WISE

厦门大学王亚南经济研究院

WANG YANAN INSTITUTE FOR STUDIES IN ECONOMICS XIAMEN UNIVERSITY

Graduate Program Course Brochure

Wang Yanan Institute for Studies in Economics

Xiamen University

November 2018

Table of Contents

Note:

1. Most of the courses listed in this brochure are taught in English. A few courses taught in Chinese are marked.
2. Normally, each course credit requires 16- 18 credit hours of teaching.
3. In the curriculum, the course type notation "C" stands for compulsory courses and “E” for elective courses.
4. Some programs share the same courses, and these courses are only listed in the program that has the majority of students enrolled in the class. If a course appearing in one program curriculum but missing from its collection of syllabi, please locate it from other programs using the search function on the course title.

Overview of Graduate Programs at WISE

WISE focuses on high-quality economics and finance education, frontier research, and intensive international academic exchanges and cooperation. With excellent faculty members recruited from top overseas universities, all academic programs are conducted in English at the international standard.

Master's Degree Programs

Three-year Master's Programs for Chinese Students

Academic Master's Programs

- **Western Economics**
- **Quantitative Economics**
- **Finance**
- **Labor Economics**
- **Statistics**
- **Regional Economics**

Professional Master's Programs

- **Finance**
- **Applied Statistics**

Two-year Master's Programs for International Students at WISE and the School of Economics (SOE)

WISE:

- **Finance**
- **Financial Engineering**
- **Management Economics**
- **Quantitative Economics**
- **Population, Resources and Environmental Economics**
- **Industrial Economics**
- **Labor Economics**

SOE

- **International Trade**
- **Statistics**
- **Regional Economics**
- **Public Finance**

PhD Programs

Four-year

- **Western Economics**
- **Quantitative Economics**
- **Finance**
- **Labor Economics**
- **Statistics**
- **Regional Economics**

Part One
Curriculum

1. WISE-SOE International Master's Programs

Master of Economics in Finance

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Financial Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Corporate Finance*	C	3
Fixed Income Analysis*	C	3
Derivatives Analysis*	C	3
2nd Year		
Fall Semester		
Other elective courses		

Courses marked with *: Provided by other programs at WISE

Master of Economics in Financial Engineering

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Financial Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Stochastic Processes*	C	3
Time Series Analysis*	C	3
Derivatives Analysis*	C	3

2nd Year		
Fall Semester		
Other elective courses		

Courses marked with *: Provided by other programs at WISE

Master of Economics in Management Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Financial Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Corporate Finance*	C	3
2nd Year		
Fall Semester		
Advanced Macroeconomics*	C	3
Advanced Microeconomics*	C	3
Other elective courses		

Courses marked with *: Provided by other programs at WISE

Master of Economics in Quantitative Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		

Advanced Econometrics II	C	3
Categorical Data Analysis *	C	3
*Multivariate Statistics Analysis**	C	3
Mathematical Statistics *	C	3
*Stochastic Processes**	C	3
*Introductory Time Series Analysis**	C	3
2nd Year		
Fall Semester		
*Micro-econometrics and Application**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Students should choose 3 of the 6 major core courses.
- Courses marked with *: Provided by other programs at WISE.

Master of Economics in International Trade

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Financial System in China	C	3
International Trade	C	3
Taxation in China	C	3
2nd Year		
Fall Semester		
Chinese Economy*	C	3
Other elective courses		

Master of Economics in Industrial Economics

Course Name	Course Type	Credit
1st Year		

Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
*Industrial Organization**	C	3
Other elective courses		
2nd Year		
Fall Semester		
*Empirical Application of Industrial Organization**	C	3
*Micro-econometrics and Application**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Courses marked with *: Provided by other programs at WISE.

Master of Economics in Labor Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Regional Economics *	C	3
Urban Economics *	C	3
2nd Year		
Fall Semester		
*Labor Economics**	C	3
*Micro-econometrics and Application**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Students should choose 3 of the 4 major core courses.
- Courses marked with *: Provided by other programs at WISE.

Master of Economics in Population, Resources and Environmental Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Environmental Economics	C	3
Economic Analysis of Environmental Policy	C	3
Energy Economics	C	3
Human Ecology	C	3
2nd Year		
Fall Semester		
Economics of Natural Resources	C	3
Climate Change Economics	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Students should choose 3 of the 6 major core courses.

Master of Economics in Public Finance

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3

Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Public Finance	C	3
Chinese Taxation	C	3
Public Policy Analysis	C	3
2nd Year		
Fall Semester		
*Micro-econometrics and Application**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Students should choose 3 of the 4 major core courses.

Master of Economics in Regional Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Regional Economics	C	3
Urban Economics	C	3
Real Estate Economics	C	3
2nd Year		
Fall Semester		
*Micro-econometrics and Application**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Students should choose 3 of the 4 major core courses.

Master of Economics in Statistics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
*Stochastic Processes**	C	3
*Introductory Time Series Analysis**	C	3
2nd Year		
Fall Semester		
Experimental Design and Analysis of Variance	C	3
*Categorical Data Analysis**	C	3
*Generalized Linear Model**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Students should choose 3 of the 5 major core courses.
- Courses marked with *: Provided by other programs at WISE.

PhD of Economics in Statistics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Advanced Macroeconomics II	C	3
Advanced Microeconomics II	C	3
Mathematical Economics	C	3
2nd Year		
Fall Semester		
*Time Series Analysis I**	C	3
Literature Review and Thesis Writing	C	3
*Micro-econometrics and Application**	C	3
Spring Semester		
*Multivariate Statistics Analysis**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Courses marked with *: Provided by other programs at WISE.

PhD of Economics in Quantitative Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Advanced Macroeconomics II	C	3
Advanced Microeconomics II	C	3
Mathematical Economics	C	3
2nd Year		
Fall Semester		
*Time Series Analysis I**	C	3
*Micro-econometrics**	C	3
*Applied Nonparametric Econometrics**	C	3
Literature Review and Thesis Writing	C	3
Spring Semester		
*Time Series Analysis II**		
*Micro-econometrics**		
*Financial Econometrics**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Courses marked with *: Provided by other programs at WISE.

PhD of Economics in Finance

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Advanced Macroeconomics II	C	3
Advanced Microeconomics II	C	3
Mathematical Economics	C	3
2nd Year		
Fall Semester		
*Asset pricing I: Discrete-time**	C	3
*Financial Econometrics**	C	3
Literature Review and Thesis Writing	C	3
Spring Semester		
*Asset pricing II: Continuous-time Models**	C	3
*Fixed Income Analysis**	C	3
*Derivatives Analysis: Algorithm Trading with Theory and Practice**	C	3
*Corporate Finance**	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Courses marked with *: Provided by other programs at WISE.

PhD of Economics in Western Economics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Introductory Mathematical Economics	C	3
Selected Issues on China	C	2
Chinese I	C	2
Spring Semester		
Advanced Econometrics II	C	3
Advanced Macroeconomics II	C	3
Advanced Microeconomics II	C	3
Mathematical Economics	C	3
2nd Year		
Fall Semester		
*Advanced Topics in Macroeconomics I: Monetary Economics and International Finance**	C	3
*Law and Economics**	C	3
*Chinese Economy: Change and Development**	C	3
*Development Economics**	C	3
*Literature Review and Thesis Writing**	C	3
Spring Semester		
*Advanced Topics in Macroeconomics II: Open Macro and Search Model Applications**	C	3
Labor Economics	C	3
Industrial Organization	C	3
International Trade	C	3
Urban Economics	C	3
Other elective courses		

- Courses marked in italic: Major core courses; subject to availability.
- Courses marked with *: Provided by other programs at WISE.

2. Master and PhD Programs

Academic Master's Programs & PhD Programs

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Mathematical Economics	C	3
Advanced Probability Theory	C	3
Study on the Theory and Practice of Socialism with Chinese Characteristics*	C	2
Spring Semester		
Advanced Macroeconomics II	C	3
Advanced Microeconomics II	C	3
Advanced Econometrics II	C	3
Advanced Financial Economics	C	3
Advanced Mathematical Statistics	C	3
Computational Data Analysis Using Software	C	3
Marxism and Methodology for Social Sciences*	C	1
2nd Year		
Fall Semester		
Time Series Analysis I	E	3
Law Economics	E	3
Asset Pricing	E	3
Advanced Topics on Finance	E	3
Labor Economics	E	3
Advanced Topics on Macroeconomics I: Monetary Economics and International Finance	E	3
Applied Microeconometrics	E	3
Microeconometrics and Panel data	E	3
Generalized Linear Models	E	3
Applied Nonparametric Econometrics	E	3
Multivariate Statistical Analysis	E	3
Study of the Capital*	E	3
Spring Semester		
Advanced Corporate Finance	E	3
The Chinese Economy: Transitions and Growth	E	3
Derivatives Analysis	E	3
Urban Economics	E	3
Thesis Writing & Master Opening report	E	3
Professional English Writing	E	3

Environmental Economics	E	3
Experimental Economics	E	3
Bayesian Statistics	E	3

Courses marked with * are taught in Chinese

Professional Master of Finance

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Financial Statement Analysis	C	3
Study on the Theory and Practice of Socialism with Chinese Characteristics*	C	2
Spring Semester		
Advanced Corporate Finance	C	3
Advanced Microeconomics II	C	3
Advanced Econometrics II	C	3
Advanced Financial Economics	C	3
Marxism and Methodology for Social Sciences*	C	1
2nd Year		
Fall Semester		
Behavioral Finance	E	1.5
Mergers and Acquisitions	E	1.5
Financial Econometrics	E	1.5
Fixed Income Securities	E	1.5
Global Financial Markets	E	1.5
Contemporary Issues in Global Finance	E	1.5
Global Investment Principles	E	1.5
Financial Market and Financial Products	E	1.5
Financial Modeling with Excel VBA	E	1.5
Spring Semester		
Fund Investment and Management	E	1.5
Financial Modeling	E	1.5
Financial Derivatives: Theory	E	1.5
Financial Derivatives: Practice	E	1.5
Global Risk Management	E	1.5
Global Equity Portfolio Management	E	1.5
Global Corporate Governance	E	1.5
Financial leasing	E	1.5
Business Ethics and Financial Norm	E	1.5
Innovative design of financial products and services process	E	1.5
Financial Services Marketing	E	1.5

Quantitative Investment and Algorithm trading	E	1.5
Quantitative Portfolio Management	E	1.5
Global Wealth Management	E	1.5

Courses marked with * are taught in Chinese

Professional Master of Applied Statistics

Course Name	Course Type	Credit
1st Year		
Fall Semester		
Advanced Macroeconomics I	C	3
Advanced Microeconomics I	C	3
Advanced Econometrics I	C	3
Sampling Inference	C	3
Study on the Theory and Practice of Socialism with Chinese Characteristics*	C	2
Spring Semester		
Advanced Microeconomics II	C	3
Advanced Econometrics II	C	3
Advanced Financial Economics	C	3
Computational Data Analysis Using Software	C	3
Marxism and Methodology for Social Sciences*	C	1
2nd Year		
Fall Semester		
Multivariate Statistical Analysis	C	3
The Research of National Accounting Theories and Method	E	3
Bayesian Statistics	E	3
Generalized Linear Models	E	3
Time Series Analysis (I)	E	3
Applied Nonparametric Econometrics	E	3
Investments	E	1.5
The Statistics for Enterprise economic	E	3
Spring Semester		
Financial Econometrics	C	3
Research on Theory and Application of Large-scale National Accounting	E	3
Theory and Method of Investment Economics	E	3
Data Mining	E	3
Risk Management	E	3
Quantitative Investment	E	1.5
Environment and Resources Accounting	E	3
The Index-Number Theory and Application	E	3

Courses marked with * are taught in Chinese

Part Two
Course Information

International Graduate Program (Fall Semester)

1. Advanced Econometrics I

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
Calculus, Linear Algebra.	Andrew Pua

Reference Book:

- Statistics for Business: Decision Making and Analysis, Second Edition, by Robert Stine and Dean Foster
- All of Statistics: A Concise Course in Statistical Inference by Larry A. Wasserman

Course Description:

This course introduces international MA/PhD students to the practice and theory of probability and statistics. It serves as a foundation for concepts to be used in advanced courses in economics and econometrics. At the end of the course, I hope that you are prepared to study more advanced courses by yourself or along with an instructor. I also hope that you become a more informed consumer and user of statistics.

