Sta457H1 S 2020 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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TA office hours: TBA.

Lectures Thursdays 3pm to 6pm; from January 9th to April 2nd, except for the reading week (Feb. 20th). Held in NF003.

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. 13th 3-5pm 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 to 3: Chapter 1.

Weeks 3 and 4: Chapter 2.

Weeks 5 and 7: Chapter 3.

Week 6: Midterm. Includes first two chapters and first half of chapter 3.

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.