

# ECONOMICS (ECON-SHU)

## ECON-SHU 1 Principles of Macroeconomics (4 Credits)

*Typically offered Fall and Spring*

Focuses on the economy as a whole (the "macroeconomy"). Begins with the meaning and measurement of important macroeconomic data (on unemployment, inflation, and production), then turns to the behavior of the overall economy. Topics include long-run economic growth and the standard of living; the causes and consequences of economic booms and recessions; the banking system and the Federal Reserve; the role of government policy; and international trade. Prerequisite: None. Fulfillment: Economics Major Required Economics Courses; Social Science Major Foundational Courses; Data Science Major Courses for Concentration in Economics.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Required
- SB Crse Attr. NYU Shanghai: Social Science Foundational Course

## ECON-SHU 2 Principles of Microeconomics (4 Credits)

*Typically offered Fall and Spring*

Focuses on individual economic decision-makers—households, business firms, and government agencies—and how they are linked together. The emphasis is on decision making by households and firms and how these decisions shape our economic life. Explores the different environments in which businesses sell their products, hire workers, and raise funds to expand their operations; the economic effects of trade between nations; and the effects of various government policies, such as minimum-wage legislation, rent controls, antitrust laws, and more. Prerequisites: Calculus (MATH-SHU 131 or 201) Fulfillment: Economics required; Social Science Foundational course.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Required
- SB Crse Attr. NYU Shanghai: Social Science Foundational Course

## ECON-SHU 3 Microeconomics (4 Credits)

*Typically offered Fall, Spring, and Summer terms*

Economics studies how agents make decisions under conditions of scarcity and uncertainty. This course provides a rigorous introduction to economics, with special emphasis on microeconomics. It will introduce you to economics as a discipline and as a way of thinking. It will also provide you with a set of tools, which will be very useful in other economics courses. We will first study the behavior of individual consumers and firms. Then we will give you some insight into how markets work and whether market outcomes are desirable. We will also look at situations in which the firm is a monopolist, or competes with a limited number of rivals. Some key concepts we will introduce include economic incentives, marginal analysis, opportunity cost (which costs matter), market efficiency (what does it mean for a market to work) and strategic behavior (how to predict and respond to your rivals' decisions). The tools that you will be acquainted with in this class are fundamental for most upper division courses of the Economics major as well as classes in Finance, Accounting and Marketing. Prerequisites: Calculus or above. Fulfillment: Economics Major Requirements; IMB Major Business Elective; Social Science Major Foundational Courses; BUSF/BUSM Business Core Courses; Data Science Major Concentration in Finance/Marketing/Economics.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: BUSF Business Core
- SB Crse Attr. NYU Shanghai: BUSM Business Core
- SB Crse Attr. NYU Shanghai: Economics Required
- SB Crse Attr. NYU Shanghai: IMB Business Elective
- SB Crse Attr. NYU Shanghai: Social Science Foundational Course

## ECON-SHU 5 Math for Econ 1: Optimization (2 Credits)

*Typically offered occasionally*

Elements of calculus and linear algebra are important to the study of economics. This class is designed to provide the appropriate tools to complement study of intermediate and advanced economic theory. Examples and motivation are drawn from important topics in economics. Topics covered include derivatives of functions of one and several variables; interpretations of the derivatives; convexity; constrained and unconstrained optimization; series, including geometric and Taylor series; matrix algebra; and (possibly) eigenvalues. Pre-requisites: Calculus (MATH-SHU 131 or 201). Fulfillment: Economics elective

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 10 Intermediate Microeconomics (4 Credits)***Typically offered Fall*

Rigorous examination of consumer choice, profit-maximizing behavior on the part of firms, and equilibrium in product markets. Topics include choice under uncertainty, strategic interactions between firms in noncompetitive environments, intertemporal decision making, and investment in public goods. Prerequisites: (ECON-SHU 2 Principles of Microeconomics or ECON-SHU 3 Microeconomics) and (MATH-SHU 131 Calculus or ECON-SHU 5 Math for Econ 1: Optimization). Fulfillment: Economics Major Requirement; Social Science Major Focus Courses Political Economy - 200 level.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Required
- SB Crse Attr. NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 151 Sustainable Business Practices and Development Economics (4 Credits)**

The course is structured to provide students with a series of coherent modules. The first module introduces concepts in sustainable development economics and complexity theory. The main idea is to incorporate novel ideas into more traditional growth theories. We use a broader perspective on development, using concepts from complexity theory and other disciplines to provide a solid theoretical framework. Students are expected to tackle sophisticated theoretical papers in this module. The second module explores the role of companies in promoting sustainable ideas by transforming the socioeconomical environment, analyzing the possibility that private firms can be promoters of change by changing internal management practices. We use a Business as Usual to a Future Sustainable Business framework as sketched below and explore the role of firms in changing the international business context - one of the case studies for this module explores changes in a multinational bank that introduced a credit score system based on sustainability of the agricultural sector. Prereq for ECON-SHU 151 is ECON-SHU 1 Principles of Macroeconomics or ECON-SHU 3 Microeconomics. Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 200 Topics in Macroeconomics: (4 Credits)***Typically offered occasionally*

Prerequisite: ECON-SHU 3 Microeconomics and ECON-SHU 1 Principle of Macroeconomics Fulfillment: 1) Topic: Economics of Gender: Economics elective; Social Science Political Economy 200 level; 2) Topic: Financial Crises & Econ. Policy: Advanced Economics elective; 3) Topic: Market Design: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No**ECON-SHU 200-2 Topics in Econ: (2 Credits)***Typically offered occasionally*

Prerequisite: None. Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 201 Math for Economists (4 Credits)***Typically offered Spring*

This course explores applications of calculus to basic differential equations and functions of several variables, which arise in virtually all fields of applied mathematics including Economics. Topics addressed include first and second-order differential equations, surface and line integrals, divergence, gradient, curl, and the theorems of Gauss, Green, and Stokes. Prerequisite: Placement via NYUSH mathematics placement exam or grade of C or better in MATH-SHU 131. Fulfillment: Economics advanced elective; Social Science Methods course.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Advanced Elective
- SB Crse Attr. NYU Shanghai: Social Science Methods Course

**ECON-SHU 202 Intermediate Macroeconomics (4 Credits)***Typically offered Spring*

The course will cover a broad range of topics in macroeconomic theory, empirics and policy. Among the issues to be discussed are the business cycle theory, economic crises, economic growth, IS-LM model, open economy, inflation and unemployment, dynamic model of aggregate demand and supply, stabilization policy, government debt and budget deficits, money supply, central banking. The banking system: competition and stability, banking growth nexus, prudential regulation and the role of the financial sector in the macroeconomics model. Prerequisites: ECON-SHU 1 Principles of Macroeconomics or ECON-SHU 251 Economics of Global Business. Fulfillment: Economics required; Social Science Focus Political Economy 200 level course.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Required
- SB Crse Attr. NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 208 Money and Banking (4 Credits)***Typically offered occasionally*

Money supply; banking as an industry; banks as suppliers of money; the Federal Reserve System and monetary control; monetary theory; and contemporary monetary policy issues. Prerequisite: ECON-SHU 1 Principles of Macroeconomics OR ECON-SHU 251 Economics of Global Business OR BUSF-SHU 202 Foundations of Finance. Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 210 Market Design (4 Credits)**

The course is about design of markets, not only in the sense of auctions and matching markets, but also in the broader sense of designing allocation rules in general. We aim to understand why some markets need to be designed, and what important design elements are. This is particularly relevant for the digital economy where market design is often programmed into smart contracts, and market participants may be computational agents. The course includes a series of assignments that build towards writing a short research paper for the course. The topic of the research paper should be related to the material presented in the course, but must go into more depth with selected issues. Prerequisite: ECON-SHU 3 Microeconomics or ECON-SHU 216 Introduction to Game Theory Fulfillment: Economics Advanced elective.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Advanced Elective