2. Advanced Macroeconomics I

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
Macroeconomics, Microeconomics, Mathematical Economics	Dan Li

Reference Book:

- N. Gregory Mankiw, Macroeconomics, 9th ed., 2015, Worth Publishers.

Course Description:

This course explores the workings of an economy from a macroeconomic perspective. Although the course focuses primarily on the United States economy and its relation with the rest of the world, the concepts and tools apply to market economies around the world. Major topics include: the determinants of an economy's output in the long run; the role of money in the long run and short run; the determinants of the price level; the role of interest rates and exchange rates in the U.S. economy and in small, "open" economies; the causes and nature of the business cycle; the Keynesian model of the economy and how it differs from the classical theory of the economy; and the role of fiscal and monetary policy in stabilizing the economy and ensuring full employment. The last module of the course examines the recent meltdown of the economy, stemming from the collapse of housing prices and the financial system.

3. Advanced Microeconomics I

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
Intermediate microeconomics advanced mathematics (calculus, linear algebra, probability statistics)	Xiaojia Bao

Reference Book:

- Robert Pindyck and Daniel Rubinfeld, Microeconomics (7th Edition), Qinghua University Press 2007

Course Description:

The main objective of this class is to train students with basic microeconomic theory and enable students to apply microeconomic theories to analyze economic phenomena and related policies.

4. Asset pricing I

Targeted Level:	***Course Type:***
Second year students (Master, PhD)	Elective
Prerequisite:	***Instructors:***
Basic microeconomic theory, calculus and matrix algebra	Peilin HSIEH

Reference Book:

- Cochrane, 2004 Asset Pricing, Revised Edition, Princeton University Press.
- O'Hara, 1995 Market Microstructure Theory, Blackwell Publishers, Cambridge Mass.
- Huang and Litzenberger, 1988 Foundations for Financial Economics, North-Holland (Elsevier Science Publishing, New York).
- Ingersoll, 1987 Theory of Financial Decision Making, Rowan and Littlefield(Totowa, NJ).
- Robert Jarrow, 2002 Modeling Fixed Income Securities and Interest Rate Options (2nd Edition).
- John Hull, 2014 Options, Futures, and Other Derivatives (9th Edition)

Course Description:

This course, which is the first in the sequence of doctoral seminars offered in finance, is designed to introduce students to the major models of asset pricing and to Rational Expectations models. All of the material is developed from first principles, so there are no formal prerequisites for taking this seminar. It is assumed, however, that students are familiar with basic microeconomic theory and have a working knowledge of both calculus and matrix algebra. The general approach will be:

- to examine the economic intuition behind each model
- provide a mathematically rigorous derivation of the model
- discuss the model's important features, and
- outline the testable implications of the model.

5. Chinese Economy

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
	Xiaojia BAO

Reference Book:

- Naughton, Barry. 2007. The Chinese Economy: Transitions and Growth. Cambridge, Mass.: The MIT Press.
- *Loren Brandt and Thomas Rawski. 2008. China's Great Economic Transformation. Cambridge University Press (Optional)
- Chow, Gregory C. 2007. China's Economic Transformation, 2nd Edition, Blackwell Publishing, Oxford et al.
- Spence, Jonathan D. 1999. The Search for Modern China, 2nd Revised edition, W. W. Norton & Co., New York.
- J. Fan and R. Morck. 2012. Capitalizing China, University of Chicago Press, Chicago, IL
- Lieberthal, Kenneth, 2004. Governing China: From Revolution to Reform. New York: W.W. Norton and Company.
- WU Jinglian, 2005, Understanding and Interpreting Chinese Economic Growth

Course Description:

The course provides a general introduction to the background and current structure of Chinese economy. It aims to help students understanding sources of Chinese economic growth and analyzing economic problems in China using empirical and theoretical approaches. We will first cover the basic geographic and demographic backgrounds and a brief introduction on economic growth history in China. Following it, we will mainly explore the behavior and decision--‐making of main players in the economy, including firms, governments and households. Throughout the way, we will integrate industrialization, decentralization and urbanization together. In the end, the course will cover specific fields including trade and financial system in China.

6. Climate Change Economics

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
Advanced Macroeconomics I and Advanced Microeconomics I	Jinxiu Ding

Reference Book:

- IPCC AR5 overall Synthesis report pages 2-12 (covers observations, causes and projections)
- IPCC WGII AR5 SPM pages 4-8 (identifies likelihood wording)
- IPCC WGII AR5 pages 662-672 (covers energy effects)
- IPCC WGIII AR5 SPM pages 4-9 (discusses mitigation and emissions sources)
- IPCC WGII AR4 chapter 18 pages 748-750 (discusses adaptation and mitigation)
- IPCC SREX SPM pages 4-9 (discusses extremes)

Course Description:

Climate change are attracting increased attention with more evidence supporting its existence. So should we take action? What could we do and what are the economic issues here? How to evaluate the effects of climate change? This course will introduce students the topics of climate change and its economic aspects. The course will also improve students' ability to assess economic questions by examining and discussing approaches used in assessments regarding effects, adaptation and mitigation. Topics will be discussed in this course include the following.

Topic 1: Introduction to Climate Change

Topic 2: Toward Action and Economic issues

Topic 3: Economic Vulnerability under Climate Change

Topic 4: Climate Change Mitigation

Topic 5: Climate Change Adaptation

Topic 6: Will Bioenergy be Profitable: Markets, Lifecycle Carbon Footprint, Commodity Prices and Leakage

Topic 7:Cost of Carbon: Discounts, Fungibility and Agricultural GHG Offset projects

Topic 8:Co-Effects of Climate Change and GHG Mitigation Policies

Topic 9:Mixing Adaptation and Mitigation Policies

7. Economics of Nature Resources

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
Master's level microeconomics	Zhi Li

Reference Book:

- Hartwick, John M. & Nancy D. Olewiler. 1998. The Economics of Natural Resources, 2nd Edition. Addison-Wesley Educational Publishers, Inc.
- Jon M. Conrad, Resource Economics, 2nd Edition, Cambridge University Press

Course Description:

As the first graduate course in resource economics, this course examines a broad range of issues related to the use of natural resources with a framework that combines calculus and graphical analysis. In general, this course applies microeconomic theory to problems of allocating renewable and nonrenewable natural resources, both among competing users and across time. Basic models are applied to the problems of fisheries overexploitation, excessive forest harvesting, and the depletion of water, soil and energy resources. The course also examines the economic rationale for government intervention in the market's provision of natural resources and evaluates alternative methods for regulating the use of selected natural resources.

8. Empirical Applications of Industrial Organization

Targeted Level:	***Course Type:***
First year students	Compulsory

Prerequisite:	***Instructors:***
N. Gregory Mankiw, 2014. *Principle of Economics.*	Jialiang Zhu

Reference Book:

- Kowoka, J. and L. White, eds. (2009), *The Antitrust Revolution*, 5th edition, New York: Oxford University.
- Tirole, J (1988), *The Theory of Industrial Organization*, Cambridge, MIT Press.
- W. Kip Viscusi, John Vernon, and Joseph Harrington (2005), *Economics of Regulation and Antitrust*, 4th

Course Description:

The course will focus on the empirical applications of industrial organizations. Specifically, it will primarily introduce the economics of antitrust and regulation. The course will teach students think in the perspectives of both firm and government. It will enable students to examine different market practices strategically and analytically. In particular, student should be able to come up with their own policy design after the course.

For each topic, students will study both the basic theory and the empirical evidence related to the theory. Both positive and normative issues will be analyzed. The course will cover the following broad topics: horizontal merger policy, collusion, predatory pricing, and vertical mergers and restraints, optimal regulation, and regulation in public utilities.

9. Financial Economics

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
This is an introductory level course which does not require in-depth knowledge on economics or finance. Students are expected to be skillful in using high-school math to make relevant calculations.	Stephanie Chan

Reference Book:

- Bodie, Merton and Cleeton, Financial Economics, 2nd edition, Chinese reprint, English version (required)

Course Description:

To ensure that the student obtains a solid basic understanding of the principles of financial economics. The most important skills are

- To understand and apply the time value of money techniques to various problems
- To be able to state the principle of asset valuation
- To be able to distinguish between risk management techniques
- To be able to relate risk and return using the CAPM framework

10. Financial System in China

Targeted Level:	***Course Type:***
Second year students	Compulsory

Prerequisite:	***Instructors:***
	Ming Gu

Reference Book:

- Saunders, Anthony and Marcia Millon Cornett, “Financial Markets & Institutions”
- McGraw Hill ---- Reference book, not required.

Course Description:

This course gives a basic introduction to the main features of financial institutions and markets in the United States and China. The objective of this course is to prepare students for successful interaction with financial markets and institutions. This course examines the form and function of various financial markets and the manner in which financial managers use these markets to accomplish corporate objectives. Focus will be placed on the behavior of major financial institutions and their role in the intermediation process as suppliers of funds as well as the form and function of specific financial markets.

11. Fixed Income Analysis

Targeted Level:	***Course Type:***
Second year students	Compulsory (MAF)
Prerequisite:	***Instructors:***
➢ Probability theory ➢ Stochastic process ➢ Basic understanding of the fixed income markets ➢ Derivatives	Qian Han

Reference Book:

- Modeling Fixed-Income Securities and Interest Rate Options, second edition, Robert A. Jarrow
- Interest rate models: theory and practice, Damiano Brigo and Fabio Mercurio

Course Description:

In This Course

- You expect to learn:

  Spot rate models

  Vasicek (general equilibrium model)

  CIR(general equilibrium model)

  HW I, II (general equilibrium model)

  BDT(no arbitrage model, use the entire yield curve to model the spot rate movement)
- Instantaneous forward rate models(modeling the entire yield curve, not just the spot rate)

  HJM(no arbitrage model)

  LIBOR market models (modeling a set of forward rates)

  BGM(no arbitrage model)
- You also get a chance to know lots of interest rate derivatives products

  Swaps/futures/options/swaptions

  Callable/convertible/caps/floors/quantos/exotics

12. Game Theory

Targeted Level:	***Course Type:***
Second year students	Elective
Prerequisite:	***Instructors:***
	Yun Wang

Reference Book:

- Game Theory for Applied Economists, by Robert Gibbons, Princeton University Press Reprint edition (July 13, 1992), ISBN-10: 0691003955, ISBN-13: 978-0691003955
- An Introduction to Game Theory, by Martin J. Osborne, Publisher: Oxford University Press (August 7, 2003), ISBN-10: 0195128958, ISBN-13: 978-0195128956

Course Description:

This course introduces students to the basic concepts of game theory, which is the theory of strategic interactions. The emphasis is on the unifying perspective that game theory offers to questions in economics, and many other disciplines including business, biology, political science as well as everyday life. The basic concepts of game theory will be presented using a wide range of substantive and intellectually stimulating applications. After completing this course students will be able to view social interactions as strategic games, to use game theoretic concepts to predict behavior in these interactions and to conceive of ways in which altering the rules of the game will affect outcomes.

13. Industrial Organization

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
The prerequisite for this course is Microeconomics.	Jialiang Zhu

Reference Book:

- Industrial Organization: Contemporary Theory and Empirical Applications,

Lynne Pepall, Daniel J. Richards, and George Norman

- The Antitrust Casebook, William Breit and Kenneth Elzinga

Course Description:

Industrial organization is a subfield of microeconomics devoted to the study of firms and markets, focusing in particular on how firms acquire market power, how firms use this power once acquired, and how competing firms interact strategically. The development of non-cooperative game theory over the past several decades has provided new, formal tools to study these issues and has led to an explosion of interest in industrial organization. Many of the lectures will be theoretical, but there will also be discussions of policy issues and empirical methods.

This course innovates the traditional industrial organization class. It consists of theory, case study and empirical method. After the course, students should be able to distinguish market strategy, improve their literature reading skills, and know some basic data management skills.

