Course Outline for Economic Forecasting

Department of Economics
Rutgers University
Spring Semester, 2011

Course Information

Title: Economic Forecasting
Code: 220:421:01
Lecture Times: MW 4.30-5.50pm
Location: Frelinghuysen Hall - Room A5, CAC

Contact Information

Professor: John Landon-Lane
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Office Hours: WTh 1pm-2pm or by appointment.

Course Resources

All materials for this course can be found at the course site at sakai.rutgers.edu. All students who are enrolled in this course have access to this Sakai site automatically. Check this site periodically for class announcements and other information.

Text and Software

The text for this course is:

This is an excellent textbook and should be available in the bookstores.

The computer software that will be used in this course is *Eviews* which is available in the University computer labs. Students can purchase a full “student” version of this software online from the website of the publisher.

**Overview of Course**

The course is aimed at the student who wishes to have a working knowledge of certain widely-used forecasting techniques. **This is an upper level elective course and so will be taught at an advanced level.** Good understanding of the material taught in the prerequisite courses for this class is essential for doing well in this course.

**Prerequisites**

It is expected that all students will have taken principles of economics courses covering microeconomics and macroeconomics (e.g. 220:102 and 220:103 or 220:200), an introductory statistics class (e.g. 960:211 or 960:285), and an introductory regression class (e.g. 220:322). It will be assumed that all students have a good command of the material taught in these courses. It is strongly suggested that you review this material at the beginning of this course.

**Learning Goals**

Students who successfully complete this course should be

1. familiar with the basic concepts of the forecasting problem and be able to articulate them to someone who is not familiar with the forecasting problem.

2. be familiar with the time series issues involved with forecasting economic variables

3. be able to use econometric software packages to produce forecasts and forecast confidence intervals.

4. be able to communicate forecasting results to a prospective client in a non-technical way.
Lecture Outline

- Part I - Introduction to Forecasting
  - Introduction to Forecasting Problem (Chapters 1-2)
    * the forecasting problem
    * sources of forecasting errors
    * identifying the forecasting model
    * point vs interval forecasts

- Part II - Forecasting using Regression Methods (Chapters 3–5)
  - The general linear regression model
  - Forecasting from the simple linear regression model
  - The multiple regression model
  - Distributed lags

- Part III - Univariate Time Series Methods (Chapter 7)
  - decomposition of time series
  - seasonal adjustment
  - smoothing methods
  - ARMA models
  - non-stationary time series

- Part IV - Short and Long Run Forecasts (Chapters 8–10)
  - short run sales forecasts
  - growth curves
  - long-run forecasts

- Part V - Multivariate methods (Chapter 11 – 12)
  - multiple equation models
  - vector autoregressions (VARs)

I reserve the right to add and/or subtract topics as the course progresses. Not all topics will be covered in the same detail. Time constraints may cause some topics to be omitted. Unless otherwise notified, students are responsible for all the topics noted in the lecture outline.
Course Assessment

There are three main components to the final grade. There will be a term-paper due on the date of the final exam for this class. The term paper will be due at 4pm on May 7. There will be two in-term exams and there will be a number of assignments during the term. All must be attempted.

The breakdown of the course assessment is as follows:

- Class participation: 5%
- Problem Sets: 30%
- Mid-term exams: 40%
- Term Paper: 25%

Important Dates

1st Mid-term exam Wednesday March 9
2nd Mid-term exam Wednesday April 20
Term Paper Friday May 6 (7pm)

Final Comments

1. It is expected that all students will attend lectures, be up to date with their readings and be prepared to participate fully in class. Please ask questions in class or in office hours if you have any problems or misunderstandings. Do not wait until just before an exam to ask questions.

2. The best way to learn is by doing. The problem sets are designed to get you to practice the material introduced in the lectures. I encourage you to form study groups and work together. However, you should write up the answers yourself. Remember to always acknowledge people that helped you in preparing your assignment.

3. Students must work on the term paper individually. No collaboration is allowed for this part of the class.

4. Please be respectful to your fellow classmates during class. The use of cell phones or computers are not allowed during class.