

McMaster University

Department of Mathematics and Statistics

STATISTICS 743 Foundations of Statistics Part 1

Fall 2019

Instructor	Angelo J. Canty Office: HH 209 Phone : (905) 525-9140 Ext 27079 e-mail: cantya@mcmaster.ca
Website	http://www.math.mcmaster.ca/canty/teaching/stat743/
Lectures	Monday 12:30 – 1:20 in ABB 270 Tuesday 12:30 – 1:20 in ABB 270 Thursday 2:30 – 3:20 in BSB B155
Office Hours	Monday 1:30 – 2:30 Thursday 1:30 – 2:20 or at other times by email appointment.

Required Textbook

G. Casella and R.L. Berger *Statistical Inference (Second Edition)*, Duxbury, 2002.

Useful References

1. R.V. Hogg, J.W. McKean and A.T. Craig *Introduction to Mathematical Statistics, (7th edition)* Pearson (2012)
2. S.D. Silvey *Statistical Inference* Chapman and Hall (1975)

Assignments

There will be 4 assignments each worth 15% of the final mark for the first term. Tentative due dates are at **the start of class** on October 3, October 24, November 14 and December 3. Final due dates will be announced in class and assignments will be posted on the website at least one week before they are due.

Final Exam

There will be a 3-hour final exam in December 2019 covering all of the material from the first term which will be worth 40% of your mark for term. The date and location will be announced in class and on the website.

Course Grade

The final course grade will be based on the average mark obtained in Term 1 and Term 2, both terms being weighted equally.

Approximate Timetable for Term 1

Lectures:

Date	Topic	Textbook
Sept 3, 5	Probability	1.1 – 1.3
Sept 9 – 16	Random Variables	1.4 – 1.6, 2.1 – 2.3
Sept 17 – 26	Common Families of Distributions	3.1 – 3.6
Sept 30 – Oct 10	Random Vectors	4.1 – 4.6
Oct 21 – 31	Random Samples	5.1 – 5.4
Nov 4 – 7	Convergence of Random Variables	5.5
Nov 11 – 14	Generating Random Samples	5.6
Nov 18, 19	Sufficiency	6.2
Nov 21 – Dec 3	Point Estimation	7.1 – 7.3 (excluding 7.2.3 & 7.3.4)

Important Notice:

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 Accommodation for Students with Disabilities

Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University's Academic Accommodation of Students with Disabilities policy.

Alterations to the marking scheme and/or course requirements for students with disabilities will be considered on an individual basis in consultation with Student Accessibility Services and/or the Associate Dean's Office as required.

Academic Accommodation for Religious, Indigenous or Spiritual Observances (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

Academic Dishonesty

Students are warned that academic dishonesty of any form will not be tolerated in this course. The following is a brief definition of what is academic dishonesty and the possible penalties that can result. For further information see the Senate policy. If in doubt err on the side of caution or ask the instructor. Also note that both the supplier and recipient of improper aid are considered equally guilty and will be dealt with accordingly.

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/senate/academic/ac_integrity.htm

The following illustrates only three forms of academic dishonesty:

- Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations