

McMaster University
Department of Mathematics and Statistics
Stats 721 – Statistical Modelling in Practice

Instructor: Aaron Childs

Office: Hamilton Hall 213

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Office Hours: Monday 2:30pm-3:20pm, Tuesday 12:30pm-1:20pm, Thursday 2:30pm-3:30pm, Friday 12:30pm-1:20pm

COURSE INFORMATION

Lectures: Tuesday and Friday 2:30pm-3:45pm in HH/207

Major Topics: Distribution theory, point estimation, interval estimation, hypothesis testing, Bayesian inference, linear regression, and time series.

Textbooks: **Primary References:** *Introduction to Mathematical Statistics, Seventh Edition*, by Hogg, McKean, and Craig, Prentice Hall.
Statistical Inference, Second Edition, by Casella and Berger, Duxbury.

Other References:

Applied Multivariate Statistical Analysis, Sixth Edition, by Johnson and Wichern, published by Prentice Hall.

Applied Regression Analysis, Third Edition by Draper and Smith, Wiley.

Linear Models in Statistics, by Rencher, Wiley.

Introduction to Time Series and Forecasting, Second Edition, by Brockwell and Davis, published by Springer-Verlag.

Background Material: *A first Course in Probability, Ninth Edition*, by Sheldon Ross, Pearson.

Future Material: *Statistical Models and Methods for Financial Markets*, by Lai and Xing, Springer.

Assignments: There will be six assignments, all due at 12:00noon (in the lockers next to HH/105), on the following dates:

Assignment #1: Tuesday, September 22

Assignment #2: Tuesday, October 6

Assignment #3: Tuesday, October 27

Assignment #4: Tuesday, November 10

Assignment #5: Friday, November 27

Assignment #6: Friday, December 11

Tests:

The tests will be on the following dates:

Test #1: Tuesday, October 20 in class
Test #2: Tuesday, November 17 in class

Course Evaluation:

Assignments:	20%
Test 1:	20%
Test 2:	20%
Final Exam:	40%

Policy Note: The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

Academic Honesty: Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf> The following illustrates only three forms of academic dishonesty: 1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained. 2. Improper collaboration in group work. 3. Copying or using unauthorized aids in tests and examinations.