14. International Finance

Targeted Level:	***Course Type:***
Second year students	Elective
Prerequisite:	***Instructors:***
N. Gregory Mankiw, Macroeconomics 7th Edition	Yufei Yuan

Reference Book:

- N. Gregory Mankiw, Macroeconomics 7th Edition
- Paul R. Krugman, Maurice Obstfeld and Marc J. Melitz, International Economics: Theory and Policy 9th Edition
- Jeffrey D. Sachs, Felipe B. Larrain, Macroeconomics in the Global Economy Prentice-Hall

Course Description:

Perhaps more than ever before, an international perspective is required to address the fundamental questions of macroeconomics. What determines the level of economic activity in an economy? What determines the pace of economic growth? What are the effects of monetary and fiscal policy? An international perspective not only improves understanding of these familiar questions, but it also allows one to consider important new questions. For instance, why do some countries run trade deficits or surpluses? Should such imbalances concern policy makers? Why do some countries encounter financial crises? What is the proper response to these crises?

In this course, we will build a framework that allows us to address the many interesting questions of international macroeconomics. In this context, several important topics will be discussed, including the following.

- What role does monetary and fiscal policy have in open economies?
- Is there a need for new international financial institutions?
- What are the merits of European Monetary Union?
- What are the tradeoffs between fixed and flexible exchange rates?
- What can account for financial crises?

15. International Trade

Targeted Level:	***Course Type:***
First and Second year students	Compulsory
Prerequisite:	***Instructors:***
Intermediate Microeconomics and Fundamental	Kai Li

Reference Book:

- Krugman, Melitz, and Obstfeld, International Economics: Theory and Policy
- Feestra and Taylor: International Trade
- Reading materials will be assigned in class.

Course Description:

This course will focus on both theoretical and quantitative aspects in the field of international trade. The aim is to help us understand the causes and consequences of trade, with particular focus on firms' behaviors. We will study Ricardian and H-O trade theory before moving on to monopolistic competition of trade. The bulk of the course will be spent discussing modern developments in international trade, focusing on models featuring heterogeneous firms in monopolistically competitive frameworks. We will brief touch on the other modern topics if time permits.

16. Introductory Mathematical Economics

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
Multivariable Calculus, Linear Algebra, basic principles of Microeconomics and Macroeconomics	Ziyan Yang

Reference Book:

- A.K. Dixit, Optimization in Economic Theory (2nd ed), Oxford, Oxford University Press,1990.
- R.K. Sundaram, A First Course in Optimization Theory, Cambridge, Cambridge University
- Press, 1996.

Course Description:

The purpose of the course is to provide students the mathematical tools for graduate study and research in economics. This course is designed to study the mathematical theory of optimization, which are most frequently used in economic models of the firm and consumer behavior. Topics include: necessary and sufficient conditions for constrained optimization, the role of convexity and concavity in optimization and comparative statics. If the time permits, I will slightly introduce the optimal control theory and dynamic programming. By the end of the course, students are expected to 1) understand the theoretical part of most current journal articles in economics, 2) develop theoretical framework in mathematical format to interpret real-life phenomena, 3) be prepared for economics study in future graduate-level courses using a wide range of mathematical techniques, 4) develop a set of problem-solving and analytical skills to solve real-life problems.

17. Investment

Targeted Level:	***Course Type:***
Second year students	Elective
Prerequisite:	***Instructors:***
	Mengmeng Ao

Reference Book:

- 投资学， Z. Bodie, A. Kane, A.J. Marcus，原书第九版，机械工业出版社， ISBN: 7111390288
- Essentials of Investments (9th edition), Z. Bodie, A. Kane, and A.J. Marcus, 2013, Mc-Graw Hill Education. ISBN 978-007-714824-9.
- Investments (any recent version), Z. Bodie, A. Kane, A.J. Marcus, Mc-Graw Hill Education

Course Description:

This course provides you with an introduction to the most fundamental aspects of investments, and possesses both theoretical and practical characteristics. The course aims at illustrating basic knowledge and skills about investments, and guiding students to systematically understand basic concepts and functions of financial markets, portfolio theory and financial assets allocation, investment analysis and management, pricing and using financial derivatives, investment performance evaluation etc. Through the course, students will learn about the investment principles in financial markets, and apply what they learn to analyze and explain investment phenomena in real economic world, get prepared for further study and research, and enhance practical investment abilities.

18. Labor Economics

Targeted Level:	***Course Type:***
Second year students (Master , PhD)	Elective
Prerequisite:	***Instructors:***
	Xiqian Cai

Reference Book:

- Benjamin, Gunderson and Riddell, Labour Market Economics
- Borjas, Labor Economics
- Handbook of Labor Economics, Vol 3A, Orley C. Ashenfelter and David Card, Chapter 23, Empirical Strategies in Labor Economics, by Joshua D. Angrist and Alan B. Krueger (http://www.irs.princeton.edu/pubs/pdfs/401.pdf)
- Microeconometrics: Methods and Applications, by Cameron and Trivedi
- Mostly harmless econometrics: an empiricist's companion, Joshua D. Angrist and Jörn-Steffen, Pischke Princeton and Oxford: Princeton University Press

Course Description:

This is a graduate course in labor economics and covers core topics in the field of labor economics and empirical methods for applied microeconomic analysis. There is no compulsory textbook for the course. Readings designated by an asterisk (*) will be emphasized in the lectures. Readings designated by a (P) can be selected for the in-class presentation. Readings with no asterisk may be discussed in the lectures briefly, but are primarily offered as a guide to the literature.

19. Law Economics

Targeted Level:	***Course Type:***
Second year students	Elective
Prerequisite:	***Instructors:***
	Cheryl Long

Reference Book:

Richard Posner, Economic Analysis of Law (Apsen), or 蒋兆康译中文版，法律出版社。

Required Textbook:

- Robert Cooter and Thomas Ulen, Law and Economics (Addison-Wesley, 6 ed.), or 史晋川译中文版，格致出版社/上海三联书店/上海人民出版社;

Course Description:

This course provides an introduction to law and economics. Standard economic theory will be applied to analyze law and legal institutions and to study the origin, nature, and consequences of the "rules of the game" as they pertain to individual and group behaviors. Specifically, applications of economic theory in property law, contract law, tort law, crime and prosecution, and other related topics will be discussed.

20. Literature Review and Thesis Writing

Targeted Level:	***Course Type:***
Second year students	Elective

Prerequisite:	***Instructors:***
	Xiaofang Dong

Reference Book:

- Cochrane, J., 2005, Writing tips for Ph. D. students, available at http://faculty.chicagobooth.edu/john.cochrane/research/papers/phd_paper_ writing.pdf
- Davis, D., 2001, Ph.D. thesis research: Where do I start? Available at http://www.columbia.edu/~drd28/Thesis Research.pdf
- Hacker, D., 2010, A writer's reference, 6th edition, Bedford/St. Martin's.
- Longknife, A., Sullivan, K.D., 2002, The art of styling sentences, Barron's, New York.
- Feak, C., Swales, J., 2009, Telling a research story: Writing a literature review, The University of Michigan Press.
- McCloskey, D., 2000, Economic writing, 2nd edition, Waveland Press, Inc., Long Grove.
- Strunk, W., White, E., 1999, The elements of style, 4th edition, Longman

Course Description:

The goal of this course is to teach students how to revise and polish their preliminary draft and complete their theses in a satisfactory manner and according to academic standards. In order to achieve this goal, this course is designed as follows.

First, the course introduces students to the ethics, the elements, and the structure of thesis writing. In terms of ethics, we will stress on the harmfulness of plagiarism. In terms of element, we will focus on the academic standards of citation. Formatting issues of the thesis will also be discussed. In terms of the writing structure, we will discuss the writing of data section, empirical analysis, literature review, introduction, conclusion, and abstract one by one. Second, the course provides a revision structure for the students through a series of take-home assignments and deadlines, so that students can make progress on their theses through frequent production of written materials. Third, the course provides for students an opportunity to orally present their work and receive feedback from instructor and peers.

21. Microeconometrics and Application

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
	Ying Zeng

Reference Book:

- Angrist, Joshua, and Jörn-Steffen Pischke. (2014) Mastering 'Metrics: The Path from Cause to Effect. Princeton University Press.
- Angrist, Joshua, and Jörn-Steffen Pischke. (2008) Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press.
- Cameron, Colin, and Pravin Travedi. (2005) Microeconometrics: Methods and Applications. Cambridge University Press.

Course Description:

This is an advanced course in microeconometrics and its application. It is designed for WISE undergraduate experimental class in economics and international master majored in quantitative economics. Building on the introductory level econometrics, this course studies econometric estimation and inference methods frequently used in program evaluation and other empirical studies. The course will cover theories, applications as well as Stata skills in the field of microeconometrics. It aims at equipping the students with all necessary knowledge and skills to fulfill a

simple empirical research project.

22. Selected Issues on China

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
	Shaolian LIAO etc

Reference Book:

- Keay, John. (2009) China: a History. New York: Harperm Press.
- Wright, David Curtis. (2001) The history of China，Westport, Conn. : Greenwood Press.
- Chinese International Publishing Group. (2009) Five Thousand Years of Chinese Characters. Beijing: Foreign Languages Press.
- Chow, Gregory. (2014) China's Economic and Social Problems. New Jersey: World Scientific.
- Zhu, Zhiqun. China's New Diplomacy: Rationale, Strategies and Significance. Farnham, England.
- Chen, Jian, (2013). Diplomacy Leads to World Harmony. Current Affairs Press.
- Ministry of Science and Technology of the People's Republic of China. (2013), China Science and Technology Indicators 2010. Scientific and Technical Documentation Press.

Course Description:

This part of the lecture series provides an introduction to China with focus on history and politics. It will first give a brief introduction to ancient history of China with focus on features of social formation in different historical periods, and then touch upon development of science & technology. The section on politics of China will cover political power and administrative system, as well as the new security concept and its impacts on foreign relations.

23. Time Series Analysis I

Targeted Level:	***Course Type:***
Second year students (Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Haiqiang Chen

Reference Book:

- Time Series Analysis, James D. Hamilton, 1994.

Course Description:

This is an introductory course to time series analysis. Methods are hierarchically introduced .starting with basic concepts and terminologies, progressing to different data analysis, and ending with different modeling and inference procedures. The course material will cover stationary/non-stationary, linear/nonlinear time series analysis. After this course, students are expected to learn the knowledge and skills needed to do both theoretical and empirical research in fields operating with time series data sets.

24. Urban Economics

Targeted Level:	***Course Type:***
Second and third year students	Elective
Prerequisite:	***Instructors:***
The intent of this course is to expose you to a number of ideas in modern urban economics. We will emphasize the use of modeling techniques that build directly upon the material covered in intermediate microeconomics. If you have not yet taken microeconomics, or the equivalent, you should prepare to work very, very hard to keep up with your peers, and should see me immediately to discuss your readiness to take the course. You should also be comfortable with some basic calculus and working with algebraic expressions.	Xiaofang Dong

Reference Book:

- Jan K. Bruckner, Lectures on Urban Economics, MIT Press Optional textbook:
- Arthur O'Sullivan, Urban Economics, 6th ed., McGraw-Hill Irwin
- Richard J. Arnott, A companion to Urban Economic, Blackwell Publishing
- Optional textbook:
- Handbook of Regional and Urban Economics Vol.4-Vol.5 Reading Materials:
- Several journal articles will be distributed during the course, to provide more detail background of the model used in class or to encourage students apply those basic microeconomic concepts to real world scenario.

Course Description:

Urban economics introduces space into economic models and studies the location of economic activity. It addresses a wide variety of theoretical approaches and policy options.

In this course, our primary focus will be on answering general and interesting questions such as, Why do cities exist? How do firms decide where to locate? Why do people live in cities? What determines the growth and size of a city? Which policies can modify the shape of a city? A simple mono-centric model will be introduced to give a basic idea what is the difference between the spatial model and traditional economic model. Then we will analyze specific economic problems that arise because we are living in cities, such as crime and poverty, housing, segregation, congestion, pollution, education, and public policy. I highly encourage and value students who can put those economic problems specifically in Chinese background.

International Graduate Program (Spring Semester)

1. Advanced Corporate Finance

Targeted Level:	***Course Type:***
MA-PhD	Compulsory
Prerequisite:	***Instructors:***
	Haiwei Jin

Reference Book:

- Financial Markets and Corporate Strategy, by Mark Grinblatt and Sheridan Titman (Irwin/McGraw-Hill, 2002)
- The Theory of Corporate Finance, by Jean Tirole (Princeton University Press, 2006)
- Econometric Analysis of Cross Section and Panel Data, by Wooldridge (MIT Press, 2001).

