Studies, Lakehead University, 955 Oliver Rd, Thunder Bay, Ontario.

Course Website: Access through Lakehead University website 'Quicklinks' (top right corner), 'For Students > **myCourseLink**'. The website includes:

- Content folder with PowerPoint slides, recorded lectures, journal article readings
- Discussion boards for general questions and assignments
- Assignment instructions and submission folders
- Survey and quiz access and submission

Required Readings:

Textbook (available for purchase through the LU Bookstore or alternative sources)

(R) Rowntree, Derek (2018). *Statistics without Tears: An Introduction for Non-Mathematicians*. Penguin Books, UK.

Journal Articles and Book Chapter Excerpts (posted on the course website)

Bernard, H.R., 2006. Research Methods in Anthropology, Sixth Edition, AltaMira Press, Oxford. (selected excerpts)

Watkins, J., 2005. Through wary eyes: Indigenous perspectives on archaeology, *Annual Review of Anthropology* 34, 429-449.

Williams, L., Quave, K., 2019. Quantitative Anthropology: A Workbook, Academic Press. (selected excerpts)

Required Materials:

Microsoft Excel: You will need to use Excel both during class and for assignments, so please make sure you have access to a computer. Microsoft Office 365 software (including Excel) is free for LU students – **please download and install it if you do not already have it:**

https://www.lakeheadu.ca/faculty-and-staff/departments/services/helpdesk/software/software_available/office-365-for-students

PAST 3.25 Statistical Software (PALeontological STastics): A free software package available at <https://folk.uio.no/ohammer/past/>
Please download both the software and the pdf manual.

Grades Breakdown

Item	Value (%)	Due Date(s)
Participation	10	Ongoing
Assignments (6 total)	30	Sept. 17, 24; Oct. 1, 8, 20, 27
Quizzes (4 total)	25	Nov 3, 10, 17, 24
Research Project: Presentation	15	Dec. 1
Research Project: Paper	20	Dec. 11
TOTAL	100	

Participation (10%): Attendance and active engagement in Zoom classes, completion of assignments and activities (including individual and group activities), participation in peer and self-assessments (i.e., quality of feedback/reflection), and peer assessments of your contributions to group activities will contribute to your participation grade. Please contact me as soon as possible if there are circumstances that may affect your participation in this course, particularly if attending live Zoom sessions will be problematic.

Assignments (30%): During the first half of the course (Modules 1 and 2) you will complete 6 assignments, each worth 5% of the final course grade. These assignments will allow you to apply and practice concepts and skills of quantitative analysis. Each assignment will have its own instructions, available on the website.

Quizzes (25%): During the second half of the course (Module 3) you will complete 4 quizzes (3 worth 5% each, and one worth 10% of the final course grade).

- Quizzes will be open-book and online (administered through mycourselink).
- Each quiz will follow a **two-stage format**. **First, each student will complete the quiz individually** (before the due date of 11:30 am on the Tuesdays indicated in the course schedule). **Second, the whole class will complete the same quiz as a group** at the beginning of the Tuesday class. For individual quiz completion you may access the quiz any time between Friday morning and Tuesday at 11:30 am (i.e., you have 4 days to complete the quiz). However, once you begin the quiz you must complete it in the allotted time and you will have only one attempt. For group quiz completion you must be present and on time to class. Students will discuss the quiz on Zoom and one person will fill out the quiz again on behalf of the whole group. The goal of this two-stage format is to give you a chance to review the quiz questions and learn from any mistakes you may have made in your original attempt.
- **Grading:** The individual component will be worth 80% and the group attempt will be worth 20% of your total grade for the quiz. If you score higher on the individual than group quiz, or you are absent or late on group quiz dates, your individual score will count for 100% of your grade for the quiz. In other words, you can only gain marks by participating in the group quizzes. If you do not complete the individual quiz you may still participate in the group quiz, but your maximum grade will be 20% (i.e., you will receive a 0 for the individual component of the quiz).

Research Project Overview: Over the course of this term you will develop an individual research project, culminating in an in-class presentation and research paper. The purpose of this project is to develop and practice your quantitative research skills, beginning with project design and ending with presentation of results (both orally and in writing). All research projects will be based on real cemetery data collected by you. Group-based aspects of this project will include designing a common sampling strategy, defining the variables, and planning the data collection. Individual components of the project will include collecting the data and analyzing the pooled data to answer your individual research questions.

- **Research Project Presentation (15%):** Each student will give a 10 minute presentation of their research question, results, and interpretations. Other students and the professor will provide written feedback on the presentation in order to help the student refine their results into a research paper.
- **Research Project Paper (20%):** Each student will write up their results as a formal research paper. The topic will be the same as was presented in the oral presentation, but you are expected to improve the research based on the peer and instructor feedback you received following your oral presentation. The research paper should follow the standard scientific paper format, including the following sections: Introduction, Materials and Methods, Results, Discussion, and Conclusions. More information about the paper format and what to include in each section will be provided in a separate document.

Lateness Policies

- **Quizzes** must be completed within the times allotted (see above for details).
- **Assignments** will receive deductions of 5% per calendar day late (including weekends and holidays). Assignments more than one week (7 days) late will not be accepted and will receive a grade of zero unless excused in advance by the instructor.
- **Research Presentations** must take place on Nov. 24 during class time, unless discussed in advance with the instructor.
- **Research Paper** will be due on Dec. 11, but there will be an automatic 2-day grace period with no late penalties. After the grace period, papers will receive a deduction of 5% per calendar day (including weekends and holidays), unless discussed in advance with the instructor. Papers handed in more than one week (7 days) past the deadline will not be accepted.

Grades for individual assignments, quizzes, etc. will be available through myInfo. Students will also be able to view quiz results on the course website and will receive additional feedback on assignments either through the course website or direct communication.

Course Schedule (subject to modification)

Please complete the readings before the class to which they are assigned. Assignments and quizzes are due on the dates indicated. Individual quiz attempts must be completed before class on the date indicated; group quiz attempts will take place in class on the dates indicated.

Date	Topics	Assignments/Quizzes due <i>before</i> the start of class on the date indicated, unless otherwise noted	Readings R = Rowntree text; others on course website
Module 1: Introduction and Research Design			
Tues Sept. 8	Introduction and course overview		R 1-13
Thurs Sept 10	Context and ethics		Watkins 2005
Tues Sept 15	The research process		Williams & Quave 2019: 1-4
Thurs Sept 17	Variables	Assignment 1: Spreadsheets (5%)	R 23 – 30 Bernard pp. 28 - 52
Tues Sept 22	Validity and uncertainty		R 30 - 32 Bernard 53 - 68
Thurs Sep 24	Descriptive/inferential stats (intro). Sampling	Assignment 2: Validity & Uncertainty (5%)	R 13 - 22
Tues Sept 29	Cemetery (virtual) tour and research planning		None
Module 2: Descriptive Statistics			
Thurs Oct 1	Data visualization	Assignment 3: Research Design (5 %)	R 33 – 37
Tues Oct 6	Descriptive stats for category (nominal/ordinal) data		None
Thurs Oct 8	Descriptive stats for scale (interval/ratio) data part I	Assignment 4: Descriptive Statistics I (5%)	R 37 - 53
Oct 13 & 15	Fall Study Break No Classes		
Tues Oct 20	Descriptive stats for scale (interval/ratio) data part II	Assignment 5: Data Collection (5 %)	None
Thurs Oct 22	Univariate analysis		
Module 3: Inferential Statistics			
Tues Oct 27	Statistical hypothesis testing: category data	Assignment 6: Descriptive Statistics II (5 %)	R 152 - 156
Thurs Oct 29	Shapes of distributions		R 54 - 79
Tues Nov 3	Normality tests	Quiz 1 due (5 %)	
Thurs Nov 5	From sample to population		R 80 -101
Tues Nov 10	Comparing two samples	Quiz 2 due (5 %)	R 102 - 143
Thurs Nov 12	Comparing multiple samples		R 143 - 152
Tues Nov 17	Correlation and regression	Quiz 3 due (5 %)	R 157 - 187

Module 4: Putting it Together			
Thurs Nov 19	Multivariate analysis		None
Tues Nov 24	Review	Quiz 4 due <i>at midnight</i> (10%)	
Thurs Nov 26	Research workshop		None
Tues Dec 1	Student presentations (15%)		None
Thurs Dec 3	Course wrap-up		None
Dec 10 - 20	No classes (exam period)	Research Paper due Dec. 11 (20%)	

General Information

Students in this course are expected to:

- Attend all classes except in emergency situations, and show up ready to learn
- Be respectful
- Contribute effectively to group work by both speaking and listening carefully
- Take responsibility for their own learning, but ask for help when needed

Regulations – from the Lakehead University [Academic Calendar](#)

“It is the responsibility of each student registered at Lakehead University to be familiar with, and comply with all the terms, requirements, regulations, policies and conditions in the Lakehead University Academic Calendar. This includes, but is not limited to, Academic Program Requirements, Academic Schedule of Dates, University and Faculty/School Policies and Regulations and the Fees and Refund Policies and Schedules.”

Plagiarism is defined in [University Regulation IX](#) with additional examples in Article I, Section 1 of The Code. Sanctions associated with Academic Misconduct are defined in Article II of The Code and Enforcement Procedures are outlined in Article III of The Code. Students wishing to learn more about Academic Misconduct are encouraged to read the [University and relevant Faculty Regulations](#) and The Code (noted above) and access other resources on the [Teaching Commons](#) website.

Support for Students – there are many resources available to support our students. These include but are not limited to:

- [Health and Wellness](#)
- [Student Success Centre](#)
- [Student Accessibility Centre](#)
- [Library](#)
- [Academic Support Zone](#) (Writing and Math Tutoring Centre)

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please contact Student Accessibility Services <http://studentaccessibility.lakeheadu.ca> (SC0003, 343-8047 or sas@lakeheadu.ca)