Course Syllabus

Full-Time Program (FT27)

Master of Science in Finance (MSF)

Banking and Finance Department, Chulalongkorn Business School

1.	**Course Number**	2604674
2.	**Course Credit**	3
3.	**Course Title**	Financial Econometrics
4.	**Faculty/Department**	Commerce and Accountancy/Banking and Finance
5.	**Semester**	1
6.	**Academic Year**	2023
7.	**Instructor**	Assistant Professor Narapong Srivisal, Ph.D. Office: 12th Floor Mahitaladibesara Building Office Hours: Friday 5-6pm or by appointment Email: narapong@cbs.chula.ac.th
8.	**Condition**	None
9.	**Status**	Compulsory Course
10.	**Curriculum**	Master of Science in Finance Program
11.	**Degree**	Master Degree
12.	**Hours/Week**	3 Hours (Friday 2:00 pm - 5:00 pm)
13.	**Course Description**	Statistics and econometrics techniques for financial research, linear regression analysis, inference, time-series analysis, and introduction to other advanced empirical analysis models.

14. Course Outline

14.1 Objectives

	Course Objectives	Learning Outcomes*	Teaching Approach*	Evaluation Approach*
1	Students understand a variety of basic econometric tools and can	1.2 In-depth knowledge 2.2 aware of etiquette	1. Lecture 2. Discussion	1. Written Exam 7. Homework

	Course Objectives	Learning Outcomes*	Teaching Approach*	Evaluation Approach*
	apply the tools with appropriate assumptions for unprejudiced analysis. [AACSB – DK, AT, EU addressed]	3.1 think critically 3.3 problem-solving skill 4.4 math/stat skill 5.1 Having an inquiring mind		
2	Students can use basic commands and know how to learn new commands in statistical software package (e.g. STATA) to analyze data with basic econometric models. [AACSB – ITL assessed]	4.3 IT skill 5.2 know how to learn	12. Demonstrate 39. Self Study	1. Written Exam 7. Homework
3	Student are capable of reading and interpreting results estimated by basic econometric models without making biased conclusion. [AACSB – DK, AT, EU addressed]	1.1 well-rounded knowledge 1.2 In-depth knowledge 2.2 aware of etiquette 3.1 think critically	1. Lecture 2. Discussion	1. Written Exam 7. Homework

14.2 Contents

Week	Date	Description	Course Objective	Assignment
1	Fri Aug 11	Overview, Probabilistic Review [AACSB: DK, AT]	1	
2	Fri Aug 18	Statistical Review: Unbiasedness and Consistency of an Estimator [AACSB: DK, AT, EU]	1, 3	
3	Fri Aug 25	Introduction to Linear Regression: Bivariate OLS model. [AACSB: DK, AT]	1, 3	
4	Fri Sep 1	Multivariate OLS Model and Interpretation, Multicollinearity. [AACSB: DK, AT]	1, 3	
5	Fri Sep 8	Inference and Rescaling [AACSB: DK, AT, EU]	1, 3	Problem Set 1
6	Fri Sep 15	STATA Session [AACSB: DK, AT, ITL]	1, 3	

Week	Date	Description	Course Objective	Assignment
7	Thu Sep 28 9:00-12:00	Review for Midterm Examination		
Midterm Exam Friday Sep 29, 13:00am – 16:00pm				
8	Thu Oct 12 14:00 – 17:00	Skedasticity. GLS and FGLS Estimators [AACSB: DK, AT, EU]	1, 2, 3	
9	Thu Oct 19 14:00 – 17:00	Endogeneity: Sources of the problem and resolutions. [AACSB: DK, AT, EU, ITL]	1, 3	
10	Thu Oct 26 13:00 – 16:00	Intro to Univariate Time-series Analysis: ARMA Model, Finite Distributed Lags [AACSB: DK, AT]	1, 3	
11	Fri Oct 27 9:00-12:00	Serial Correlation, ARCH, and GARCH Models [AACSB: DK, AT, EU, ITL]	1, 3	Problem Set 2
12	Fri Nov 3 9:00-12:00	Intro to Panel Data Analysis [AACSB: DK, AT, EU, ITL]	1, 3	
13	Fri Nov 10 9:00-12:00	Intro to Maximum Likelihood Estimator (MLE) and Applications [AACSB: DK, AT, ITL]	1, 2, 3	
14	Fri Nov 17 9:00-12:00	Review for Final Examination	1, 2, 3	
Final Exam Monday Nov 20, at 9:00am - 12:00pm				

problem regarding regression

e.g. y can be either 1 or 0

14.3 Teaching Aids

Courseville, STATA

14.4 Course Evaluation

Assignments	10%
In-class exercises and participation	10%
Midterm Examination	40%
Final Examination	40%

