课程详述

COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	**课程名称 Course Title**	计量经济学 Econometrics
2.	**授课院系** **Originating Department**	数学系 Department of Mathematics
3.	**课程编号** **Course Code**	FMA301
4.	**课程学分 Credit Value**	3
5.	**课程类别** **Course Type**	专业核心课 Major Core Courses
6.	**授课学期** **Semester**	春季 Spring
7.	**授课语言** **Teaching Language**	中英双语 English & Chinese
8.	**授课教师、所属学系、联系方式（如属团队授课，请列明其他授课教师）** **Instructor(s), Affiliation& Contact** **（For team teaching, please list all instructors）**	杨燕，数学系 第一教学楼 313 yangy3@sustc.edu.cn 0755-8801-5914 Yan Yang, Department of Mathematics Rm313, The first Teaching Building yangy3@sustc.edu.cn 0755-8801-5914
9.	**实验员/助教、所属学系、联系方式** **Tutor/TA(s), Contact**	Grader: 赵恒煜，慧园 3 栋 516，zhaohy@mail.sustc.edu.cn
10.	**选课人数限额(可不填)** **Maximum Enrolment（Optional）**	

11. 授课方式 Delivery Method

	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other（Please specify）	总学时 Total
学时数 Credit Hours	48			复习、考试（2 周） 6 Revision & Exam (2 weeks) 6-hours	48

12.	先修课程、其它学习要求 **Pre-requisites or Other Academic Requirements**	数理统计（MA204）（或概率论与数理统计（MA212）） Mathematical Statistics(MA204) (or Probability and Statistics(MA212))
13.	后续课程、其它学习规划 **Courses for which this course is a pre-requisite**	金融风险管理(FMA304)，金融统计， Financial risk management, Financial statistics
14.	其它要求修读本课程的学系 **Cross-listing Dept.**	

教学大纲及教学日历 SYLLABUS

15. **教学目标 Course Objectives**

The main objectives of the course are to introduce students to basic econometrics techniques and to prepare them to do their own applied work. Students are encouraged to think of the course as a preparation toward their thesis research project.

16. **预达学习成果 Learning Outcomes**

The completion of this course would help students to be familiar with some basic econometrics models and techniques of analysis such as The Simple Regression Model, Multi-variate Regression Analysis, Inference in the Multi-variate Regression Model, Asymptotic Properties of OLS, Heteroscedasticity, Instrumental Variables and two stage least square, Introduction to Panel Data Methods, Maximum Likelihood, Limited Dependent Variable Models. This course will train students to develop abilities to conduct some research in econometrics.

17. **课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）**
Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)

Chapter 1 The Nature of Econometrics and Economic Data (2 hours)

第 1 章 计量经济学的性质与经济数据(2 小时)

PART 1: Regression Analysis with Cross-Sectional Data

第一篇：横截面数据的回归分析

Chapter 2 The Simple Regression Model (4 hours)

第 2 章 简单回归模型(4 小时)

Chapter 3 Multiple Regression Analysis: Estimation (4 hours)

第 3 章 多元回归分析：估计(4 小时)

Chapter 4 Multiple Regression Analysis: Inference (2 hours)

第 4 章 多元回归分析：推断(2 小时)

Chapter 5 Multiple Regression Analysis: OLS Asymptotics (2 hours)

第 5 章 多元回归分析：OLS 的渐进性(2 小时)

Chapter 6 Multiple Regression Analysis: Further Issues (2 hours)

第 6 章 多元回归分析：深入专题(2 小时)

Chapter 7 Multiple Regression Analysis with Qualitative Information: Binary (or Dummy) Variables (2 hours)

第 7 章 含有定性信息的多元回归分析：二值(或虚拟)变量(2 小时)

Chapter 8 Heteroskedasticity (4 hours)

第 8 章 异方差性(4 小时)

Chapter 9 More on Specification and Data Issues (3 hours)

第 9 章 模型设定和数据问题的深入探讨(3 小时)

Midterm examination (2 hours)

期中考试(2 小时)

PART 2: Regression Analysis with Time Series Data

第二篇 时间序列分析数据的回归分析

Chapter 10 Basic Regression Analysis with Time Series Data (3 hours)

第 10 章 时间序列数据的基本回归分析(3 小时)

Chapter 11 Further Issues in Using OLS with Time Series Data (3 hours)

第 11 章 OLS 用于时间序列的其他问题(3 小时)

Chapter 12 Serial Correlation and Heteroskedasticity in Time Series Regressions (3 hours)

第 12 章 时间序列回归中序列相关和异方差性 (3 小时)

PART 3: Advanced Topics

第三篇 高级专题

Chapter 13 Pooling Cross Sections Across Time: Simple Panel Data Methods (2 hours)

第 13 章　跨时横截面的混合：简单面板数据方法 (2 小时)

Chapter 14 Advanced Panel Data Methods (4 hours)

第 14 章　高级面板数据方法 (4 小时)

Chapter 15 Instrumental Variables Estimation and Two Stage Least Squares (4 hours)

第 15 章　工具变量估计与两阶段最小二乘法(4 小时)

Chapter 16 Simultaneous Equations Models (2 hours)

第 16 章　联立方程模型(2 小时)

18. 教材及其它参考资料 **Textbook and Supplementary Readings**

参考教材 Textbook：

Introductory Econometrics A Modern Apporach, Jeffrey.M. Wooldridge, 6e, Cengage Learning,2015

其他参考资料 Supplementary Readings：

Basic Econometrics(5e), Damodar Gujarati, Dawn Porter, Mcgraw, 2017

计量经济学(第 4 版)，李子奈、潘文卿，高等教育出版社，2015

课程评估 ASSESSMENT

19.

评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance				
课堂表现 Class Performance				
小测验 Quiz		10%		
课程项目 Projects		20%		
平时作业 Assignments		20%		
期中考试 Mid-Term Test		20%		
期末考试 Final Exam		30%		

期末报告 **Final Presentation**				
其它（可根据需要改写以上评估方式） **Others (The above may be modified as necessary)**				

20. 记分方式 **GRADING SYSTEM**

☑ A. 十三级等级制 **Letter Grading** ☐ B. 二级记分制（通过/不通过） **Pass/Fail Grading**

课程审批 REVIEW AND APPROVAL

21. 本课程设置已经过以下责任人/委员会审议通过
This Course has been approved by the following person or committee of authority