**ECON-SHU 213 Causal Inference in the Social Sciences (4 Credits)**

*Typically offered occasionally*

Questions that have answers in data are called empirically verifiable questions. That is, instead of debating based on logic, anecdotes, past experiences and personal beliefs, we can collect and carefully analyze large amounts of data on what people really did, thought, felt and obtained, to find out what really happened. The tools introduced in this course will help you become a qualified detective when investigating causal questions related to political, social, economic and business phenomena with data. Students will learn how to interpret, design, and execute empirical research using Stata software. Pre-requisites: BUSF-SHU 101 Fulfillment: Economics elective; Social Science Methods course.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective
- SB Crse Attr. NYU Shanghai: Social Science Methods Course

**ECON-SHU 215 Economic History (4 Credits)**

*Typically offered occasionally*

This course introduces students to a broad set of important economic history topics. The period covers the Middle Ages to the 20th century, and the geographic coverage is globally wide. More focus is given to Britain and Northwestern Europe because that is where economic growth first occurred, but US, Asia, Latin America, and Africa are also included. The course is designed so that students with a particular interest in one topic area can focus their attention in that area, while still being exposed to a broader set of research. It is designed to This course has several objectives: the first is to give students essential background in the historical context for modern economic development through time. Secondly, it shows how theoretical approaches and quantitative tools can be applied to historical evidence. The third objective is to introduce students to research and paper writing in economic history and other applied fields of economics. Prerequisite: Principles of Macroeconomics or Economics of Global Business or Co-req Principles of Macroeconomics or Economics of Global Business Fulfillment: Economics elective; Social Science Focus Political Economy 300 level course.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective
- SB Crse Attr. NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 216 Introduction to Game Theory (4 Credits)**

*Typically offered Fall and Spring*

This course introduces students to the basic concepts and tools of game theory and their applications to real-life situations. It starts with basic terms such as strategies, payoffs, and equilibrium, and then goes through different types of games, such as extensive form games, normal form games, dynamic games and games with incomplete information. The second half of the course covers a selection of topics closely related to the real world, such as cold war, voting, bargaining and auction. Students will be able to analyze the situation, frame it in terms of the tools discussed, and understand the strategies used in the interaction. Pre-requisites: Calc (MATH-SHU 131 OR 201) Fulfillment: Economics Major Electives; IMB Major Business Elective Courses; Mathematics Major Additional Mathematics Electives; Honors Mathematics Major Mathematics Electives; Social Science Major Methods Courses; Business and Finance Major Non-Finance Electives; Business and Marketing Major Non-Marketing Electives

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: BUSF Non-Finance Elective
- SB Crse Attr. NYU Shanghai: BUSM Non-Marketing Elective
- SB Crse Attr. NYU Shanghai: Economics Elective
- SB Crse Attr. NYU Shanghai: Honors Mathematics Math Elective
- SB Crse Attr. NYU Shanghai: IMB Business Elective
- SB Crse Attr. NYU Shanghai: Mathematics Additional Mathematics Elective
- SB Crse Attr. NYU Shanghai: Social Science Methods Course

**ECON-SHU 217 Topics in Economics: Financial Technology (4 Credits)**

The course examines the development of money, banking and financial technology (fintech). Prerequisite: ECON-SHU 1 Principles of Macroeconomics. Fulfillment: Economics Major Advanced Economics Electives.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Advanced Elective

**ECON-SHU 218 International Trade and the Chinese Economy (4 Credits)***Typically offered Fall and Spring*

This course is designed to combine basic trade theory with its practical relevance in China to help students better understand the international economic activities in developing countries. We will investigate the causes and consequences of trade, discuss the role of multinational corporations and foreign direct investment in driving economic growth and wage inequality, and study countries' motives for regulating international trade and the effects of trade policy on economic welfare. We will also focus on China's gains and losses from opening up to trade and investment, on the dual impacts of the rise in exports from China on the U.S. employment and consumers, on the distributional effects of tariff cuts in developing countries, and so on. Prereq for ECON-SHU 218 is Microeconomics and (Principles of Macroeconomics or EGB). Fulfillment: Core Curriculum Social Science Perspective on China; Social Science Major Focus Courses Political Economy - 200 level; Economics electives.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Elective
- SB Crse Attr: NYU Shanghai: Social Science Focus Political Economy
- SB Crse Attr: NYU Shanghai: Social Science Perspective on China

