



# STAT 285

## Intermediate Probability and Statistics

Spring 2008  
Day Course

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Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 778-782-3112 or csdo@sfu.ca

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Instructor: [Dr. Tom Loughin](#) (Surrey)

### Prerequisite:

STAT 270 & MATH 232 (can be a corequisite). This course may not be taken for credit by students who have credit for STAT 330 prior to the Fall 03-3 semester.

### Textbook:

*Probability and Statistics for Engineering and the Sciences*, 7<sup>th</sup> ed., by Jay L. Devore, Publisher: Duxbury Press

### Calendar Description:

This course is a continuation of STAT 270. Review of probability models; procedures for statistical inference from survey results and experimental data. Statistical model building. Elementary design of experiments and regression methods. Introduction to lifetime analysis. Introduction to time series. Introduction to stochastic processes. **Quantitative**

### Outline:

1. Review of STAT 270 material and relationship to this course
2. Statistical Models
3. Parameter estimation - least squares and likelihood methods
4. Hypothesis tests
5. Introduction to Regression Analysis - simple and multiple
6. Analysis of Variance
7. Introduction to lifetime analysis
8. Introduction to time series: ARIMA models, estimation, forecasting, confidence interval

### Grading Scheme:

Assignments – 20%  
Midterm 1 – 20%  
Midterm 2 – 20%  
Final – 40%

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*Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Please consult the General Guidelines of the calendar for more details.*

Revised October 2007