



STATISTICS 211
"CONCEPTS OF STATISTICS"

Calendar Description: H(3-1T)

The systematic treatment of fundamental statistical ideas culminating in the discussion of parameter estimation and hypotheses testing.

Prerequisite: Pure Mathematics 30 or Math II (Continuing Education).

Syllabus

<u>Topics</u>	<u>Number of hours</u>
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