**ECON-SHU 221 China's Financial System (4 Credits)***Typically offered every year*

This course introduces the institutions and instruments of the Chinese financial system as well as relevant macroeconomic policy tools as they play a role in the broader Chinese economy. The goal of the course is to provide students with a comprehensive understanding based on monetary and financial economics from a comparative and historical standpoint. The teaching proceeds in three stages: (1) introductory redux in monetary and financial economics (2) historical and comparative overview of the evolution of China's financial system and macroeconomic policy in the context of international financial arrangements (3) in-depth analysis of current topics in the field. Some of the topics covered include the Chinese banking system, RMB exchange rates, Chinese stock markets and bond markets, mutual fund and hedge fund industry, security dealers and money markets, Chinese derivative markets, green finance arrangements, real estate markets and state owned companies. The similarities and differences between Chinese financial markets and more developed financial markets will be highlighted. Prerequisite or Co-requisite: Principles of Macroeconomics (ECON-SHU 1 or equivalent) or Economics of Global Business (ECON-SHU 251 or equivalent).

Antirequisite: Students who have taken BUSF-SHU 286 Chinese Financial Market are not eligible. Fulfillment: CORE IPC; Economics Elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Elective
- SB Crse Attr: NYU Shanghai: Interdisciplinary Perspectives on China

**ECON-SHU 222 Cooperation, Coordination, Collective Action (4 Credits)***Typically offered every year*

As social animals, cooperation has been vital to human beings' success. Yet in contexts as mundane as cleaning or impactful as climate change, people often fail to work together, even for mutual benefit. Using game theory as a launching point, with detours in neuroeconomics, behavioral economics, political economy, and elsewhere, this course considers the challenge of motivating collective action at different scales, from cooperation in small societies, to mass action undertaken by strangers united by a common cause. Ultimately, this course is designed to help students spark collective action when they feel it is needed by providing a suitable framework for analysis and an environment to discuss and refine ideas, eventually resulting in a final project. Prerequisite: Sophomore standing. Fulfillment: Econ elective; Social Science Focus Political Economy 200 level.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Elective
- SB Crse Attr: NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 225 Advanced Economic Theory (4 Credits)***Typically offered Fall*

Advanced Economic Theory is focused on the effect of uncertainty on individual decisions, on the design of optimal contracts, and on competitive markets. Compared to Game Theory, we consider situations where agents have no strategic power, or where the strategic power is entirely in the hands of one party (for contract design). The course is divided into three blocks. In the first block, we review the standard model of expected utility that is used in economics, we investigate its foundations in absence of objective probabilities, and we study two fundamental applications at the core of macroeconomics and finance. In the second block, we study applied problems of information asymmetry in bilateral interactions, and the optimal contractual solutions for the uninformed party. In the third block, we analyze the effect of uncertainty on general equilibrium in multi-period competitive markets. Basic knowledge of multivariate calculus constitutes a necessary mathematical background to follow the course. Pre-requisites: Intermediate Micro AND (Math for Econ 1 OR Multivariate Calculus) Fulfillment: Economics Major Advanced Economics Electives; Social Science Major Focus Courses Political Economy - 300 level.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Advanced Elective
- SB Crse Attr: NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 232 Blockchain, Cryptocurrency, and Money (4 Credits)***Typically offered Fall*

In this course, we will learn all about Blockchain and money. (1) We will first investigate questions about how to make money and how money used to be made; who can and who can't make money in the modern economy; what money is and how money moves; how to measure money and how to control money. (2) Second, you will learn why, until the arrival of Blockchain, it has been so difficult to make new digital money; what Blockchains really are; how Blockchains work and when Blockchains don't work; how to raise money and how to make new digital money with Blockchains. You will thereby gain a solid and detailed technical understanding of Blockchain and the Blockchain-enabled financial technology. (3) Third, you will also learn about the most important current and future non-blockchain financial technologies in China, including the People's Bank of China's digital yuan (e-CNY) project.

