

## Social Science 2J03 - Introduction to Statistics Course Outline Fall 2009 - Evening Section

**Instructor:** James Bruce

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**Website:** <http://socserv.mcmaster.ca/bruce/> This is where all the stuff that would normally be done on webCT can be found. There are tests from previous terms, lecture notes, and the "Course Information" page.

**Course Information page:** Keep an eye on the course information page. The assignments, test locations, test content, and other useful information will be posted there. Any changes to the things found on this course outline will be posted there.

**Phone:** ext. 23211 Don't leave messages, I never check them. If you'd want to leave a message send me an email instead.

**Office Hours:** KTH 406 Tuesdays and Wednesdays 3 - 5 p.m.

**Textbook:** There is no required text for this course--I'll have lecture notes on the website and old test questions to practice with. Before amassing enough old test questions, I used David S. Moore's *The Basic Practice of Statistics* 3rd and then 4th edition, both of which are pretty good.

**Content:** While the topics won't change, the date on which a particular topic's lecture is given is subject to change. Any such changes will be noted on the Course Information webpage.

Thur. Sept. 10	Types of Variables; Graphs
	Describing Distributions w Numbers
	Normal Distribution
Thur. Sept. 17	Normal Distribution
	Correlation
	Regression
Thur. Sept. 24	Sampling
	Experiments
	Probability
Thur. Oct. 1	Probability ASSGN #1 DUE
	Sampling Distribution
Thur. Oct. 8	TEST 1
Thur. Oct. 15	Confidence Intervals for Proportions
	One-Sample Z-test
Thur. Oct. 22	Two-Sample Z-test
	One-Sample t-Test
Thur. Oct. 29	Confidence Intervals for Means
	Two-Sample t-Test
Thur. Nov. 5	Chi-Square test
	Goodness-of-Fit test
Thur. Nov. 12	TEST 3
Thur. Nov. 19	Regression t-test ASSGN #2 DUE

Thur. Nov. 26	ANOVA
Thur. Nov. 4	Logic of Hypothesis Tests
	Small Sample Issues

By the end of this course, you should have a good understanding of how to interpret and present data, evaluate the applicability and usefulness of data, and perform some of the more commonly used statistical tests.

This is not the best course to be taking if you expect to ever take statistics again as an undergrad. (If you expect to be doing this anyway, I'd recommend finding an introductory textbook with decent sections on variance, expected value, and conditional probability and then learning that stuff. If you're an economics major have a closer look at hypothesis testing with regression.)

### **Evaluation:**

There will be two term tests, held on Oct. 8 and Nov. 12, both of which are Thursdays. The tests will be held during the lecture time in a location yet to be determined. The tests will consist of problems similar to the examples given in class, found in the lecture notes, and used on old tests.

There are no make-up test dates. If you miss a test, submit the relevant documentation to your faculty office. They will let me know they received it and then your missed test's contribution to your final grade will be determined by the part of the final exam that covers the same material.

There will be a final exam on a date determined in the future by someone else. It will consist of 50 multiple choice questions.

Note that the only calculator permitted in the tests and exam is the Casio FX991.

There will be two assignments. They will be posted on the course website along with the data. The first one is due on Thur. Oct. 1, the second one on Thur. Nov. 19. They will require use of some sort of spreadsheet or statistical software. Excel, which is a standard part of the MS Office suite, should be on the computers in the lab in KTH and will do fine. You are welcome to use whatever sort of software you wish. You can even do them by hand if you want, although that would be exceptionally tedious.

Your final grade will be calculated using the two assignments for a total of 15% (each question will be worth the same amount and it is likely that the two assignments will not have the same number of questions), each test for 30%, and the final exam for 25%.

### **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/senate/academic/ac\\_integrity.htm](http://www.mcmaster.ca/senate/academic/ac_integrity.htm)

**Email:**

I maintain a page on my website entitled 'Course Information' accessible from a link on your main course page. It will include answers to emailed questions I've already received. **Please check the course information page before emailing me a question to see if your answer is already there.** If it is, you probably won't get a response. You might even lose brownie points. **Put the course code at the beginning of the subject line.** Even if you are certain that I will recognize your name, still do this, just in case. Otherwise it is possible I will mistake your email for spam. Especially if Univmail dumps your email into the spam folder. One lame feature of the Univmail software is that you can only see the first bit of the subject line until you actually load up the message, so make sure the course code is at the beginning. (Course code = "2j03" or "soc sci 2j03".)