

Department of Mathematical Sciences, Lakehead University
MATH 2333 – Introduction to Mathematical Statistics – 2012W
Course Outline

Instructor: Dr. Xuemao Zhang

Office: RB-2006

Phone: ext. 8822

Email: xzhang10@lakeheadu.ca

Office hours: Mondays & Wednesdays 2:30PM - 3:30PM (Other times by appointment)

Lectures: Tuesday & Thursday 02:30PM - 4:00PM (RC 1001)

Labs: Friday 10:30AM - 11:30PM (RB 3044)

Course Website: <http://webct.lakeheadu.ca/webct/public/home.pl>

Prerequisites: MATH 2331.

Textbook: "*Introduction to Probability and Statistics*"

(4th Edition, by J. S. Milton and Jesse C. Arnold).

Software: R (free software: <http://www.r-project.org/>) and SPSS

Reference: "*Introduction to Probability and Statistics Using R*" (by G. Jay Kerns) that can be downloaded from <http://cran.r-project.org/web/packages/IPSUR/vignettes/IPSUR.pdf>

Course content: This course is a mathematical introduction to the theory and applications of statistics. The objective of this course is to gain a sound understanding of the fundamental concepts of statistics as well as their applications. Basically it will cover Chapters 7 – 15. The instructor reserves the right to add or delete sections to the list. Topics include sampling distributions, point and interval estimations, hypothesis testing and inferences on population parameters such as population means, population variances and population proportions, etc, simple linear regression and correlation, multiple linear regression models, analysis of variance, factorial experiments, categorical data, the contingency table test, etc.

Remarks:

(1) Attending lectures is not compulsory. According to historical records, however, there is a positive correlation between the regular lecture attendance and the final course mark. Pre-reading related sections in the textbook is expected.

(2) During the lab hours, you will meet your instructor and ask questions about the course materials and even get help to finish your assignments. If there is no student showing up during the first 5 minutes, the Q's and A's will be moved to the instructor's office (RB2006).

Important Dates:

Jan 6: First day of classes

Jan 16: Last day for registration

Mar 2: Last day to withdrawal without academic penalty

Apr 5: Last day of classes

Performance Evaluation:

Assignments	20%
Midterms (Feb. 21)	30%
Final Exam	50%

Six Assignments (20%):

Each assignment will be assigned to the class during the Thursday lecture period and is due on or prior to the following Friday 12:30 PM. Assignments should be dropped in the MATH 2333 assignment box on the second floor of Ryan Building before the due time or simply bring them to Thursday's lectures. All assignments, hand written or printed, should have a cover page with information including: course number, assignment number, student's name, and student's ID number. **Late assignments will not be marked under any circumstances. Sloppy writing may face a mark penalty of up to 20%.** Each student's lowest assignment marks will be dropped for the final mark calculation.

Midterm Exam (30%):

The midterm exam will be written during the regularly scheduled class time on **Tuesday 21 February 2011 (02:30 PM - 04:00 PM in RC 1001)**. The midterm exam will cover the material taken in the first half semester. **No make-up test is provided for any student who misses writing any midterm exam at the scheduled time.** If there is a legitimate (documented) reason, the final mark will be calculated on the basis of final exam. Otherwise, a grade of 0% for the missed exam will be averaged with other grades.

Final Exam (50%):

The exam will be written in the scheduled three hours. The final exam will cover the whole course. Further details will be provided closer to the exam dates.

All exams will be entirely open-books and open notes. You may need a non-programmable calculator for some questions. However no examination aides other than those specified are permitted.