

**BU665- Statistical Analysis, Spring 2009** Amjad Rabi arabi@wlu.ca

Office: P2045. Office Hours: By appointment.

**Text:** *Business Forecasting with ForecastX*<sup>™</sup>, Sixth edition, J Holton Wilson and Barry Keating, McGraw Hill, 2009. ISBN: 0073373648.

**Software:** The text comes with  $ForecastX^{TM}$ , which will allow you to experiment with the models covered in the course. We will also use Microsoft Excel 2007 extensively throughout the course. **Please bring your text and your laptop to every class.** 

Additional resources can be found on the WEBCT site.

**Course Evaluation** Weekly assignments (60%) Project (40%)

**Goals:** The goal for the semester is to learn, understand and be able to use forecasting techniques and how and why they are applied. The course focuses on the application of forecasting models to business decisions. Six forecasting methods will be covered.

**Expectations:** You are expected to do most of your learning outside of the classroom. Statistics, like most subjects, is learned by doing it. There will not be time in class for you to do a lot of statistics yourself. If you must miss a class, you are expected to find out what happened.

**Graded Work:** Assignments will be posted on WebCT every Friday. They will be due on Thursdays of next week. The term project will require you to find a dataset, apply the methods discussed in class to the dataset to create forecasts, and write a report comparing between the methods and discussing your findings. The final report will be due on Thursday July 30<sup>th</sup>, 2009. Further details will be discussed in class.

There will be **no make-ups** for missed work.

Session	Date	Topic or Method	Reference
1	May 7	- Introduction	Ch 1 & 2
		- Graphical, Tabular and Numerical Descriptive Statistics	Excel manual
2	May 14	- Estimation	Ch 1 & 2
		- Hypothesis testing	Excel manual
3	May 21	- Moving Averages	Ch 3
4	May 28	- Exponential Smoothing	Ch 4
5	June 4	- Simple Linear Regression	Ch 5
6	June 11	- Multiple Regression	Ch 6
7	June 18	- Time Series Regression	Ch 7
8	June 25	- Box-Jenkins ARIMA models	Ch 7
9	July 2	- Combining Forecasts and Implementation	Ch 8
10	July 9	- Data Mining	Ch 9
11	July 16	- Forecasting for Portfolio Management	Ch 10
12	July 23	- Judgmental Forecasting	

**Syllabus:** The course will cover most of chapters 1 through 10. On average 1 chapter per week. Anticipated coverage of the text, subject to change, is as follows:

**Students with disabilities or special needs** are advised to contact Laurier's Accessible Learning Centre for information regarding its services and resources. Students are encouraged to review the Calendar for information regarding all services available on campus.