Course Description:

This course surveys the common methodologies used in empirical corporate finance research, with an emphasis on practical issues. It also examines many of the important topics in corporate finance, including both seminal papers and working papers on the cutting edge of the field.

2. Advanced Econometrics II

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
The course prerequisite is Advanced Econometrics I (probability and statistics). Familiarity with linear algebra and multivariate calculus is assumed.	Wei Song

Reference Book:

- Wooldridge, Jeffrey (2015). Introductory Econometrics: A Modern Approach. South-western College Publishers, 6th Edition

Course Description:

This course is designed for International Economics Ph.D. and Master students at WISE, XMU. The basic methods of modern econometrics are covered. Attention will be given both to econometric theory and the problems that arise in empirical studies. We begin with an extended discussion of univariate and multivariate regression analysis. Later in the semester, we will get to learn more advanced topics, such as instrumental variables, limited dependent variable methods, and the application of regression models to time series and panel data.

3. Advanced Macroeconomics II

Targeted Level:	***Course Type:***
First year students (PhD)	Compulsory
Prerequisite:	***Instructors:***

Advanced Macroeconomics I	Minqiang Zhao

Reference Book:

- David Romer, Advanced Macroeconomics 4th Edition, McGraw-Hill/Irwin, 2012 (ISBN:0073511374)

Course Description:

In this course we will study the foundations of modern macroeconomic analysis and survey applications related to economic growth and business cycles. We will begin with a basic understanding of macroeconomic facts related to growth and economic fluctuations, and then explore different macroeconomic models and research findings to help you acquire analytical skills to solve problems in macroeconomics. Some important methods of solving dynamic models, such as differential calculus of constrained maximization and dynamic programming, will be introduced to you.

4. Advanced Microeconomics II

Targeted Level:	***Course Type:***
First year students (PhD)	Compulsory
Prerequisite:	***Instructors:***
Advanced Microeconomics I	Jialiang Zhu

Reference Book:

- Varian: Microeconomic Analysis, 3rd. Ed. - MilesLight.com

Course Description:

This course will equip students with advanced microeconomics theory and its application. After the course, students should be able to use mathematical model to demonstrate economics theory, use economic models to analyze and examine empirical applications. The course is designed for Ph.D. students; it will be highly mathematical orientated. Students are required to take advanced microeconomics I before taking this course.

The course will cover big topics in microeconomics, including uncertainty, utility, market power, oligopoly and game theory, pure exchange economy, and information economics. All the topics will be elaborated on in great details, and students are required to demonstrate all the models using advanced mathematics.

5. Applied Micro-econometrics

Targeted Level:	***Course Type:***
First year students (Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Ying Fang

Reference Book:

- Angrist and Pischke, 2009, Mostly Harmless Econometrics: An Empirical Companion, Princeton University Press, Princeton, New Jersey, USA.
- Arellano, 2003, Panel Data Econometrics, Oxford University Press, New York, USA.

- Cameron and Trivedi, 2005, Microeconometrics, Cambridge University Press, New York, USA. (4) Hsiao, 2003, Analysis of Panel Data, Cambridge University Press, Cambridge, UK.
- Lee, 2005, Micro-econometrics for Policy, Program, and Treatment Effects, Oxford University Press, New York, USA.
- Wooldridge, 2002, Econometric Analysis of Cross Section and Panel Data, MIT press, Cambridge, USA.
- Cerulli, 2015, Econometric Evaluation of Socio-Economic Programs: Theory and Applications, Springer, German.

Course Description:

This course covers several popular econometric methods which have recently been widely used in empirical studies. These topics include (1) instrumental variables estimation and inference under weak instruments and near erogeneity; (2) static and dynamic panel data models; (3) policy evaluation; and (4) quartile estimation.

6. Asset Pricing II: Continuous - time Models and Risk Management

Targeted Level:	***Course Type:***
Second year students (Master, PhD)	Elective
Prerequisite:	***Instructors:***
	TBD

Reference Book:

- Risk Management and Financial Institutions, Third Edition (John Hull, 2012) website: http://www-2.rotman.utoronto.ca/~hull/riskman/
- Stochastic Calculus for Finance: Volume II: Continuous-time Models (Steven Shreve, 2004)
- Options, Futures, and Other Derivatives, 6th Edition (John Hull, 2006)
- Quantitative Risk Management: Concepts, Techniques and Tools (Alexander McNeil, Rüdiger Frey, Paul Embrechts, 2005)
- Monte Carlo Methods in Financial Engineering (Paul Glasserman, 2003)
- Interest Rate Models – Theory and Practice: with Smile, Inflation and Credit, 2nd Edition (Damiano Brigo, Fabio Mercurio, 2007)
- Credit Derivatives Pricing Models: Models, Pricing and Implementation (Philipp Schonbucher, 2003)

Course Description:

This course is designed to introduce modern quantitative methodologies for asset pricing in finance (and insurance) with emphasis on continuous-time models and associated risk management in practice. The main asset classes covered are option, rate and credit. The associated numerical implementations are demonstrated via Mat Lab.

7. Chinese Economy: Transitions and Growth

Targeted Level:	***Course Type:***
Second year students (Master, PhD)	Compulsory (MIT)
Prerequisite:	***Instructors:***

WISE MA & PHD students: First year core courses WISE International MA students: First year core courses	Lei Meng

Reference Book:

Main textbook:

- Naughton, Barry. 2007. *The Chinese Economy: Transitions and Growth*. Cambridge, Mass.: The MIT Press**.**
- Naughton, Barry. 1995. Growing Out of the Plan. Cambridge University Press.

Main reference materials

- Lin, Justin Yifu, Fang Cai, and Zhou Li. 2003. The China Miracle: Development Strategy and Economic Reform. Hong Kong: Chinese University Press.
- Chow, Gregory C. 2007. China's Economic Transformation. 2nd Edition. Malden, MA: Wiley-Blackwell.
- Lu, FMing. 2016. Great State Needs Bigger City. Shanghai: Shanghai People's Publishing House.

Course Description:

The goal of this course is to investigate the fundamental causes of sustained economic prosperity and widespread wealth using the contemporary Chinese economy as the backdrop. Specifically, it aims at providing students with tools and frameworks to explain China's economic transitions and growth, to be able to discuss the contemporary Chinese economy topics in an informed way, and to probe into China's future.

8. Chinese Taxation

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
	Xixi Lin

Reference Book:

- LIU Zou and DU Li, Tax system of the people's republic of China

Course Description:

To introduce the fundamental concepts of tax system in China.

9. Corporate Finance

Targeted Level:	***Course Type:***
First year students	Compulsory (MAF MME)
Prerequisite:	***Instructors:***
Financial Markets and Corporate Strategy, by Mark Grinblatt and Sheridan Titman (Irwin/McGraw-Hill, 2002)	Haiwei Jing

Reference Book:

- Robert C. Higgins, Analysis for Financial Management (9th ed.) Irwin/McGraw-Hill, 2009.
- Richard A. Brealey, Stewart C. Myers, and Franklin Allen, Principles of Corporate Finance (10th ed.), Irwin/McGraw-Hill, 2011.
- Stephen A. Ross, Randolph W. Westerfield, and Jeffrey F. Jaffe, Corporate Finance (9th ed.), Irwin/McGraw-Hill,
- 2009. Joel M. Stern and Donald H. Chew, Jr. eds. The Revolution in Corporate Finance, (4th ed.), Blackwell Business, 2003.

Course Description:

The objective of this course is to develop an understanding of the decisions financial managers face. In this course, we will approach problems from the perspective of the Chief Financial Officer. We will focus on decisions concerning raising money (equity, debt, convertible bonds, etc.), and spending money (project valuation, acquisitions).

10. Derivative Analysis

Targeted Level:	***Course Type:***
MA-PHD & Intl MA	Compulsory
Prerequisite:	***Instructors:***
Calculus , Probability	Pei-Lin Hsieh

Reference Book:

- Options, Futures, and Other Derivatives, John Hull
- An In troduction to Derivatives Securities, Financial Market, and Risk Management, Jarrow and Chatterjea

Course Description:

This course is designed to provide students with a solid understanding of pricing and trading in derivatives markets. The underlying includes futures and options. Algorithmic trading models and practices will be covered based on your understanding of the aforementioned instruments. Students will also better understand investors' trading behavior and how the market functions via micro-structure analysis.

11. Economic Analysis of Environmental Policy

Targeted Level:	***Course Type:***
International master students	Compulsory
Prerequisite:	***Instructors:***
N. Gregory Mankiw, 2014. *Principle of Economics.*	Pei Li

Reference Book:

- Ross R. McKitrick. 2011 *Economic Analysis of Environmental Policy.* University of Toronto Press
- Journals, articles and periodicals (*e.g., The Economist*)

Course Description:

Broadly speaking, economics is the science of how scarce resources are allocated: how people and firms do this allocation and how society might want to make decisions about scarce resources. When viewed in this way, it is clear that economics might provide a useful framework within which to analyze environmental problems and approaches to solve them.

This course introduces students to fundamental concepts, analytical methods and public policy options in managing environmental and natural resources using the tools of economic analysis. What is economics from a practical, problem-solving point of view? And how can we use economics to analyze and solve environmental problems? The answers to these questions are the two central themes of this course.

12. Economic Growth

Targeted Level:	***Course Type:***
First year Intl MA	Elective
Prerequisite:	***Instructors:***
Intermediate Macroeconomics	Mouhua Liao

Reference Book:

- Robert J. Barro and Xavier Sala-i-Martin, ECONOMIC GROWTH, Second Edition, The MIT Press, October 2003.

Course Description:

A theoretical and empirical examination of economic growth and income differences across countries. This course focuses on both the experience of rich countries and the catch-up process of less-developed countries. Topics may include population growth, accumulation of physical and human capital, technological change, openness, the role of government and income distribution. This course use Solow model with exogenous savings rate as a main theoretical framework. We also consider models with endogenous saving rate, such as OLG model and optimization models with a finite period.

13. Empirical Methods in Labor Economics

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
Jeffrey M. Wooldridge, Econometric Analysis of Cross	Xiqian Cai

Reference Book:

- Pierre Cahuc and Andre Zylberberg, Labor Economics, MIT Press, 2004.
- Angrist and Pischke, Mostly Harmless Econometrics, Princeton University Press.

Course Description:

Research in labor economics is closely related to policy, and labor economists often aim to provide evidence on the causal effect of either a policy intervention (e.g. minimum wage) or an individual choice variable (e.g. education, fertility, child care) on labor market outcomes. During the last decades, labor economists have been very prominent in developing micro-econometric methods for estimating such causal effects. This has had substantial spillovers to other fields in economics.

In this course, we will focus on the empirical methods used in labor economics. The course is designed to prepare you to read and evaluate empirical work in labor economics. However, the toolkit presented in this course will be useful for research in all areas of applied micro.

The course will begin with a detailed discussion of some of the main problems affecting empirical work in economics, such as omitted variable bias, selectivity bias, endogeneity, and measurement error. We will then cover the empirical techniques designed to overcome these issues, such as difference-in-difference, regression discontinuity design, instrumental variables etc.

14. Energy Economics

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
N. Gregory Mankiw, Macroeconomics 7th Edition	Chuanwang Sun
Reference Book:	

- Bhattacharyya S C. Energy economics: concepts, issues, markets and governance [M]. Springer Science & Business Media, 2011.
- Dorsman A, Simpson J L, Westerman W. Energy economics and financial markets [M]. Springer, 2013.
- Narbel P, Hansen J P, Lien J R. Energy technologies and economics [M]. Springer, 2014.
- Madureira N L. Key concepts in energy [M]. Springer, 2014.

Course Description:

More than ever, energy dictates our lives. Once viewed as a utility, energy is now the key word in our struggle for a sustainable future. The need for sustainability has turned energy into a highly relevant product, even approximating a lifestyle item. In this course, we will discuss both the value and the valuation of energy, and gain useful insights into the fundamental economic forces determining the global energy supply and demand. Some economics issues facing the energy sector will also be figured out, like environmental pollutions, renewable energy systems, low-carbon development and energy finance. This course is accessible to students of little mathematical background. The economic concepts will be explained in graphical presentations, while the mathematics materials are often provided for further reading.

15. Environmental Economics

Targeted Level:	***Course Type:***

First year students	Compulsory
Prerequisite:	***Instructors:***
Introductory Economics	Xiaojia Bao

Reference Book:

- Kolstad, Charles D., 2010. Environmental Economics. Oxford University Press.

