

**QUEEN'S UNIVERSITY**  
**STAT 263, Introduction to Statistics**  
**Winter 2009**

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Text: *Modern Elementary Statistics, 12<sup>th</sup> Edition*, John E. Freund

Required Calculator: **Casio fx-991MS** or **fx-991MS PLUS**

Marking scheme:	Term test	30%
	WebCT quizzes	10%
	Final exam.	60%

The two WebCT quizzes with the lowest marks will be dropped from the calculation of the final grade.

**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

**What you are responsible for in the text:**

Chapters 1 to 5: all

Chapter 6: all, (in 6.7 you are only responsible for the situation A and B; not A, B<sub>1</sub>, B<sub>2</sub>, etc.)

Chapter 7: do 7.1 only

Chapter 8: omit 8.4, 8.6

Chapter 9: omit 9.1, do the rest but you are only responsible for knowing what normal probability plots are, why you do them, and what you look for in them – not producing one.

Chapter 10: omit 10.2, 10.3, 10.4, 10.5, 10.10

Chapter 11 to 13: all

Chapter 14: omit 14.1

Chapter 15: do 15.1, 15.2, 15.3; in 15.8 & 15.9 only to the extent considered in class

Chapter 16: do 16.1, 16.2, 16.3; in 16.4 only to the extent considered in class

Chapter 17: do 17.1, 17.2, 17.3 (in 17.3 you are to do the t test, not the Z test)

Chapter 18: do 18.2 and 18.5 only