

(3-0-0; —)	Introduction to Statistics	STAT-263*
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This introductory statistics course provides a foundation for statistical analysis in a variety of disciplines. This course is taken by students in various programs, including: Life Sciences, Biochemistry, Chemistry, Computing, and medial programs involving MATH and another discipline. For a STAT medial or MATH major, STAT-261* is the indicated course. Departments that offer their own introductory statistics courses may permit students to substitute STAT-263*.

Textbook: *Modern Elementary Statistics*, 11th Edition
by John E. Freund (Prentice-Hall)

Recommended calculator: *Casio fx-991MS*

Prerequisite: Preparation equivalent to Ontario Grade 12 Advanced Functions
and Introduction to Calculus or MATH-006*.

Instructor: C. Molson

Evaluation:	Quizzes	10%
	Midterm Test	30%
	Final Examination	60%

Outline:

- Techniques to summarize and display univariate and bivariate data
- Measures of location and dispersion, Chebyshev's Theorem
- Probability: independence, conditional probability, Bayes' Theorem, expectation
- Probability distributions: discrete, binomial, hypergeometric, Poisson, normal
- Sampling distributions, standard error of the mean, Central Limit Theorem
- Estimation, confidence intervals, parametric hypothesis testing for means, variances, and proportions in one-sample and two-sample situations
- ANOVA: one-way, and introduction to two-way analysis of variance
- Regression and correlation: simple linear regression and introduction to multiple regression
- Non-parametric hypothesis testing: sign test, Mann-Whitney U test