

STAT 347
Introduction to Nonparametric Statistics
Winter 2018

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Office Hours: Tuesdays, 16:00–17:30.

Text: No text is prescribed. Course notes will be provided.

References:

1. *An Introduction to Modern Nonparametric Statistics*, by J.J. Higgins, Thomson, Brooks/Cole.
2. *Nonparametric Statistical Inference*, 5th Edition (CRC), by Gibbons and Chakraborti.

Calculators: Only calculators approved by the Department (with a sticker attached as proof of approval) are permitted in the class test(s) and final examination. The preferred calculators are the **Sharp EL 531** and the **Casio FX 300MS**, available at the Concordia Bookstore.

Recommended: MINITAB for Windows Software/ R software

Final Grade: The final grade will be based on the higher of **(a)** or **(b)**:

- a) 16% for the assignments, 35% for the midterm test, and 49% for the final exam.
- b) 16% for the assignments, 20% for the midterm test, and 64% for the final exam.

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

IMPORTANT: PLEASE NOTE THAT THERE IS NO "100% FINAL EXAM" OPTION IN THIS COURSE.

NOTE: It is the Department's policy that tests missed for any reason, *including illness*, cannot be made up. If you miss the midterm test because of illness (*to be confirmed by a valid medical note*), the final exam can count for 84% of your final grade.

- Notes:**
- The midterm test will take place in class on **Thursday, March 1, 2018**.
 - Midterm test will cover up to week 7 inclusively.
 - The final examination will cover everything taught in the course.
 - Assignments will be handed bi-weekly and collected in class.
 - Late assignments will not be accepted.
 - Please note that there are no supplemental privileges in this course.

Objectives: This course is an introduction to the basic techniques of nonparametric inference – mainly tests of hypotheses. We shall try to cover the classical methods, exact as well as approximate (i.e., large sample), both theoretically and computationally.

Contents: **Higgins:** One-Sample Methods (Chapter 1); Two-Sample Methods (Chapter 2), K-Sample Methods (Chapter 3), Paired-Comparisons and Blocked Designs (Chapter 4), Tests for Trends and Association (Chapter 5).

Gibbons and Chakraborti: Chapter 2 (Order Statistics, Quantiles), Chapter 3 (Test of Randomness) and Chapter 4 (Tests of Goodness-of-Fit), Chapter 5 (One-Sample and paired-Sample Procedures).

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [Undergraduate Calendar, Sec 17.10.2]