

Sta457H1 S 2017 Course Information

This course is an introduction to Time Series with applications to sciences and economics. This course is designed for senior undergraduate students and graduate students of statistics and other related disciplines.

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Office Hours: Wednesdays 3:00pm to 5:00pm at SS6026B.

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TA office hours: TBA.

Lectures Wednesdays 6pm to 9pm; from January 11th to April 5th, except for the reading week (Feb. 22nd). Held in SS2118.

Textbook P.J. Brockwell and R.A. Davis, **Introduction to Time Series and Forecasting, second edition**. Springer-Verlag, 2002.

Readings G. Box, G.M. Jenkins and G. Reinsel, **Time Series Analysis: Forecasting & Control (3rd Edition)**. Wiley, 2008.

Ruey S. Tsay, **Analysis of Financial Time Series, 2nd edition**. Wiley, 2005.

William W.S. Wei, **Time Series Analysis, Univariate and Multivariate Methods**, second edition, Pearson, 2006.

Computing There will be some computing exercises, in the **R** or **ITSM** language. **R** can be downloaded and installed for **free** at www.r-project.org. You can also find an introduction to **R** at the latter website. CD of **ITSM2000** is included in the textbook. There is a tutorial of **ITSM** at Appendix D of the textbook.

Evaluation Final exam: **55%** (Scheduled by the Faculty) Cumulative.

Mid-term test: **35%** (Feb. 15th 6-8pm in class)

There will be no make-up midterms. If you have to miss the midterm, weights will be shifted to the final exam with valid evidences for absence.

HWs: **5%** Three times. The lowest HW score will be dropped.

Data Analysis Report: **5%**.

Syllabus Weeks 1 and 3: Chapter 1.

Weeks 3 and 4: Chapter 2.

Weeks 5 and 6: Chapter 3.

Week 7: Midterm. Includes first three chapters.

Week 8: Chapter 4.

Weeks 9 and 10: Chapter 5.

Weeks 10 and 11: Chapter 6.

Week 12: Chapter 10.3.

I will also cover some other topics regarding computer applications, and introduce you to the R language. Information on these topics will be provided by hardcopy handouts or on the web.