Topics to be covered include: definition of money, functions of money, the evolution of money and digital money, money creation, payment systems, Alipay, WeChat Pay, financial technology (FinTech), distributed ledgers, Blockchain technology, digital signatures, basic cryptography, cryptocurrencies, cryptocurrency market, Bitcoin, Bitcoin security and quantum computing, consensus, Proof-of-Work (PoW), Proof-of-Stake (PoS), the economic limits of consensus protocols, initial coin offerings (ICO), online peer-to-peer lending (P2P), China's digital currency and electronic payment system (DC/EP), digital yuan, e-CNY, and central bank digital currencies (CBDC). Prerequisite: ICP, or ICS, or Creative Coding Lab Fulfillment: CORE STS; Economics Elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Elective
- SB Crse Attr: NYU Shanghai: Science, Technology and Society

**ECON-SHU 238 History of Modern Economic Growth: Exploring China From a Comparative Perspective (4 Credits)***Typically offered Fall*

This course has two goals: 1) to provide an understanding of economic development and growth with applications to the Chinese economy and Chinese institutions, and (2) to learn how to analyse major policies in China's economic development in both oral and written form. China has experienced rapid institutional changes and achieved high growth rates. We start with (i) the pre-modern and early-modern historical background of this transition process and then move on to analyse (ii) the roots and pattern of economic growth in modern China. Topics include: The great divergence between poor and rich countries; introduction to global economic history; why the industrial revolution did not take place in China's Yangtze River Delta first; economic catch up by the rest of the West; state-led big push industrialization; the ancient Chinese economy's high-level equilibrium trap; the Needham Question; the Chinese economy prior to 1949; modern China's early reform era 1949-78; the developmental state; market transition post-1978; modern Chinese growth and structural change. Prerequisite: None. Fulfillment: CORE SSPC or IPC; Economics elective; GCS elective The Politics, Economy, and Environment of China; Social Science Focus Political Economy 200 level course.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Elective
- SB Crse Attr: NYU Shanghai: GCSE: The Politics, Econ, Environment of China
- SB Crse Attr: NYU Shanghai: Interdisciplinary Perspectives on China
- SB Crse Attr: NYU Shanghai: Social Science Focus Political Economy
- SB Crse Attr: NYU Shanghai: Social Science Perspective on China

**ECON-SHU 239 China's Economic Transition (4 Credits)***Typically offered every year*

Over the past forty years, China has transitioned from a poor, inefficient, and closed economy to an upper-middle income country and the world's largest trading nation. This course introduces the key institutional and economic reforms of China since 1978 and their contributions to China's economic development. We will examine the reforms in the pivotal sectors, including agriculture, industry, banking, and international trade, all of which are important steps to improve the overall efficiency and productivity of the Chinese economy. We will also discuss the current challenges facing China to maintain sustainable growth, such as problems regarding demographic structure, state-owned enterprises, government debts, etc. Prerequisite: This course assumes no prior background in economics. However, if you are already familiar with basic algebra and basic calculus, supply and demand curves, basic economics concepts, it will help you to understand this course better. Prereq: None. Fulfillment: CORE IPC; Economics Elective; Social Science Focus Political Economy 200 level.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Elective
- SB Crse Attr: NYU Shanghai: Interdisciplinary Perspectives on China
- SB Crse Attr: NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 250 Economics of Global Business for Econ (4 Credits)***Typically offered occasionally*

This course, intended for Economics students, examines the forces driving toward globalization: the integration of national business activities into globally competitive markets. International trade is a key driver of global integration. The role of comparative advantage as a determinant of the location of production is examined. Also examined are the reasons for and effects of government policies that create impediments to international trade. The second part of the course surveys the role of money and finance in global economic activity. The role of exchange rates as key variables in global finance is introduced. Also examined is the role of government policies toward the foreign exchange market, including the choice between fixed and floating exchange rates and the use of exchange controls to create impediments to currency exchanges. The course also introduces the concept of foreign direct investment and discusses the rising importance of multinational corporations. Prerequisite: ECON-150.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No**ECON-SHU 251 Economics of Global Business (4 Credits)***Typically offered Spring*

