

Mid-Term Review
Eco 5375
Business and Economic Forecasting
Summer I, 2015

Our upcoming mid-term exam is on **Saturday, June 13 at 1:00 – 2:30 pm**. (Note that our start time is at **1:00 instead of 2:00 because Room 188 Crow is occupied (for this one Saturday) from 12:00 – 1:00 pm**. The test is a closed notes test and thus you are not to have any notes in any form open during the test. Also you cannot use your calculators or i-phones during the test. We will provide you with a 4-function calculator if you should need one.

- In addition to my regular Office Hours, I am going to be available for questions on Friday from 3:00 – 4:30 pm and Saturday from 10:00 – 11:30 am.
- You should read Chapters 1 – 3 in your FVDO testbook. You should also review all of your QQs and Exercises 1 – 6 for possible questions for the exam. Your graded QQs and Exercises are available in Room 301F Lee in a filing rack on the east side of the room under the bulletin board. The Keys for the QQs and exercises are posted on the course website. The main subjects to be covered on this mid-term are (1) Key Features of Economic Time Series, (2) Additive Decomposition of Time Series, (3) Buys-Ballot Tables and Plots for detecting seasonality in time series data, (4) Stable Seasonal Pattern (SSP) Models, (5) Optimal Inventory Modeling, (6) Deterministic Trend/Deterministic Seasonal (DTDS) models, and (7) Non-Seasonal Box-Jenkins (ARMA and ARIMA) Time Series Models. The pdf files that you should read are listed below by topic. Be sure and read the comments in the SAS programs that are discussed in the pdf files and in class as they have a lot of information in them.

Key Features of Economic Time Series:

- Chapter 2 in FVDO

Additive Decomposition of Time Series:

- A Demonstration of Basic Additive Time Series Decomposition.pdf
- Decomposition.sas

Buys-Ballot Tables and Plots:

- Buys-Ballot Plots.pdf
- Your several SAS programs that plot Fomby Inc. sales and Plano Sales Tax Revenue data

Stable Seasonal Pattern Model:

- Stable Seasonal Pattern Model_v2.pdf and Exercise 2 (EX2.sas)

Optimal Inventory Modeling:

- See the detailed notes in Exercise 3 (EX3.pdf)

Deterministic Trend/Deterministic Seasonal Model:

- Det Trend Model_v2.pdf
- Plano_Test_Seasonality.sas (To demonstrate the application of DTDS Model to Plano Sales Tax Revenue Data)
- See Exercise 4 and EX4.sas
- Plano_Forecast.sas (demonstrates how to forecast with Proc Autoreg)
- See Exercise 5 and EX5.sas

Non-Seasonal Box-Jenkins Models:

- A Beginners Guide to B-J Models.pdf and Real GDP.sas
- Read Chapter 3 in FVDO
- BJ_Notation.pdf
- Stats.pdf
- ACF_PACF_Table.pdf
- See the many ACF/PACF plots on the class website like ARMA02a.pdf, etc. for practice on using the spiking and damping behavior of ACFs and PACFs to identify the orders of pure AR(p) and pure MA(q) models. These can be found in the ACF_PACF subdirectory in the class website.
- Forecast Profiles.pdf
- See Exercise 6 and EX6.sas