Economics 427 - Economic Forecasting

Instructor: Peter Fuleky
Office: 508 Saunders Hall
Hours: MW 11:20-12:00
Email: fuleky at hawaii.edu

Semester: Fall 2013
Location: MIL 1
Time: MWF 10:30-11:20 AM
Prerequisites: ECON 321 or BUS 310 or NREM 310 or (MATH 251A and NREM 203) or (MATH 371 and MATH 373) or (MATH 471 and MATH 472)
Website: http://www2.hawaii.edu/~fuleky/econ427.html

Student Learning Outcomes:
To be familiar with time series econometric methods for forecasting in business and economics, and to understand the statistical basis for these approaches. Topics include statistical methods for modeling and forecasting trend, seasonal and cyclical components of economic time series, multivariate regression models, forecast evaluation, and forecasting in the presence of unit roots. To be able to apply time series econometric forecasting methods to practical forecasting settings, particularly those relevant to the U.S., Asian and Hawaii economies. To be able to use standard econometric modeling software for forecasting. To be able to successfully complete a model-driven forecasting project and present the methods and results to an educated audience.

Recommended Reading:

Additional Books of Interest:
• Soren Bisgaard, Murat Kulahci (2011): Time Series Analysis and Forecasting by Example, Wiley.
• Francis X. Diebold (2006): Elements of Forecasting, South-Western.
• Spyros G. Makridakis, Steven C. Wheelwright, Rob J Hyndman (1997): Forecasting: Methods and Applications, Wiley.

Course Requirements:
Grades for the course will be based on one midterm exam (20%), one comprehensive final exam (25%), problem sets (15%), a term project (30%), and participation (10%). Participation includes oral recaps of previous class sessions, and contribution to class discussions.

Due dates are firm! Any problem set, project component, or other work submitted after the start of class on the day it is due will be marked down half a grade per day until I have received it.

Exams:
The midterm and final exams must be taken at the scheduled dates and times.
Except for medical emergency, I will not schedule makeup exams.

Problem Sets:
Problem sets will include analytical lecture material and applications of forecasting methods. Examples of possible application problems include: trend modeling of U.S. retail sales, analysis of seasonality in Hawaii visitor arrivals, cyclical modeling of Japanese employment, and a regression model of U.S. automobile demand. These will take a substantial amount of time, so plan ahead!

Forecasting Group Project:
You will work on a forecasting model for an aspect of the U.S, Hawaii or global economy. You will review existing literature on the behavior and determinants of the indicator, perform preliminary statistical assessment, develop a forecasting model, evaluate forecast performance, and write up your results. You will make forecast presentations in addition to the written report. I will provide you with detailed guidelines in a few weeks.

Class Participation:
Active participation helps to deepen understanding of course material. To facilitate this, I organize class in an informal lecture and discussion format, and I expect you to participate. You will be evaluated on your class attendance, your preparation, and your contribution to class discussions.

Please be prepared for class. Read handouts and textbook chapters before I lecture on the material. Do not miss class.

Plus-Minus Grading:
I will award plus and minus grades for course work and the overall course grade, according to this plus-minus grade schedule, applied to adjusted (curved) scores.

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<th>Grade</th>
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<tr>
<td>A+</td>
<td>At my discretion</td>
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<tr>
<td>A</td>
<td>93 and above</td>
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<td>A-</td>
<td>90-92</td>
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<td>B+</td>
<td>87-89</td>
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<td>D+</td>
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Academic Integrity:
The University has strict standards on academic honesty and severe penalties for dishonesty. Academic dishonesty includes cheating and plagiarism, and may result in suspension or expulsion from the University.

Two practices that not all students realize may fall into the category of academic dishonesty are: (1) using the same material for more than one course, and (2) turning in work done by several students in a joint project as one student's own work. The rules apply equally to papers for courses taken during the same semester and to courses taken in different semesters.

If a student wishes to use the same material in papers or projects for more than one course, the student must obtain the advance permission of both instructors. Instructors will often give such
permission, but if the student neglects to get permission, there may be serious consequences, including failing grades in the courses involved, or even expulsion from the program.

Students with Disabilities:
If you feel you need reasonable accommodations because of the impact of a disability, please (1) contact the KOKUA Program (V/T) at 956-7511 or 956-7612 in room 013 of the QLCSS, and (2) speak with me privately to discuss your specific needs. I will be happy to work with you and the KOKUA Program to meet your access needs related to your documented disability.

Econometric Software:
We will use GRETL (Gnu Regression, Econometrics and Time-series Library), an open source program. GRETL is a statistical package that combines powerful analytical capabilities with a simple-to-use interface. For more information on GRETL see http://gretl.sourceforge.net/. A comprehensive ebook on GRETL can be downloaded from here http://www.learneconometrics.com/gretl.html.

Selected Additional Resources on Forecasting:

Rob Hyndman and George Athanasopoulos:
Forecasting: principles and practice http://otexts.com/fpp/


FRED database, St. Louis Federal Reserve Board, http://research.stlouisfed.org/fred2/.


Schedule and Assignments:
There is a tentative plan for the course on the class website, http://www2.hawaii.edu/~fuleky/econ427.html. I will update it as the semester proceeds.

Additional Resources on Oral Communication:

http://www.hawaii.edu/gened/oc/oc.htm