The objective of this course is to provide future decision-makers with a systematic understanding of critical aspects of economic development and the global business environment. We will examine the basic workings of the national economies (macroeconomics) and then explain the role of international trade and international finance. We show how the forces of globalization affect international business, down to the impact on the future careers of NYU students. The challenges presented by tepid economic growth in Europe, a soft landing in China, and the changing dynamics in the US, and the long run prospects for global economic growth and development are discussed. Pre-requisite: ECON-SHU 150 or ECON-SHU 3 Fulfillment: Economics required; IMB Business Foundation course; Social Science Foundational course; BUSF/BUSM Business Core course.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: BUSF Business Core
- SB Crse Attr: NYU Shanghai: BUSM Business Core
- SB Crse Attr: NYU Shanghai: Economics Required
- SB Crse Attr: NYU Shanghai: IMB Required Business Foundation Course
- SB Crse Attr: NYU Shanghai: Social Science Foundational Course

**ECON-SHU 260 International Trade (4 Credits)***Typically offered Fall*

This course will cover the basics of international trade theory and policy. It will introduce students to the main theoretical concepts in international trade, ranging from the Ricardian comparative advantage theory to the new trade theory under imperfect competition. Using the tools of microeconomic analysis, this course will explore the patterns of trade among countries, policies that impede or promote free trade as well as their welfare and distributional implications. Pre-requisite: ECON-SHU 3 Microeconomics.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No**ECON-SHU 301 Econometrics (4 Credits)***Typically offered Fall and Spring*

This course introduces the core set of statistical tools used by economists to analyze data and understand causal relationships among variables in order to assess economic theories and estimate policy impacts. Students will learn regression analysis that provides a framework for quantifying how a change in one variable affects another variable and for measuring the uncertainty/precision associated with those answers. Students will also learn how to use Stata, a statistical software package, to perform regression analysis. Upon completion of this course, students will be able to conduct their own empirical research using econometric methods. Prerequisite: BUSF-SHU 101 or MATH-UA 233 or MATH-SHU 234 or MATH-SHU 235 or MATH-SHU 238 or SOCS-SHU 210 or SOCS-UH 1010Q or ECON-UA 18 or ECON-UA 20 or STAT-UB 1 or STAT-UB 103 or an equivalent statistics course. Fulfillment: Economics Major Requirement; Social Science Major Requirement; Data Science Major Required Courses.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No**ECON-SHU 315 Competitive Analysis (4 Credits)***Typically offered occasionally*

This course takes a formal approach to analyzing the way firms make production and sales decisions and interact strategically with each other in the marketplace. We begin with a study of optimal pricing policies, including versioning, bundling, and related market segmentation strategies. In the second part of the course, we apply game theory to the study of oligopoly interaction, focusing on pricing and output strategies in a dynamic setting. Finally, we analyze strategies for firm dominance, especially through the deterrence of potential competition. The list of such strategies includes capacity expansion, product proliferation, and exclusive dealing contracts. The main goal of the course is to develop the basic intuition for pricing and other forms of strategic behavior on the part of firms, both when faced with complex patterns of consumer demand and when faced with strategic competitors. In-depth case analyses are adopted to showcase how the formal analyses enable an insightful understanding of complex real-life business decision makings and the relevant policy makings, as well as to provide students with opportunities to gain practical skills in conducting business analyses. Pre-requisite: Microeconomics Fulfillment: Economics Advanced elective; BUSF Non-Finance elective; BUSM-Non-Marketing elective; IMB Business elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: BUSF Non-Finance Elective
- SB Crse Attr: NYU Shanghai: BUSM Non-Marketing Elective
- SB Crse Attr: NYU Shanghai: Economics Advanced Elective
- SB Crse Attr: NYU Shanghai: IMB Business Elective

**ECON-SHU 316 Industrial Organization (4 Credits)***Typically offered occasionally*

How firms behave in imperfectly-competitive markets. Uses game theory to understand strategic decisions. Topics include price discrimination; peak load pricing; productivity; Bertrand, Cournot, and Hotelling oligopoly models; entry; mergers and merger regulation; monopoly regulation; patents; auctions; and two-sided platforms. Moves from theoretical and mathematical models to real-world data and problem sets. Prerequisite: ECON-SHU 3 Microeconomics OR ECON-SHU 10 Intermediate Microeconomics.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No**ECON-SHU 317 The Economics of Discrimination (4 Credits)***Typically offered Fall*