Course Description:

This course is intended for second-year, junior and senior students in the undergraduate program. The goal of this course is to train students with topics in environmental economics and analytical skills for addressing basic empirical research questions related to environmental economics. Students should be able to analyze basic environmental issues with economic approaches and tools.

16. Experimental Economics

Targeted Level:	***Course Type:***
First year students	Elective
Prerequisite:	***Instructors:***
Principals of Economics or equivalent courses	Sen Geng

Reference Book:

- Charles Plott and Vernon Smith, Handbook of Experimental Economics Results, North-Holland, 2008

Course Description:

This course consists of two parts. Seventy percent of time will be devoted to the methodology and application of experimental methods in economics. Given the recent growth of interest in behavioral considerations, experiments are increasingly used in economics to study human behavior. With their help we now have much better understanding of individual and market behavior. Students will overview some of the most important existing experimental work and learn how to design their own experiments and prepare to run them.

Thirty percent of time will be spent on exploring how individuals and firms make financial decisions in a way that deviates from those predicted by traditional financial or economic theory. Specifically, we examine the existence of psychological biases in financial decision-making, and how the insights of behavioral finance sheds light on the behavior of asset prices, corporate finance, and various financial practices.

17. Fixed Income Analysis

Targeted Level:	***Course Type:***
First year students	Compulsory (MAF)
Prerequisite:	***Instructors:***

	Jian Chen

Required Textbook:

- Bond Markets Analysis and Strategies, Sixth Edition, by Frank Fabozzi, Pearson, Prentice Hall, 2007.

Reference Book:

- Modeling Fixed Income Securities and Interest Rate Options by Robert Jarrow (Stanford Economics and Finance) 2nd Edition, 2002.
- Fixed Income Securities by Bruce Tuckman (Wiley), 2nd Edition, 2002.
- Fixed Income Markets and Their Derivatives by Suresh Sundaresan (South Western), 2nd Edition 2001.

Course Description:

The purpose of the course is to familiarize the students with the world of fixed income and the characteristics of the various securities traded in fixed income markets. This is not a very technical course, and precise pricing models will not be discussed-they are covered extensively in other courses offered at WISE. We will also focus on public policy issues related to the fixed income markets.

18. Human Ecology

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
Principles of Economics	Nan Zhong

Reference Book:

- Diamond, Jared. Guns, Germs, and Steel: The Fates of Human Societies. W.W. Norton, 2005.
- McNeill, J.R. Something New Under the Sun. W.W.Norton, 2000.
- Sachs, Jeffrey D. Common Wealth. Penguin, 2008.
- Angus Maddison, The World Economy

Course Description:

Human ecology is an interdisciplinary subject which studies the relationship between humans and their natural and social environments.

This course combines some most recent developments in both natural and social sciences, provides an introduction to this interdisciplinary field of human ecology, with a focus on the relationship between nature's processes and economic development, and the way they impact each other. Some important topics that will be discussed include how natural resource or ecological constraints can significantly affect economic development. For example, the patterns of climate, disease ecology, physical resources such as energy and geographical conditions can significantly shape the patterns of social and economic development. And anthropogenic activities, such as farming and depletion of resources, affect the physical environment in turn. In the process, the course will also provide introductions of ecosystem service, human development, some related economic policies that help managing the limited resources, and sustainable development. With these topics, the course aims to provide students an understanding of the interaction between the natural system and the social economic development.

19. Time Series Analysis

Targeted Level:	***Course Type:***
First year students	Compulsory (MAF)
Prerequisite:	***Instructors:***
Probability and Statistics	Yingxing Li

Reference Book:

- Time Series Analysis with Applications in R

Reference Book:

- Analysis of Financial Time Series

Course Description:

Time Series Analysis is an important branch in Inferential Statistics, and it also has wide applications in Economics, Social Science, and Natural Science. In this course, we will introduce the important theory and methods that are used in time series analysis, and discuss in details how to model stationary time series, nonstationary time series, seasonal time series, including model identification, parameter estimation, model diagnostic checking, prediction and control and so on. After taking this course, students are expected to learn the skills needed to do empirical research with time series data, and they are able to evaluate their analysis and know how to improve their analysis, which might help them a lot in further studying and practices.

20. Mathematical Economics

Targeted Level:	***Course Type:***
First year PhD students	Compulsory
Prerequisite:	***Instructors:***
Introductory Mathematical Economics	Ying Zeng

Reference Book:

- Mathematics for Economists, First Edition, by Carl P. Simon and Lawrence Blume.
- Essential Mathematics for Economic Analysis, Fifth Edition, by Knut Sydsaeter, Peter Hammond, Arne Strom, Andrés Carvajal

Course Description:

This course is designed for international Ph.D. students. It is a continuation of introductory mathematical economics. The purpose of this course is to expose students to mathematics techniques frequently used in advanced microeconomics, advanced macroeconomics and advanced econometrics

21. Microeconometrics and Application

Targeted Level:	***Course Type:***
First year students	Compulsory

Prerequisite:	***Instructors:***
Econometrics	Jiaming Mao

Reference Book:

- James et al., An Introduction to Statistical Learning: with Applications in R, Springer, 2013.
- Morgan and Winship, Counterfactuals and Causal Inference, Cambridge University Press, 2007.
- Angrist and Pischke, Mostly Harmless Econometrics: An Empiricist's Companion, Princeton University Press, 2009.
- Wasserman, All of Statistics: A Concise Course in Statistical Inference, Springer, 2004.
- Cameron and Trivedi, Microeconometrics: Methods and Applications, Cambridge University Press, 2005.
- Stock and Watson, Introduction to Econometrics, 3rd Edition, Pearson Education, 2010.

Course Description:

This course consists of three parts. The first part surveys a range of techniques used in econometrics, statistics and machine learning that are useful in analyzing micro data. The second part focuses on the estimation of treatment effects and introduces the theory of causal inference. The third part discusses structural estimation and its applications. The goal of this course is to prepare students with the tools to conduct empirical research in microeconomics. The emphasis will be on issues that arise in working with data and practical considerations in using various techniques rather than their theoretical underpinning. It is assumed that students already have a sufficient knowledge of the basic econometric theory.

22. Multivariate Statistics Analysis

Targeted Level:	***Course Type:***
First year students	Compulsory (Statistics)
Prerequisite:	***Instructors:***
Linear Algebra, introductory probability and statistics.	Yanan He

Reference Book:

- Applied Multivariate Statistical Analysis, sixth Edition, by Johnson, R.A. and Wichern, D.W., published by Pearson Education or Tsinghua University Press.

Course Description:

This is an introductory multivariate statistical analysis course. The aim of the course is to introduce a variety of statistical methods for describing and analyzing multivariate data, emphasizing the implementation and interpretations of these methods. At the end of the course, students should develop the knowledge for making proper interpretations, selecting appropriate techniques, and understanding their value.

23. Public Finance

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
Microeconomics; Macroeconomics	Ye Liu

Reference Book:

- *Harvey S Rosen, Public Finance (6th Edition),*

Course Description:

This course is a Compulsory course for students who majored in Public Finance. Its purpose is to make the students master the basic theory of modern public finance, and be able to use their knowledge to think about the fiscal realities of our country and even worldwide. The topics include: The Functions of Public Finance; Public Goods; Public Choice; The Theories of Public Expenditure; purchase expenditure; transfer expenditure; taxation theory; Taxation System; Government Budgeting; Deficits and Public debts; Fiscal System.

24. Public Policy Analysis

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
Microeconomics; Macroeconomics; Public Economics;	Pei Li

Reference Book:

- Class notes

Course Description:

This course aims to provide students with both a conceptual framework and practical experience in analyzing public policies. The course covers a variety of topics related both to the substance and methods of policy analysis. It is designed to help students develop the skills required to define and critically analyze policy issues and problems, choose the relevant methods and techniques for policy analysis, evaluate alternative policy solutions and assess the means and costs of implementation.

25. Real Estate Economics

Targeted Level:	***Course Type:***
Second year students	Compulsory
Prerequisite:	***Instructors:***
Intermediated Microeconomics, Intermediated Macroeconomics	Xiaofang Dong

Reference Book:

- DiPasquale, Denise, and William Wheaton. Urban Economics and Real Estate Markets. Upper Saddle River, NJ: Prentice Hall, 1995. ISBN: 9780132252447
- John F. McDonald, and Daniel P. McMillen. Urban Economics and Real Estate: Theory and Policy, Wiley, 2 edition, 2010. ISBN: 978-0470591482

Course Description:

This course is designed to provide students with an introductory analysis of real estate markets, as well as public policies that affect these markets. We will apply the latest economic thinking and research to the task of analyzing real estate market fundamentals, forecasting supply and demand, and choosing locations. In this course, we will build a framework that allows us to address the many interesting questions of real estate economics. In this context, we will discussed several important topics as following.

What is the optimal Housing FAR?

How to predict the changes in real estate markets?

What about the Retail travel patterns and the distribution of stores?

Is there any fiscal incentives for land use regulation?

What can account for submarkets and land use segregation?

26. Regional Economics

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
Advanced microeconomics & Advanced econometrics	Xiaofang Dong, Shihe Fu, Pei Li, Xirui Zhang

Reference Book:

- Regional Economics, Roberta Capello, 2006, Routledge.
- Modern Urban and Regional Economics, Philip McCann, 2013, Oxford University Press.
- Methods of Interregional and Regional Analysis, edited by Walter Isard, et al., 1998, Ashgate.
- Handbook of Regional and Urban Economics, Vol. 1-5, Elsevier.

Course Description:

This course covers the theoretic and quantitative methods in regional economic analysis. The theories include theory of location and land use, theory of regional growth, theory of regional development, theory of regional competition and coordination, theory of spatial equilibrium, cost and benefit analysis of infrastructure projects and their financing. The quantitative methods include regional and interregional input-output analysis, gravity and spatial interaction models, basic spatial econometrics, multiplier analysis, shift-share analysis, place-based policy evaluations, regional economic forecasting models.

Students are expected to be able to apply both theoretic and empirical methods to carry out regional, inter-regional, and urban economic analysis and related policy evaluation.

27. Stochastic Process

Targeted Level:	***Course Type:***
First year students	Compulsory (MFE)
Prerequisite:	***Instructors:***
Students will need to have basic knowledge of finance, calculus, and probability. The knowledge of financial engineering will be also expected.	Jian Chen

Reference Book:

- Neftci, Salih, 1999, An Introduction to the Mathematics of Financial Derivatives, Academic Press.
- Shreve , Steven E., 2003, Stochastic Calculus for Finance I & II, Springer.
- Hull, John C., Options, Futures, and Other Derivatives, 8th edition, Pearson Press.

Course Description:

Stochastic analysis is a rapidly expanding interdisciplinary field that involves mathematics (stochastic calculus) and models for financial markets. Finance has become an increasingly quantitative discipline, and financial institutions are hiring graduates in finance, economics, mathematics, physics, and engineering. A solid mathematical and financial foundation is necessary to understand new paradigms in finance, and employers are also looking for graduates trained in both disciplines, with particular emphasis on modeling ability. This course will comprise an immersion into the mathematics and models of modern finance, with an emphasis on conceptual and mathematical understanding, as well as building and implementing models.

28. Topics in Labor Economics

Targeted Level:	***Course Type:***
First year students	Compulsory
Prerequisite:	***Instructors:***
Jeffrey M. Wooldridge, Econometric Analysis of Cross	Xiqian Cai, Shihe Fu and Lei Meng

Reference Book:

- Pierre Cahuc and Andre Zylberberg, Labor Economics, MIT Press, 2004.
- Angrist and Pischke, Mostly Harmless Econometrics, Princeton University Press.

Course Description:

Labor economics as a field has grown enormously in the past several decades. Although originally focused on the interactions between firms and workers, modern labor research examines diverse areas such as crime, family interactions, social incentive etc. The purpose of this course is to review several topics of interest to labor economists, outlining the relevant theoretical work and empirical evidence. Particular emphasis will be given to identifying data sources that will be useful for students in their own empirical work, as well as furthering students' understanding of the empirical methods used by labor economists.