No late assignments will be accepted. Students may work together on assignments, as there is positive externality in discussion and teamwork. However, each student must write up and

submit his/her own work with his/her name and the names of all people working together. Any student caught cheating on assignments or examinations will be penalized according to the university's regulation.

15. Reading List

15.1 Required

Lecture Notes

Wooldridge, Jeffrey M. (2016) "Introductory Econometrics: A Modern Approach," 7th ed., Cengage Learning. [*or any newer edition*]

15.2 Supplementary

Stock, J. H. and M. W. Watson (2010) "Introduction to Econometrics," 3rd ed., Addison-Wesley. [*or any newer edition*]

Verbeek, M. (2010) "A Guide to Modern Econometrics," 4th ed., Wiley. [*or any newer edition*]

16. Teaching Evaluation

16.1 Type of Evaluation

Feedback from students will be used to adjust the content of the course.

16.2 Changes made in accordance to previous teaching evaluation

16.3 Discussion or analysis which develops desired characteristics of Chulalongkorn University

- Graduates
- Knowledge
- Skills
- Ethics
- Social

***Notes**

Desired Characteristics of Chulalongkorn University Graduates			
Outcomes			
1	Being knowledgeable	1.1	Possessing well-rounded knowledge
		1.2	Possessing in-depth knowledge
2	Having good morals	2.1	Being moral and ethical
		2.2	Having an awareness of etiquette
3	Having higher order thinking skills	3.1	Being able to think critically
		3.2	Being able to think creatively
		3.3	Having skills in problem solving
4	Possessing essential capabilities	4.1	Having professional skills
		4.2	Having communication skills
		4.3	Having skills in information technology
		4.4	Having mathematical and statistical skills
		4.5	Having management skills
5	Having an inquiring mind and knowing how to learn	5.1	Having an inquiring mind
		5.2	Knowing how to learn
6	Having leadership qualities		
7	Maintaining well-being		
8	Being community-minded and possessing social responsibility		
9	Sustaining Thainess in a globalized world		

Teaching Methods	
1	Lecture
2	Discussion

3	Seminar
4	Deductive
5	Inductive
6	Case
7	Role playing
8	Field work
9	Field trip
10	Simulation
11	Dramatization
12	Demonstration
13	Learning center
14	Game
15	Experiment
16	Programmed instruction/Computer-aided instruction/Blended learning/Online learning
17	Practice
18	Practicum (including teaching practicum)
19	Research-based instruction
20	Problem-based instruction
21	Reflective thinking
22	Inquiry-based instruction
23	Independent study
24	Self-directed learning
25	Project-based instruction
26	Learning from model persons/learned persons
27	Micro teaching
28	Supervision
29	Cooperative learning

30	Individual advice
31	Tutorial group
32	Brain storming
33	Summary of main topics, or presentation of reading assignment
34	Apprentice
35	Activities
36	Clinical bed-side teaching or patient-based learning
37	Practice in behavior manifestation
38	Observation trip
39	Self study
40	Others (Please specify)

Evaluation Methods	
1	Written examination
2	Oral examination
3	Skills examination
4	Behavior observation
5	Assessment of work processes/activity roles
6	Assessment of output/lessons based on students' experience
7	Homework assessment
8	Report/Project assessment
9	Diary/Journal assessment
10	Performance testing
11	Assessment of report criticism/presentation
12	Assessment of result of team-work effort
13	Self assessment

14	360 Degrees assessment
15	Peer assessment
16	Oral presentation
17	Class attendance
18	Others (Please specify)