This research-focused seminar course will first cover applied microeconometrics with a strongly applied and empirical focus, and then introduce important theoretical and empirical papers analyzing and documenting different mechanisms of gender inequality. Topics covered will include micro-econometric research designs, theory and evidence about gender wage gaps, female educational attainment and human capital and family economics. If there is time, topics in gender and preferences will also be covered. This course is most appropriate for those with a strong grasp of microeconomics and econometrics, and with an interest in pursuing more advanced social science research projects on topics related to labor economics, inequality, and development economics. Economics majors and data science majors with a concentration in economics are particularly encouraged to enroll. Pre-requisites: ECON-SHU 3 Microeconomics OR ECON-SHU 301 Econometrics.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No**ECON-SHU 335 Development Economics (4 Credits)***Typically offered Fall and Spring*

This course focuses on the understanding of the process of economic development. The course will be structured around the following four questions: (1) Why are some countries much poorer than others? (2) What are the main barriers to the process of economic development? (3) What are the main barriers that prevent the poor to escape from poverty? and (4) Why do these barriers exist and persist? The first half of the semester is focusing on the macro perspective in understanding the economic development. We start from laying down the framework in order to understand the mechanics behind the economic growth. The second half of the semester is focusing on the micro perspective in understanding the development at the individual level. We will cover various topics, including land and labour market, education, health, finance, firms, technology, taxation, corruption and public service delivery. This course combines theory and empirics but maintains a strong applied focus. Under each theme, we will derive testable implications from the theory, subject these predictions to econometric testing, comment on the robustness of the results obtained, and seek to draw policy conclusions. Most classes focus on one or two applied papers and an exercise that asks you to explore these questions on your own. Prerequisite: ECON-SHU 1 Principles of Macroeconomics or ECON-SHU 3 Microeconomics or ECON-SHU 202 Intermediate Macroeconomics or ECON-SHU 301 Econometrics. Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 336 Macroeconomic Policy (4 Credits)***Typically offered every year*

This course is to provide macroeconomic frameworks that are microeconomically founded to study the aggregate behavior of the economy and to think about dynamic policy problems. First, we study economic growth and develop the neoclassical growth model, which constitutes the basic grammar of the language of modern macroeconomics. In that process, we also develop the overlapping generations model, the second canonical model in modern macroeconomics. Then we turn to the study of business cycle fluctuations. We start with the real business cycle approach, which is based on the neoclassical growth model, then turn to the Keynesian approach and present the canonical New Keynesian framework. Once we have covered all this, using those tools, we discuss the scope and effectiveness of fiscal and monetary policy and what optimal policy would look like. Prerequisite or Co-requisite: ECON-SHU 1 Principles of Macroeconomics AND ECON-SHU 10 Intermediate Microeconomics. Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 342 Behavioral Economics (4 Credits)***Typically offered occasionally*

This course explores the effects of psychological factors on economic behavior. We will analyze the observations from the real world that cannot be well explained by classical economic models, and enrich the standard model by incorporating psychological phenomena, such as bounded rationality, loss aversion, time inconsistency and social preferences. We will present both theoretical models and empirical evidence from experiments or real world data. Applications include marketing, asset pricing, game theory, consumption and savings, and public policy. Prerequisites: Microeconomics courses: ECON-SHU 3 or ECON-SHU 150 and Statistics courses: BUSF-SHU 101 or MATH-SHU 20 or MATH-SHU 235 or MATH-SHU 170 or BIOL-SHU 42 or other equivalent courses in statistics. Fulfillment: Economics Major Elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 351 Labor Economics (4 Credits)**

Labor economics is the study of how labor markets work. We will investigate numerous aspects of the labor market, including the supply of and demand for labor, labor-market equilibrium, human capital, unemployment and job search, labor unions, compensating wage differentials, discrimination and immigration. We will use theory to understand facts and we will use facts to test and inform theory. Prerequisite: Microeconomics, Econometrics Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 353 Public Economics (4 Credits)***Typically offered occasionally*