Master and PhD Programs (Fall Semester)

1. Advanced Econometrics I

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
Calculus, Linear Algebra.	Zhenghui FENG, Yaxing YANG, Huihui LI, Guannan LIU

Reference Book:

- 概率论与统计学，洪永淼，中国统计出版社，2017
- Lecture Notes on Probability and Statistics Theory for Economists, Yongmiao Hong, 2013.
- Statistical Inference, Casella, G. and Berger, R. L. Duxbury Press, 2002.

Course Description:

This course is the first course in a graduate econometrics sequence and provides necessary probability and statistics background for the first-year graduate students for their courses in econometrics, microeconomics, and macroeconomics. Contents are as following:

Chapter 1. Foundation of Probability Theory
Chapter 2. Random variables and Univariate Probability Distribution
Chapter 3. Important Parametric Distributions
Chapter 4. Random Vectors and Multivariate Probability Distribution
Chapter 5. Introduction to Sampling Theory and Statistics
Chapter 6. Convergence Concepts and Limit Theories
Chapter 7. Parameter Estimation and Evaluation
Chapter 8. Hypothesis Testing

2. Advanced Macroeconomics I

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
	Minqiang ZHAO, Yu ZHANG, Shan ZHOU, Jaehong Kim

Reference Book:

- Advanced Macroeconomics, 3rd edition, by David Romer
- Economic Growth, 2nd edition, by Robert J. Barro and Xavier Sala-i-Martin

Course Description:

This course explores the workings of an economy from a macroeconomic perspective. Although the course focuses primarily on the United States economy and its relation with the rest of the world, the concepts and tools apply to market economies around the world.

3. Advanced Microeconomics I

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
Advanced mathematics, Intermediate microeconomics	Luhang WANG, Xiaolu ZHOU, Menghan XU, Zhi LI, Yang XU

Reference Book:

- Advanced Microeconomic Theory(3rd Edition,China Edition)，Geoffrey A.Jehle and Philip J.Reny，PEARSON EDUCATION ASIA LTD and CHINA RENMIN UNIVERSITY PRESS，2011
- Microeconomic Theory，Andreu Mas-Colell,Michael D.Whinston and Jerry Green，Oxford University Press，2012

Course Description:

Microeconomics investigates how individual agents, such as consumers and firms, make (rational) decisions, as well as how these decisions interact and lead to equilibrium either in a single market setting or on multiple markets simultaneously. The aim of this course is to prepare graduate-level students with the microeconomic theory related to their future fields of interests. Topics covered in Advanced Microeconomics I include consumer theory, producer theory, partial equilibrium and general equilibrium. In this course, the economic concepts and behavior assumptions will be examined at a higher level of rigor with the help of mathematical tools.

4. Mathematical Economics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Advanced mathematics (calculus, linear algebra, fundamentals of probability theory), principles of economics, intermediate microeconomics, intermediate macroeconomics	Sen GENG, Xixi LIN

Reference Book:

- Mathematics for Economists，Carl P. Simon and Lawrence Blume，Norton&Company, Inc.，1994

Course Description:

This course is designed to introduce to a wide range of mathematical techniques used in graduate level economics courses. Topics include the tools used to analyze equilibrium models, comparative-static models and optimization. Elementary economics courses use reasonably simple mathematical techniques to describe and analyze the models they present. They focus on models with one or two goods in a world of perfect competition, complete information, and no uncertainty. Courses beyond introductory micro- and macroeconomics drop these strong simplifying assumptions. However, the mathematical demands of these more sophisticated models scale up considerably. The goal of this course is to give students of economics a deeper understanding and working knowledge of the mathematics they need to work with these more sophisticated, more realistic, and more interesting models.

5. Time Series Analysis I

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Advanced Econometrics I, II	Muyi LI

Reference Book:

- Time Series Analysis, James D. Hamilton, 1994.
- Time Series: Theory and Methods (2nd ed.), Peter J. Brockwell & Richard A. Davis, 1991.
- Time Series Analysis, James D. Hamilton, 1994.
- Analysis of Financial Time Series (3rd ed.), Ruey S. Tsay, 2010.
- Lecture notes on Nonlinear time series analysis-Econometric Theory and Application, Yongmiao Hong, 2011.
- The Elements of Financial Econometrics, Jianqing Fan& Qiwei Yao, 2015.

Course Description:

This is an introductory course to time series analysis. Methods are hierarchically introduced starting with basic concepts and terminolo- gies, progressing to different data analysis, and ending with different modelling and inference procedures. The course material will cover stationary/nonstationary, linear/nonlinear, univariate/multivariate time series analysis. After this course, students are expected to learn the knowledge and skills needed to do both theoretical and empirical research in fields operating with time series data sets.

6. Law Economics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Xiaoning LONG

Reference Book:

- Richard Posner, Economic Analysis of Law (Apsen)
- Law and Economics (6th Edition)，Robert B. Cooter, Thomas Ulen, Prentice Hall

Course Description:

This course provides an introduction to law and economics. Standard economic theory will be applied to analyze law and legal institutions and to study the origin, nature, and consequences of the "rules of the game" as they pertain to individual and group behavior. Specifically, applications of economic theory in property law, contract law, tort law, crime and prosecution, and other related topics will be discussed.

7. Asset Pricing

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Peilin XIE

Reference Book:

- John Cochrane, Asset Pricing, PrincetonUniversity Press, 2005.
- George Pennacchi, Theory of Asset Pricing, 2008,
- Campbell and Viceira, Strategic Asset Allocation: Portfolio Choice for Long-term Investors, OxfordUniversity Press, 2002.
- Campbell, Lo and MacKinlay, The Econometrics of Financial Market. PrincetonUniversity Press, 1997.
- Darrell Duffie, Dynamic Asset Pricing Theory, 1996.
- Altug S. and Labadie D., Dynamic Choice and Asset Markets,1994 Foundations for Financial Economics，Chi-fu Huang and Litzenberger，Prentice Ha,1988.
- Asset Pricing，John H.Cochrane，Princeton University Press，2005.

Course Description:

This course, which is the first in the sequence of doctoral seminars offered in finance, is designed to introduce students to the major models of asset pricing and to Rational Expectations models. All of the material is developed from first principles, so there are no formal prerequisites for taking this seminar. It is assumed, however, that students are familiar with basic microeconomic theory and have a working knowledge of both calculus and matrix algebra. The outline that follows provides a brief description of the material that is covered in the course. The general approach will be:

- to examine the economic intuition behind each model
- provide a mathematically rigorous derivation of the model
- discuss the model's important features, and outline the testable implications of the model.

8. Advanced Topics on Finance

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Guojin CHEN

Reference Book:

- Asset Pricing，John H.Cochrane，Princeton University Press, 2005
- John Campbell , Andrew Lo and Craig MacKinlay, The Econometrics of Financial Markets, Princeton University Press,1997.

Course Description:

This course will review the classical asset pricing theory in discrete time, cover the empirical puzzles, and then will discuss the recent theories that have been developed to try to solve the puzzles. The purposes of this course are to

introduce some advanced topics in finance to students as well as to give students some basic training in reading and writing.

9. Labor Economics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Advanced Econometrics Ⅰ, Advanced Econometrics Ⅱ	Xiqian CAI

Reference Book:

- George Borjas, Labor Economics, Seventh Edition, McGraw Hill.
- Pierre Cahuc and Andre Zylberberg, Labor Economics, MIT Press, 2004.
- Angrist and Pischke, Mostly Harmless Econometrics, Princeton University Press.

Course Description:

This is a graduate course in labor economics and covers core topics in the field of labor economics and empirical methods for applied microeconomic analysis. Research in labor economics is closely related to policy, and labor economists often aim to provide evidence on the causal effect of either a policy intervention (e.g. minimum wage) or an individual choice variable (e.g. education, child care) on labor market outcomes. During the last decades, labor economists have been very prominent in developing micro-econometric methods for estimating such causal effects. This has had substantial spillovers to other fields in economics. In this course, we will focus on the empirical methods used in labor economics. The course is designed to prepare you to read and evaluate empirical work in labor economics. However, the toolkit presented in this course will be useful for research in all areas of applied micro. The course will begin with a detailed discussion of some of the main problems affecting empirical work in economics, such as omitted variable bias, selectivity bias, endogeneity, and measurement error. We will then cover the empirical techniques designed to overcome these issues, such as difference-in-difference, regression discontinuity design, instrumental variables etc.

10. Advanced Topics on Macroeconomics I: Monetary Economics and International Finance

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Advanced Macroeconomics and Advanced Microeconomics.	Hao JIN

Reference Book:

- Martin Uribe and Stephanie Schmitt-Grohe (2017): Open Economy Macroeconomics, Princeton University Press.
- Jordi Galí (2015): Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications, Princeton University Press.

Course Description:

This course uses intertemporal optimization approach to study topics in open economy macroeconomics. Students will have the opportunity to learn a set of models and tools to analyze open economy macroeconomic questions and contact a number of active research areas in this field.

11. Applied Microeconometrics

Targeted Level:	***Course Type:***
Second year students (Master, PhD)	Elective
Prerequisite:	***Instructors:***
Advanced Econometrics、Probability Theory	Ying FANG

Reference Book:

- Angrist and Pischke, 2009, Mostly Harmless Econometrics: An Empirical Companion, Princeton University Press, Princeton, New Jersey, USA.
- Arellano, 2003, Panel Data Econometrics, Oxford University Press, New York, USA.
- Cameron and Trivedi, 2005, Microeconometrics, Cambridge University Press, New York, USA. (4) Hsiao, 2003, Analysis of Panel Data, Cambridge University Press, Cambridge, UK.
- Lee, 2005, Micro-econometrics for Policy, Program, and Treatment Effects, Oxford University Press, New York, USA.
- Wooldridge, 2002, Econometric Analysis of Cross Section and Panel Data, MIT press, Cambridge, USA.

Course Description:

This course covers several popular econometric methods which have recently been widely used in empirical studies. These topics include (1) instrumental variables estimation and inference under weak instruments and near exogeneity; (2) static and dynamic panel data models; (3) policy evaluation; and (4) quantile estimation.

12. Microeconometrics and Panel data

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Cheng Hsiao

Required Textbook::

- C. Hsiao (2014), Analysis of Panel Data, 3rd edition. Cambridge, University Press

Reference Book:

- A.C Cameron and P.K. Trivedi (2005), Microeconometrics, Cambridge University Press.

Course Description:

The first lecture notes are mainly about the estimation and the estimation test of the discrete choice model. The first major part covers the parametric estimation, mainly the MLE approach, for different choice models while the last small part explains the semi-parametric approach. The second lecture notes are mainly about the estimation of sample selection model for truncated data and censored data respectively. The first major part is about the various parametric approaches while the last small part introduces the non-parametric approach. The third lecture notes are mainly about the nonparametric statistics, which has not yet started this semester. The first part covering the density estimation,

explains the expected value, variance, bias, MSE of the density function under uniform of multidimensional kernel form while the last part introduce the nonparametric regression.

13. Generalized Linear Models

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Wei ZHONG

Reference Book:

- An Introduction to Generalized Linear Models Third Edition, 2015.
- Generalized Linear Models，Peter McCullagh and Jhon Nelder, Boca Raton: Chapman and Hall.

Course Description:

This course will focus on theories and applications of generalized linear models and related statistical topics. Topics include multivariate regression, ANOVA models, log-linear models, logistic regression, logit and probit models, Poisson regression and survival analysis.

14. Applied Nonparametric Econometrics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Zongwu CAI

Reference Book:

- Conover, W.J. (1971). Practical Nonparametric Statistics, 2nd Edition. John Wiley & Sons, New York.
- Fan, J. and I. Gijbels (1996). Local Polynomial Modeling and Its Applications.Chapman and Hall, London.
- Fan, J. and Q. Yao (2003). Nonlinear Time Series: Nonparametric and Parametric Methods. Springer-Verlag, New York.
- Li, Q. and J. Racine (2007). Nonparametric Econometrics: Theory and Practice. Princeton University Press, Princeton.
- Serfling, R.J. (1980). Approximation Theorems in Mathematical Statistics.John Wiley & Sons, New York.

