**Financial Econometrics**

Course No ： 02812070 Program ： MFin

Credit ： 2 Instructor ： Yu Zhang

Prerequisite ： Semester ： 2022 Fall

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| Instructor’s brief introduction:  Yu Zhang is an Assistant Professor of Finance at Guanghua School of Management, Peking University. He received a Ph.D. degree in economics from Princeton University after studying at the Department of Economics and the Bendheim Center for Finance. His empirical research focuses on the intersection of macroeconomics and finance, with applications on housing, household finance, asset pricing, and supply chain finance, and has been published in journals including the Review of Financial Studies and the Review of Economics and Statistics.  Instructor’s contact information：  yuzhang@gsm.pku.edu.cn  TA’s contact information::  Office hour:  By appointment  **Course Overview**  Financial econometrics is the study of drawing associations and causal relationships from financial data. This course assumes no prior knowledge of econometrics.  **Course Objectives**  You should be able to (1) perform OLS estimation and inference using appropriate standard errors, (2) estimate binary choice models, (3) point out endogeneity and reason the choice of methods dealing with endogeneity (IV, difference-in-differences, RDD), (4) carry out event studies. You should be fluent in R and Rmarkdown.  **Detailed Course Plan**  Week 1: R and Rmarkdown  Week 2: OLS basics  Week 3: OLS inference  Week 4: OLS additional issues (outliers, autocorrelation, heteroskedasticity)  Week 5: Binary choice and missing data  Week 6: Endogeneity, instrumental variables, RDD  Week 7: Event study, difference-in-differences, panel data, fixed effect model  Week 8: Prediction and time-series basics  **Final Exam：**  Closed book  **Teaching Methods**  The course material will be taught in an interactive way.  **IT tools to be used in the classroom**  The course involves heavy use of Rmarkdown.  **Textbooks**  Introductory Econometrics (6ed), Wooldridge.  **References & Readings**  Using R for Introductory Econometrics (2ed).  The Econometrics of Financial Markets (Campbell, Lo and MacKinlay, 1997).  **Videos, CD-ROMs and other adjunct learning resources used**  You are required to bring a laptop to class.  **Rules students must follow**  Please show respect to classmates, lecturers, every one’s time, and most importantly yourself.  **Course Assessment**  40% HW + 60% Final. |