



Statistics 211

Concepts of Statistics

(see Course Descriptions for the applicable academic year: <http://www.ucalgary.ca/pubs/calendar/>)

*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