
Professor Robert H. Patrick
Department of Finance and Economics
Rutgers Business School - Newark and New Brunswick

Class meets Thursdays 6:00-9:00 PM in Hill Hall 108.

Offices and hours: Ackerson Hall 312, Thursdays 4:30-5:30 P.M., and by appointment.

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Web: http://www.rci.rutgers.edu/~rpatrick/hp.html

This course presents an overview of short-term and long-term financial analysis, planning, and forecasting. Regression and other statistical techniques are developed and illustrated in alternative financial planning and forecasting analyses.

Prerequisites: admission to RBS (Introduction to Economics, Statistical Methods, Calculus for Finance, Financial Accounting, or acceptable substitutes). This course is a Finance core requirement for students that have not taken Introduction to Econometrics already. Students who are double majors in Finance and Economics can take Introduction to Econometrics (220:322).

References

Course handouts will serve as your primary reference. The texts you used in statistics and in finance should be useful references. Students should pursue supplements that best help them learn the course material. I recommend the following references.


Computer Programs: Microsoft Excel is the minimum software requirement for the course. However, more advanced software, such as EViews or SAS, will facilitate relatively efficient estimation.

Grading Policy:

Exams and Homework 60%
Project 35%
Class attendance and participation 5%

Course Outline:
(Topics are tentative and may vary according to class interests and time constraints.)

1. Introduction

2. Statistical Analysis of Financial and Accounting Data

3. Linear Regression Analysis
   OLS estimation
   Hypothesis Testing
   Goodness-of-fit

4. Fundamentals of Forecasting
   Roles and conditions of forecasting
   Explanatory versus time-series forecasting
   Accuracy of forecasting
   Descriptive Statistics
   Selection of forecasting models
   Forecasting Technique

5. Simulation models for financial planning
   The simulation process
   Evaluating simulation models
   Model estimation
   Vector Autoregressions
   Limited data
   Dynamic models
   Stability and Oscillations
   Multipliers and dynamic response
   The impulse response function and vector autoregressions
   Stochastic simulation
6. Time-series models
   - Smoothing and extrapolation
   - Seasonal adjustment
   - Stochastic time-series
   - The autocorrelation function
   - Random Walks
   - Co-integrated time-series
   - AR, MA, ARMA, and ARIMA models

7. Estimating and Forecasting with time-series models
   - Diagnostic checking
   - Minimum mean-square-error forecasts
   - Forecast error

9. Applications of regression and/or time-series models and simulation in finance.

10. Final Exam (December 18, 6:20-9:20PM).

Web Pages (there are many of potential interest, here are a few examples)
http://www.libraries.rutgers.edu/rul/rr_gateway/research_guides/busi/business.shtml
http://www.economist.com
http://www.FT.com
http://online.wsj.com/public/us
http://econwp.a.wustl.edu/econFAQ/EconFAQ.html
http://www.lancs.ac.uk/users/mansch/managem/research/forecast.html
http://lib.stat.cmu.edu
http://www.lib.umich.edu/govdocs/stccon.html
http://www.federalreserve.gov/
http://fisher.osu.edu/fin/fdf/osudata.htm
http://www.rba.co.uk/sources/stats.htm
http://www.bea.gov/
http://www.treasurydirect.gov/govt/govt.htm
http://www.economagic.com/
http://www.oswego.edu/~economic/econsoftware.htm
http://www.forecastingprinciples.com/dictionary/defined%20terms.html