Mathematics and Statistics

Stats 3Y03/3J04
Course Outline
(Fall 2017)

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Course Home Page
- The course home page is NOT on Avenue to Learn. It is right here!

Course Description
- **Course Title:** Probability and Statistics for Engineering
- **Class Times and Locations:** Check Mosaic

Instructor Information

Section 1 (C01) Instructor Information
- **Name:** Aaron Childs
- **Email:** childsa@mcmaster.ca
- **Office Location:** HH/213
- **Office Hours:** Click here

Section 2 (C02) Instructor Information
- **Name:** Sharon McNicholas
- **Email:** sharonmc@mcmaster.ca
- **Office Location:** HH/208
- **Office Hours:** Tuesday Thursday and Friday, 9.30am-10.30am

Textbook
- **Required:**
  - *Applied Statistics and Probability for Engineers, 6th Edition* by Montgomery and Runger, Wiley.
- **Optional:** Student Solutions Manual

Material Covered
- All sections covered in the suggested problems
- **Major Topics:** probability, random variables and probability distributions, joint probability distributions, data description, point and interval estimation, hypothesis testing, linear regression, analysis of variance
- **Stats 3J04** students will also cover the following topics in the tutorials (in addition to all of the above material), and will have an extra assignment based on these topics: Bayes' Theorem, multinomial distribution, general functions of random variables, moment generating functions, method of moments, maximum likelihood estimation

Assignment Information
- There will be 7 online assignments, plus an additional assignment for 3J04 students only.

Test Information
- Only the McMaster standard calculator Casio fx-991 is allowed on the tests and exam.
- Some sample tests are available under 'Content'.
- **Tentative Dates** (subject to change):
  Test #1: Tuesday October 3rd
  Test #2: Tuesday November 7th
- Check the Announcements for room and time information, and for instructions on what to do if you have a conflict with the test time.

Course Evaluation

Assignments - 20%
2 Tests - 15% each
Final Exam - 50%

- At the end of the course the grades may be adjusted, but this can only increase your grade and will be done uniformly. We will use the grade equivalence chart published in the Undergraduate Calendar to convert between percentages and letter grades.
- 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.

Missed Work Policy
- If you are absent from the university for a minor medical reason, lasting fewer than 3 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form. Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, report your absence to childsa@mcmaster.ca. Please note that the MSAF may not be used for term work worth 25% or more, nor can it be used for the final examination. For more information look here.
- If your MSAF form was received then the word "note" will appear in place of your mark on the marks page. This will show up within one week after you filled out the MSAF form. If you don't see the word "note" in place of your mark for the missed work one week after filling out the MSAF form, then send an email to Dr. Childs. If you do see the word "note" in place of your mark, then no follow-up is required.
- The percentage for a missed test will be added to your final exam.
- The percentage for a missed assignment or lab will be distributed among your remaining assignments or labs.

Academic Dishonesty
- 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.