

Math 0212:
Quantitative Methods for the Health Scientist
Spring 2024 Online

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“Class” Times: MTWThF 8:30-11:30 am ET

Recommended Textbook: *Elementary Statistics: A Brief Version*, 8th Edition, by A. G. Bluman.

Course Webpage: There is a page for the course on myCourseLink through myInfo. Announcements, assessments, due dates, lecture notes, the syllabus, and any other course information will all be posted here.

Course Content: We will cover the majority of the textbook material. By the end of the course students will be able to: summarize both qualitative and quantitative data sets using frequency distributions and graphs; interpret data presented graphically; calculate measures of central tendency such as mean, median, mode, and midrange; calculate measures of variation such as variance, standard deviation, and coefficient of variation; and identify the position of a data value in relation to its data set using both z-scores and percentiles; define a sample space and distinguish between simple and compound events; identify mutually exclusive and independent probability events; compute classical and empirical probabilities, as well as compound and conditional probabilities; use counting rules to compute the probabilities of more complex events; construct and interpret discrete probability distributions; identify binomial distributions and apply the binomial probability formula to compute expected values; use the application of the normal distribution to compute probabilities for normally distributed data; apply the Central Limit Theorem to make predictions about sampling distributions; apply the normal approximation to the binomial distribution to compute binomial probabilities on large data sets; construct confidence intervals for various population parameters and use them to make estimates; perform a variety of hypothesis tests to draw research conclusions; describe relationships between two quantitative variables using Pearson's correlation coefficient and regression lines; and compare three or more population means using one way Analysis of Variance.

Class Policies: There are still policies even though the instruction is online. Please be respectful to your fellow students. Lakehead University will not tolerate any form of harassment or discrimination to students or instructors. While working together to understand the concepts is encouraged, academic dishonesty (plagiarism, cheating, or impersonation of any kind) is a serious offence and penalties will be strictly enforced.

Grading Scheme:	Practice Quizzes	5%
	Assignments	20%
	Quizzes	30%
	Final Exam	45%

Participation: There will be 11 practice quizzes to be completed via MathMatize. These questions will help prepare you for the quizzes, and I will only be recording completion of these, not how you score on them.

Quizzes: There will be 11 quizzes to be completed via myCourseLink.

Assignments: There will be 11 homework assignments to be completed via WeBWorK.

Final Exam: The final exam is scheduled from 1-4 pm ET on Friday, May 24th. It will be a cumulative, open book exam completed online through myCourseLink.

Accommodations: Lakehead University is committed to achieving full accessibility for persons with disabilities. This 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).

Important Dates:	May 1 st	First Day of Classes
	May 3 rd	Final Date to Register
	May 10 th	Final Date to Withdraw
	May 22 nd	Last Day of Classes
	May 24 th	Final Exam