Course Description:

This is an advanced level of econometrics course designed with ideas, methodologies, theory and applications. Here, our focuses are on both the rigorous THEORY and SKILLS of analyzing real data using nonparametric methods, in particular on implementation using the statistical software R. The socalled nonparametric statistics is referred to use statistical techniques that do not require a researcher to specify a functional form for an object being estimated.Rather than assuming that the functional form of an object is known up to a few unknown parameters, we shall substitute less restrictive assumptions such as existence and smoothness for the assumption that the parametric form of, say, a density function is known and equal to, say, the univariate normal distribution. Of course, if there is some prior knowledge about

the functional form of the object of interest up to a few unknown parameters (say, mean and variance), then it would be better to use parametric techniques. However, in practice these forms are rarely if ever known, and the unforgiving consequences of parametric misspecification are well known and are not repeated here.

15. Multivariate Statistical Analysis

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Qingzhao ZHANG

Reference Book:

- Applied Multivariate Statistical Analysis: Pearson New International Edition (English Edition), Richard A. Johnson、Dean W. Wichern, 2013

Course Description:

This is a professional course designed for graduate students who are major in Statistics. The objective of the course is to introduce a variety of statistical methods used to analyze multivariate data, with emphasis on the theory and development of these methods. Topics covered include graphical techniques for displaying multivariate data, the geometry of sample data, the multivariate normal distribution, principal components analysis, factor analysis, canonical correlation analysis, classification/discrimination, as well as cluster analysis.

16. Study of the Capital（taught in Chinese）

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Compulsory
Prerequisite:	***Instructors:***
	Changfa DING, Jian ZHAO

Reference Book:

- 马克思：《资本论》1-3卷；
- 马克思：《剩余价值学说史》；
- 王亚南：《中国经济原论》。

Course Description:

Through in-depth studies on the "Capital" ,this course tries to help the students further understand the methodology and some of the problems of Marxist economics, and develop their ability to analyze economic problems ,and the ability of scientific research. A comparison of Marxist Economics and Western Economics Research would be implemented so that the students may better understand Marxist economics and western economics.

17. Financial Statement Analysis

Targeted Level:	***Course Type:***

First year students (Professinoal Master of Finance)	Compulsory
Prerequisite:	***Instructors:***
	Yue QIU

Reference Book:

- Financial Statement Analysis and Security Valuation, 5th edition, by Stephen Penman
- Financial Reporting and Analysis,by Revsine, Collins, Johnson, Mittelstaedt and Soffer (6th Edition, McGraw‐Hill, 2015).

Course Description:

This course is designed to help you develop skill of financial information analysis - particularly firms' financial reports - for making decisions, strategy and investment. The course will be taught from the perspective of a security analyst; with the course material closely will be relevant from the aspect of corporate financial analyst for evaluating acquisitions and other investments, and for calculating the value generated by strategy scenarios. By the end of the course, the student should feel competent in writing a thorough, convincing equity research report.

18. Fixed Income Securities

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Qian HAN

Course Description:

This course introduces the primary knowledge of fixed income securities, including the basic knowledge of fixed income securities and the market operation of fixed-income markets, the pricing of bonds, the yield analysis, the static models of the interest rate term structure, interest rate risk management, the bonds portfolio management, securitization, and fixed-income derivatives. Fixed-income derivatives includes interest rate forwards, interest rate futures, interest rate swaps, interest rate options and credit derivatives.

19. Quantitative Portfolio Management

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Haiqiang CHEN

Reference Book:

- Quantitative Equity Portfolio Management: An Active Approach to Portfolio Construction and Management, by Ludwig B. Chincarini and Daehwan Kim, McGraw-Hill Education

Course Description:

The purpose of this course is to enable students to master the basic concepts and methods of quantitative investment,

and to develop students' ability in quantitative analysis and decision-making. Learn how to build and deduce a quantitative portfolio model and how to use the model to make financial investment decisions; Students will learn to use statistical analysis software and programming language to analyze financial data, construct and evaluate the quantitative portfolio, so as to improve the practical ability of quantitative analysis.

20. Financial Market and Financial Products

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Ye GUO

Reference Book:

- 1、弗雷德里克 S • 米什金 (Frederic S. Mishkin) , 斯坦利 G.埃金斯 (Stanley G.Eakins) ,《金融市场与金融机构》（第七版），机械工业出版社。
- 2、张亦春 郑振龙 林海,《金融市场学》（第四版），高等教育出版社。
- 3、林华 主编，《金融新格局:资产证券化的突破与创新》，中信出版社 2014 年版。
- 4、保罗•西罗尼 (Paolo Sironi) ，《金融科技创新》，中信出版社 2017 年版。

Course Description:

The main contents of this course includes the macroeconomic and financial situation, the introduction of financial market, the change and development trend of Chinese financial market, the marketization of interest rate and the internationalization of RMB, and the financial innovation of China (financial system innovation). Financial product innovation) and five parts.

21. Mergers and Acquisitions

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Baolin XU

Course Description:

This course deals primarily with different aspects of mergers and acquisitions(M&A), including review of previous massive international M&A waves, analysis on motivations and types of M&A, methods of due diligence and valuation on the target company and basic models of takeovers (such as, negotiated acquisition, collective bidding and tender offer). Based on all the knowledge mentioned above, we will then focus on leveraged buyout(LBO) and management buyout(MBO), which are widely used on international M&A market.

22. Financial Modeling with Excel VBA

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Baolin XU

Course Description:

With the development of financial market, the release of real economic risks. Students are increasingly required to have the skills of quantitative financial modeling. The most commonly used knowledge in the market is to use EXCEL-VBA programming to manage risk and asset pricing. But. At present, there are very few specialized financial modeling courses in the financial disciplines of colleges and universities in China. Therefore, the course of financial modeling can enhance students' skills as soon as possible. It is of great significance to improve the pertinence and effectiveness of student training. This course is intended to combine theoretical knowledge with the help of the computer classroom and equipment of the college. Cultivate students' practical ability and programming ability in financial modeling, and improve students' competitiveness in the job market.

23. Quantitative Investment

Targeted Level:	***Course Type:***
Second year students (Professional Master of Applied Statistics)	Elective
Prerequisite:	***Instructors:***
	Hua ZHAO

Reference Book:

- Asset Management: A Systematic Approach to Factor Investing，Andrew Ang，Oxford University Press.，2014

Course Description:

The objectives of the course are designed for students with career aspirations in asset management, equity research, financial consulting, private equity, or investment banking. The course is useful for all investment professionals who want to knowledge quantitative investment processes, portfolio analytics, and efficient portfolio construction techniques. Quantitative Investments delivers the theory and tools necessary for active quantitative investment management. This course is also very data-intensive. Students are going to learn how to write compute programs to retrieve data, to construct portfolios, and to manage portfolio risks. The course encourages students to develop quantitative strategies and present them in class.

Master and PhD Programs (Spring Semester)

1. Advanced Econometrics II

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***

Advanced Econometrics I	Xiaoyi HAN, Xingbai XU, Tian XIE, Andrew Pua, Li, CHEN

Reference Book:

- 高级计量经济学，洪永淼，高等教育出版社，2011
- 计量经济学导论，杰弗里伍德里奇，清华大学出版社 Cengage Learning，2017
- Econometric Analysis, by William H. Greene,7th Edition
- Introductory Econometrics: A Modern Approach, by Wooldridge, 4e
- Econometric Theory and Methods, by Davidson and MacKinnon

Course Description:

This course is for graduates as an advanced level of econometrics. It develops a coherent framework of econometric theory and methods for economic models, covering classical regression analysis, asymptotic theory, instrumental variables, GMM, (Q)MLE, etc. We exclude GMM and MLE in a one-semester study. This course emphasizes theories' proofs, intuitions, and applications to practical economic problems and phenomenon. Grasping these analytical tools, students would be able to read and understand more advanced econometric books. Much homework will consolidate what students learn.

2. Advanced Macroeconomics II

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
Advanced Macroeconomics I	Linlin NIU

Reference Book:

- Structural Macroeconometrics（结构化的宏观经济计量学），David N. DeJong, Chetan Dave，Princeton University Press, 2007，
- Monetary Policy, Inflation, and the Business Cycle，Jordi Gali，Princeton University Press，2008
- Advanced Macroeconomics，David Romer，McGraw-Hill，2012

Course Description:

This is the second of the required core courses in macroeconomic theory for graduate students. Dynamic stochastic general equilibrium (DSGE) models have become the standard workhorse models for the analysis of economic fluctuations. The primary focus of the course will be on the analysis, solution, estimation, and extension of DSGE models. In addition, students will be introduced to basic tools in the New Keynesian modelling approach, which combines the DSGE structure characteristic of Real Business Cycle (RBC) models with assumptions that depart from those found in classical macroeconomic models. Modern macroeconomics is a quantitative science. As such, students will be expected to perform quantitative exercises using a computer program, most preferably MATLAB. You will also be asked to download Dynare, which is a set of codes used to solve, simulate, and estimate DSGE models.

3. Advanced Microeconomics II

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory

Prerequisite:	***Instructors:***
Advanced Microeconomics I	Inkee Jang, Yun WANG, Shaojie XUE

Reference Book:

- Microeconomic Theory，Andreu Mas-Colell, Michael D. Whinston, Jerry R. Green，Oxford University Press，1995
- Microeconomic Analysis，Hal R. Varian，W .W. Norton & Company，1992

Course Description:

This course will equip students with advanced microeconomics theory and its application. After the course, students should be able to use mathematical model to demonstrate economics theory, use economic models to analyze and examine empirical applications. The course will cover Part A Social Choice：（1）Social Choice Theory；（2）Collective Decision and Welfare；Part B Game Theory（1）Game Theory Basic Concepts；（2）Information Economics (Adverse Selection; Moral Hazard)；Part C Mechanism Design: Auction and Revenue Maximizing Mechanism

4. Advanced Financial Economics

Targeted Level:	***Course Type:***
First year students (Master , PhD)	Compulsory
Prerequisite:	***Instructors:***
	Shuoxun ZHANG, Juan LIN, Yang Ji, Chao MA

Reference Book:

- Intermediate Financial Theory，Danthine and Donalson，Academic Press，2015

Course Description:

The course provides an introduction to the field of asset pricing and portfolio choice. Topics to be covered include: consumer decision-making under uncertainty, Capital Asset Pricing Model (CAPM), the Consumption Capital Asset Pricing Model (CCAPM), the Arbitrage Pricing Theory (APT), the Arrow-Debreu Pricing theories and the Martingale Pricing methods，etc. This course will also discuss the application of econometric methods to the estimation and testing of selected models of financial economics.

5. Advanced Corporate Finance

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Electice
Prerequisite:	***Instructors:***
	Haiwei Jing

Reference Book:

- Financial Markets and Corporate Strategy, by Mark Grinblatt and Sheridan Titman (Irwin/McGraw-Hill, 2002)
- The Theory of Corporate Finance, by Jean Tirole (Princeton University Press, 2006)
- Econometric Analysis of Cross Section and Panel Data, by Wooldridge (MIT Press, 2001).

Course Description:

This course surveys the common methodologies used in empirical corporate finance research, with an emphasis on practical issues. It also examines many of the important topics in corporate finance, including both seminal papers and working papers on the cutting edge of the field.

6. The Chinese Economy: Transitions and Growth

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
WISE MA & PHD students: First year core courses WISE International MA students: First year core courses	Lei MENG

Reference Book:

- Chow, Gregory C. 2015. China's Economic Transformation. 3nd Edition. Malden, MA: Wiley-Blackwell.
- Naughton, Barry. 2007. The Chinese Economy: Transitions and Growth. Cambridge, MA: The MIT Press.
- Lin, Justin Yifu, Fang Cai, and Zhou Li. 2003. The China Miracle: Development Strategy and Economic Reform. Hong Kong: Chinese University Press.
- Naughton, Barry. 1995. Growing Out of the Plan. Cambridge University Press.

Course Description:

This course introduces students to the transitions and growth of the Chinese economy. It first provides a historical-institutional background for understanding the current Chinese economy. This includes discussion on economic lessons from history, geographical endowments, traditional economy, planned economy and the strategy and process of market transition. It then covers specific topics such as economic growth and topics in economic development, putting special emphasis on population, human capital, migration, and trade. It also branches into studies of economic institutions by focusing on the role of regional government in China's economic growth. It concludes by drawing lessons from studying the Chinese economy.

7. Derivatives Analysis

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Calculus , Probability	Peilin XIE

Reference Book:

- Options, Futures, and Other Derivatives, John Hull
- An In troduction to Derivatives Securities, Financial Market, and Risk Management, Jarrow and Chatterjea

Course Description:

This course is designed to provide students with a solid understanding of pricing and trading in derivatives markets. The underlying includes futures and options. Algorithmic trading models and practices will be covered based on your understanding of the aforementioned instruments. Students will also better understand investors' trading behavior and

how the market functions via micro-structure analysis.

