

**BANA7050**  
**Forecasting and Time Series Methods**  
MW 10:10AM - 12:00PM, Lindner 111  
Spring 2018

**Instructor:** **Peng Wang**  
Office: 529 Lindner Hall  
Office Hours: MW 2:00-3:00pm  
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**Prerequisites:**

- \* You must have completed the following course(s) with the minimum grade indicated of C: BANA7041
- \* You must have an academic program in 22 Carl H. Lindner College of Business
- \* You must have an academic program with the following credit level: G
- \* Basic knowledge of SAS and R.

**Textbooks:**

1. *Time Series Analysis*, second edition, William W. S. Wei.
2. *SAS for Forecasting Time Series*, second edition, John C. Brocklebank and David A. Dickey.
3. *Time Series Analysis and Its Applications: With R Examples*, third edition, Robert H. Shumway and David S. Stoffer.

**Computing Resources:**

We will use SAS or R analyzing time series data. You can access SAS in the second floor computer lab (215 and 202). Computer labs all around campus in, e.g., Engineering, Education, etc. also have SAS installed. R is free online.

**Grading:**

Homework	15%
Computer Homework/Cases	15%
Exams (exam 1 in the 5 or 6th week/exam 2 in the 7th week)	65%
Participation and attendance	5%

**Individual Homework, Computer Homework/Cases:**

Three homework and three case assignments will be given, and they are due at the beginning of class. Late homework is not permitted. Homework assignments can be found on the course home page.

**Withdrawal Policy:**

You may withdraw from the class until the official deadline.

**Honor Policy:**

Exam and homework are to be the sole work of each student. Anyone cheating or assisting another during an exam or finishing homework will be given a 0 for that part and possibly a grade of F for the class. College procedures will be followed and the graduate dean will be notified. If warranted, additional action will be taken.

For most detailed information on Academic Misconduct or related university policies and procedures, please see the UC Code of Conduct.

[http://www.uc.edu/conduct/Code\\_of\\_Conduct.html](http://www.uc.edu/conduct/Code_of_Conduct.html)

**Important: The course will cover the theoretical part of times series models in the first half of the semester, and cover the application, SAS programming and real data analysis in the second half of the semester.**

**Tentative Schedule:**

**2/26: Stationary process, ACF, PACF**

**2/28: PACF, white noise operator**

**3/5: ARMA, AR1, AR2, AR(p)**

**3/7: MA1, MA2, MA(q)**

**3/19: ARIMA**

**3/21: Transformation**

**3/26: Model identification**

**3/29: Advanced tools in identification, ESACF, SCAN, MINIC**

**4/2: Non-stationary model identification**

**4/4: Forecasting**

**4/9: Seasonal ARIMA**

**4/11: Exam 1: written exam**

**4/16: GARCH**

**4/18: Exam 2: computer exam**

**Syllabus Revision Policy:**

The instructor reserves the right to revise the syllabus.