



ECON534/ FIN518 Financial Econometrics Module 3, 2016

Course Information

Instructor: Chia-Shang Chu

Office: PHBS Building, Room 732

Phone: 86-755-2603-2933

Email: cchu@phbs.pku.edu.cn

Office Hour: Mon & Thu 2:30-3:30

Teaching Assistant: TBA

Phone:

Email:

Classes:

Lectures: Mon & THU: 10:30-12:20

Venue: PHBS Building, Room 229

1. Course Description

1.1 Context

Course overview: This course covers some econometrics that has wide applications in empirical finance, including nonstationary time series, GRACH, event studies and Multi-equation models.

Prerequisites: Econometrics I and II

1.2 Textbooks and Reading Materials

The Econometrics of Financial Markets by

John Y. Campbell, Andrew Lo and A. Craig MacKinlay.

Brook, Chris (2008): *Introductory Econometrics for Finance*. Cambridge University Press. Geanger, C. and P. Newbold (1977): *Forecasting economic time series*. Academic Press (New York)

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	YES
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	YES
2. Our graduates will be skilled in team work and	2.1. Students will be able to lead and participate in group for projects, discussion,	NA

leadership.	and presentation.	
	2.2. Students will be able to apply leadership theories and related skills.	NA
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it.	NA
	3.2. Our students will practice ethics in the duration of the program.	YES
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	NA
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	YES
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	YES
	5.3. Our students will demonstrate competency in critical thinking.	YES

2.2 Course specific objectives

To understand what econometrics can do and cannot do.

2.3 Assessment/Grading Details

Midterm (March 31, 40%), homework (20%) and a term paper (40%).

2.4 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to *PHBS Student Handbook*.

3. Topics, Teaching and Assessment Schedule

3.0: Preparation- Regression; LLN; CLT

3.1: Random Walk; I(1) process; ADF/PP test

- 3.2 Nonstationarity due to break; Sup F test
- 3.3 Spurious regression; traps in time series regression; ADL regression
- 3.4 GARCH process: ARCH; GARCH; IGARCH
- 3.5 Extensions: GJR; EGARCH; ARCH in Mean
- 3.6 A working model of asset allocation
- 3.7 Multivariate mean equation: SUR; SEM
- 3.8 VAR: Estimation and inference
- 3.9 Co-integration: Johansen's test; Error correction model
- 3.10 Multivariate GARCH: VEC(DVEC); BEKK(DBEKK)
- 3.11 Multivariate GARCH: CCC; DCC

4. Miscellaneous

Software EVIEW, STATA or Matlab is required.