8. Urban Economics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Advanced microeconomics; Dynamic optimization; Applied econometrics	Shihe FU

Reference Book:

- Arnott, R., ed., 1996, Regional and Urban Economics, Volumes 1-2, Harwood Academic Publishers.
- Arnott, R., D. McMillen, eds, 2006, A Companion to Urban Economics, Blackwell Publishing.
- DiPasquale, D., Wheaton, W., 1996, Urban Economics and Real Estate Markets, Prentice Hall.
- Fujita, M., 1989, Urban Economic Theory: Land Use and City Size, Cambridge University Press.
- Fujita, M., Krugman,P., Venables, A., 2001, The Spatial Economy, The MIT Press.
- Fujita, M., Thisse, J.F., 2002, Economics of Agglomeration, Cambridge University Press.
- Henderson, J.V., 1985, Economic Theory and The Cities, Academic Press.
- Kanemoto, Y., 1980, Theories of Urban Externalities, North-Holland Publishing Company.
- Papageorgiou, Y., Pines, D., 1999, An Essay on Urban Economic Theory, Springer.
- Handbook of Regional and Urban Economics, Volume 1-4.

Course Description:

This course covers the main theory and empirical evidence in urban economics at the graduate level, focusing on the development of this field during the past three decades. The prerequisites are Advanced Microeconomics, Dynamic optimization, and Applied econometrics. Topics covered include internal structure of cities, optimal city size and city size distribution, theory and empirical evidence on agglomeration economies, urban growth, urban labor markets, housing economics and policy, transportation economics, local public finance, new economic geography, and recent studies on Chinese cities.

9. Thesis Writing & Master Opening Report

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Wenchao XU

Reference Book:

- Joyner, Randy L.; Rouse, William A. (Arthur), Jr.; Glatthorn, Allan A. Writing the Winning Thesis or Dissertation: A Step-by-Step Guide. 3rd ed. Sage Publications, 2012. (Course textbook, recommended)
- Meloy, Judith M. Writing the Qualitative Dissertation. 2nd ed. Lawrence Erlbaum Associates, Publishers, 2002
- Israel, Mark; Hay, Iain. Research Ethics for Social Scientists. Sage Publications, 2006

Course Description:

The course is designed to get students familiarize with the process of thesis writing, committee organization, thesis and dissertation defense, and other related issues; to ensure timely and successful completion of the thesis or dissertation; to plan ahead at the early stage for their career, particularly for those with academic career advancement plans; and to provide knowledge and suggestions for organizing, writing, and publishing.

10. Professional English Writing

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
	Roslyn Bowers

Course Description:

This course seeks to help the student develop professional writing skills and strategies with a solid command of the English language by helping to effectively develop both academic writing skills and improve upon oral communication. Contrary to some assumptions, writing does not come naturally. Therefore, this course seeks to provide some understandable and practical strategies to help increase one's writing productivity. The student will develop the ability to write effectively in a range of contexts and for a variety of different audiences and purposes by using appropriate styles and approaches. In the oral communication segment, the student shall develop the ability to explain and present his/her ideas in clear English to a range of audiences. Students should be capable of developing the ability to tailor a delivery to any given audience, by using the appropriate styles and approaches and developing an understanding of the importance of non-verbal cues in oral communication.

11. Environmental Economics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Intermediate Microeconomics	Minqiang ZHAO

Reference Book:

- Charles D. Kolstad, Intermediate Environmental Economics 2nd Edition, Oxford University Press, 2011.

Course Description:

This course aims to help students understand the connection between economics and the environment, and how economic analytical tools can be used to make private and public economic decisions that involve environmental resources. Through this course, students should be able to grasp the basic theoretical knowledge, analytical and evaluation methods to lay down a solid foundation for engaging in further environmental economic studies or for engaging in environment-related governmental work in the future.

12. Experimental Economics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Principals of Economics or equivalent courses	Sen GENG

Course Description:

This course consists of two parts. Seventy percent of time will be devoted to the methodology and application of experimental methods in economics. Given the recent growth of interest in behavioral considerations, experiments are increasingly used in economics to study human behavior. With their help we now have much better understanding of individual and market behavior. Students will overview some of the most important existing experimental work and learn how to design their own experiments and prepare to run them. Thirty percent of time will be spent on exploring how individuals and firms make financial decisions in a way that deviates from those predicted by traditional financial or economic theory. Specifically, we examine the existence of psychological biases in financial decision-making, and how the insights of behavioral finance sheds light on the behavior of asset prices, corporate finance, and various financial practices.

13. Bayesian Statistics

Targeted Level:	***Course Type:***
Second year students (Academic Master, PhD)	Elective
Prerequisite:	***Instructors:***
Principals of Economics or equivalent courses	Sen GENG

Course Description:

Bayesian statistics is very distinctive and important part of modern statistics. The point is to take the parameter as a random variable, using historical information to determine the prior distribution, then using samples to obtain the posterior distribution, and then using the posterior distribution to make various statistical inferences. This course introduces basic theory and methodology of Bayesian statistics, including the Gibbs sampling and MCMC algorithm. The objective is to make students understand and master ideas and methods of Bayesian statistics in order to lay a good foundation for applying Bayesian statistics in various fields.

14. Financial Modeling

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Qian HAN

Reference Book:

- Modeling in Finance using Excel.and Vba，Sheridan Titman，John Wiley & Sons, 2001

Course Description:

This course is designed to equip students with practical skills of financial modeling with Excel VBA programming. Specific topics include: (1) asset pricing such as bond, stock and credit product valuations; (2) financial risk management such as hedging, diversifying and insuring with derivatives; (3) performance measurement for mutual funds and hedge funds. It is our hope that through taking this course, students will not only understand the theory and models behind asset valuation and risk management, but also be well prepared to provide effective solutions to real world financial problems.

15. Financial Econometrics

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Li CHEN

Reference Book:

- 指定教材：金融时间序列分析，Ruey S. Tsay，人民邮电出版社，2012 年 09 月
- 指定教材：金融计量学：时间序列分析视角(第二版)（非全日制专硕使用），张成思，中国人民大学出版社，2016 年 03 月

Course Description:

The course contents mainly include Regression Analysis; Autoregressive Moving Average Model (ARMA); Vector Autoregressive Model (VAR); Cointegrated Process; Principal Components Analysis (PCA) and Factor Analysis; Stable Process; ARMA with fat-tailed errors and Autoregressive Conditional Heteroscedasticity Model (ARCH) and GARCH Model

16. Financial Derivatives: Theory

Targeted Level:	***Course Type:***
Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Peilin XIE

Reference Book:

- Options, Futures, and Other Derivatives，John C. Hull，Pearson，2017

Course Description:

Financial derivatives are fundamental to the understanding of modern financial markets. This course will be structured as four parts, with each part focusing respectively on the basics of financial derivatives, the pricing of forward and futures, swap contracts, the pricing of options, the application of options, and risk management. In addition to the aforementioned subject matters, case studies regarding the China's financial derivative markets are conducted.

17. Financial Derivatives: Practice

Targeted Level:	***Course Type:***

Second year students (Professional Master of Finance)	Elective
Prerequisite:	***Instructors:***
	Peilin XIE

Reference Book:

- Trading Commodities and Financial Futures，George Kleinman，Pearson，2013

Course Description:

The course is structured as four parts to introduce the application of financial derivatives. The first part introduces basic knowledge of financial derivatives. The second part deals with basic operations of forwards, futures and options, such as hedging, arbitrage trading, volatility trading, and market maker trading. The third part talks about trading strategies of financial derivatives. The last part is a trade simulation, including futures trading in CFFE, options trading in SHSE, T-quote, and use of client software. A demo trading contest would be held, if possible.The teaching method combines lecture, case study and demo trading. Students are expected to master the knowledge and practice of financial derivatives by learning textbook knowledge and participating in demo trading (access to Shanghai 50ETF options), experiencing the real derivative markets, trading strategies and risk exposure.

18. Theory and Method of Investment Economics

Targeted Level:	***Course Type:***
Second year students (Professional Master of Applied Statistics)	Elective
Prerequisite:	***Instructors:***
	Lizhi TANG

Reference Book:

- Zvi Bodie，Alex Kane，Alan J.Marcus《投资学》（英文版），机械工业出版社，2009
- （法）索尔尼克著，王闻等译，《国际投资学》，中国人民大学出版社，2004 年 12 月

Course Description:

Based on the modern investment theories and modern economics analysis method, this course introduces the latest modern investment theory and method comprehensively and systematically. Emphasizing the organic unity of the theory and practice, macroscopic and microcosmic, theoretical research and empirical analysis, in 6 aspects this course elaborates project investment, property investment, financial investment, international investment, venture investment, government investment in the latest research results and related theoretical progress from 6 aspects, in order to make students grasp the essence of modern investment activities regulars of the internal and external performance.

19. Data Mining

Targeted Level:	***Course Type:***
Second year students (Professional Master of Applied Statistics)	Elective

Prerequisite:	***Instructors:***
	Kuangnan FANG

Reference Book:

- An Introduction to Statistical learning，Gareth James Daniela Witten Trevor Hastie，Springer，2013
- Ben-Chang Shia, Yu-Ting Cheng, Chih-Hsiung Su, Liang-Fen Kuo, “Excel Application in Data Mining ”, Chung-hwa DATA MINING Society, November 2007.
- Ben-Chang Shia, Yu-Ting Cheng, Chih-Hsiung Su, Liang-Fen Kuo, “Microsoft SQL Server Application in Data Mining & Business Intelligence ”, Chung-hwa DATA MINING Society, November 2007.
- Ben-Chang Shia, Yu-Ting Cheng, Jia-Jyu Deng, “DATA MINING SUMMARY “Chunghwa DATA MINING Society.
- Yu-Ting Cheng, Dan-Huei Yi, Ben-Chang Shia, “Statistical data analysis “, Chunghwa DATA MINING Society, April 2006.

Course Description:

1. Understand DM concept
2.Using DM Tools
3.Understand DM methodology
4.Understand DM application

20. Multivariate Statistical Analysis

Targeted Level:	***Course Type:***
Second year students (Professional Master of Applied Statistics)	Elective
Prerequisite:	***Instructors:***
	Jingyuan LIU

Reference Book:

- Applied multivariate sttistical analysis，Richard A.Johnson and Dean W.Wichern，Pearson Education，2008

Course Description:

This course is to implement the "less is more" principle, strive to statistics theory as the main line, using the SPSS software as the tool, explain profound theories in simple language to introduce theory and application of multivariate statistical methods. The main contents include: the first chapter is a survey of multivariate analysis; the second chapter is multivariate normal population parameter estimation; the third chapter content is the test of multivariate normal distribution mean vector and covariance matrix; the fourth chapter is the discriminant analysis; the fifth chapter is clustering analysis; the sixth chapter is the principal component analysis; the seventh chapter content is the factor analysis; the eighth chapter is The corresponding analysis; the ninth chapter is the canonical correlation analysis, the tenth chapter is multidimensional scaling; the eleventh chapter is multivariate visualization analysis. This book is particularly prominent, the SPSS software learning and case analysis of the organic combination, shows the application of multivariate statistical analysis method.

21. The Research of National Accounting Theories and Method

Targeted Level:	***Course Type:***
Second year students (Professional Master of Applied Statistics)	Elective
Prerequisite:	***Instructors:***
Economic statistics (national economic statistics)	Chan YANG

Reference Book:

- 国民经济核算教程（第四版），杨灿，中国统计出版社，2016 年

Course Description:

This course covers the basic theories and methods of national accounts and some relevant issues of macroeconomic analysis. The main contents include: First, an overview at the basic issues of national accounts (framework, principles, classification); Second, comprehensive introduction of five parts of the accounts theories and methods; Third, the structure of national accounts; Fourth, the frontier issues and developments of national accounts; Fifth, the compilation of CPI, the theories and methods of economic statistics, and so on. Combining with relevant research projects, this course aims at expanding and deepening students' existing knowledge of economic statistics and national accounts, helping the students master the relevant theories and skills more thoroughly, and cultivating their interest and ability of analyzing and solving problems of relevant fields through classroom learning, literature study and discussion.