



STAT 270-3

Introduction to Probability and Statistics

Summer 2013
Day Course
Statistics Workshop

Students requiring accommodations as a result of disability must contact the Centre for Students with Disabilities 778-782-3112 or csdo@sfu.ca

Instructor: Ari Belenkiy
Lab Instructor: [Robin Insley](#)

Prerequisite:

Corequisite: MATH 152 or 155 or 158. Students wishing an intuitive appreciation of a broad range of statistical strategies may wish to take STAT 100 first.

Textbook:

Title: *Introduction to Probability and Statistics*, by Tim Swartz, STAT 270 Course Notes, publisher Pearson.

Calendar Description:

Basic laws of probability, sample distributions. Introduction to statistical inference and applications. **Quantitative.**

Outline:

1. Introduction to graphical and numerical descriptive statistics including histogram, boxplot, scatterplot, sample mean, sample median, sample standard deviation and sample correlation coefficient.
2. Elementary probability rules, basic combinatorial formulae, conditional probability and independence.
3. Introduction to discrete distributions including probability mass function, expectation, binomial distribution and Poisson distribution.
4. Introduction to continuous distributions including probability density function, expectation, cumulative distribution function, uniform distribution, gamma distribution, exponential distribution, normal distribution, normal approximation to the binomial distribution, jointly distributed random variables, statistics and their distributions, Central Limit Theorem.
5. Single sample inference including estimation and testing for proportions and means.
6. Two sample inference including estimation and testing for differences in proportions and differences in means, paired data.

Grading Scheme:

3 Midterms – 15 pts each
Final Exam– 55 pts
Additional bonuses for solving special problems indicated in the course

The grading is subject to change.

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Students are encouraged to review policies pertaining to academic integrity available on Student Services webpage at <http://students.sfu.ca/academicintegrity.html>

Students looking for a Tutor should send an email to stat@sfu.ca with “Tutor Request” in the subject line. Please only include information that you would like forwarded to our tutors mailing list.