UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

Statistics 211 Concepts of Statistics

The systematic treatment of fundamental statistical ideas culminating in the discussion of parameter estimation and hypotheses testing.
Course Hours: H(3-1T)
Prerequisite(s): Pure Mathematics 30 or Mathematics II (offered by Continuing Education).
Notes: See the statements regarding credit which appear at the beginning of the Statistics course listings.

Syllabus

Topics	**Number of hours**
Experimental design: Completely randomized designs, observational studies, confounding factors	3
Data summary: Histograms, shape of distribution, measures of central tendency and dispersion	4
Normal curve, standard units, tables, problems, measurement error	3
Probability trees, box models, conditional probability, multiplication and addition rules, independence	4
Combinations, binomial probabilities, Normal approximation to the binomial	3
Expected values, standard errors, laws of sums and averages, roulette example	3
Confidence intervals for averages and percentages	3
Testing hypotheses for averages and percentages, t-test	4
Two-sample tests for means, percentages	2
Chi-square tests for goodness-of-fit, independence	2
Issues related to tests of hypotheses	1
Correlation and regression	2
TOTAL HOURS	**34**

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PE:jml