This course investigates the role of the public sector in the economy. The aim is to understand the reasons for government intervention, the response of economic agents to the governments and assessing the welfare effects of these influences. The course covers tax policy and inequality, social insurance programs, public goods, and the interaction between different levels of government. Special emphasis is on current policy issues such as education reform, health care reform, income tax reform, and the role of behavioral factors in designing effective policy. Students are expected to be familiar with one variable calculus and optimization techniques at the level required in Intermediate Microeconomics. Prerequisite: ECON-10 Fulfillment: Economics elective; Social Science Focus Political Economy 300 level course.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective
- SB Crse Attr. NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 356 Antitrust and Competition Policy in the Digital Era (4 Credits)***Typically offered every year*

Law and Economics presents an economic analysis of monopoly power and efforts to limit monopoly. This course helps students understand the theoretical rationale for competition policy in the classical price-centric economy and the recent new economy. The course also provides students with an understanding of competition policy and antitrust regulation by examining recent, prominent public and private antitrust cases. Prerequisite / Corequisite: ECON-SHU 10 Intermediate Microeconomics OR BUSF-SHU 202 Foundations of Finance OR BUSF-SHU 303 Corporate Finance OR CSCI-SHU 360 Machine Learning. Fulfillment: Economics elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 360 Experimental Economics (4 Credits)***Typically offered occasionally*

Predicated on the belief that economics, like other sciences, can be a laboratory science where economic theories are tested, rejected, and revised. Reviews the methodology of such laboratory experiments and investigates the use of experiments in a wide variety of fields. These include competitive markets, auctions, public goods theory, labor economics, game theory, and individual choice theory. Prerequisite: ECON-SHU 10 OR ECON-SHU 3. Fulfillment: Economics Major Elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective

**ECON-SHU 368 Financial Economics (4 Credits)***Typically offered occasionally*

The last episode of financial crisis and the subsequent policy response provide excellent examples for students to learn about the functioning of financial markets and the importance of monetary policies and banking regulations. The course aims to provide an introduction to the role of money, financial markets, financial institutions and monetary policy in the economy, thus providing a solid foundation for further study or employment in the financial services industry. We consider institutions that either help financial markets work well or that interfere with the efficient performance of these markets. Our development includes a series of applications of principles from finance and economics that explore the connection between financial markets and the economy. The course covers many public policy issues and examines how central banks operate and how monetary policy is conducted. It will have a strong international orientation by examining monetary policy in many countries and possible reforms of the international financial system. For each of the addressed issues, we discuss current events reported in the financial press. Throughout this course, you will learn how to apply economic theories to research questions with proper methods, and will acquire the solid skills to read, comprehend, and develop critical thinking. Also, you will learn how to choose and approach an interesting economic research question by yourself from observed economic phenomena. By the end of the course, you will be able to communicate both orally and in written form your own economic research idea. Prerequisite: None. Fulfillment: Economics elective; Social Science Focus Political Economy 300 level course.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** No

- SB Crse Attr. NYU Shanghai: Economics Elective
- SB Crse Attr. NYU Shanghai: Social Science Focus Political Economy

**ECON-SHU 400 Economics Capstone Seminar (2 Credits)***Typically offered Spring*

Open to Senior Economics Majors Only. Fulfillment: Economics Capstone, Advanced elective or elective.

**Grading:** Ugrd Shanghai Graded**Repeatable for additional credit:** Yes

- SB Crse Attr. NYU Shanghai: Economics Advanced Elective
- SB Crse Attr. NYU Shanghai: Economics Elective
- SB Crse Attr. NYU Shanghai: Economics Required



**ECON-SHU 402 Advanced Econometrics (4 Credits)**

This course introduces students to many topics and methods that are actively studied and increasingly used in applied micro/macroeconomics. Students will be required to read articles in economics journals and see how in practice the tools of econometrics can be applied to tackle challenges that observational data pose in estimating causal effects. The articles will illustrate applications of the tools that were covered in Econometrics (ECON-SHU 301) as well as advanced tools that will be covered in this course. The advanced topics covered may include: quantile regression, multinomial models, Tobit model, selection models, count-data models, survival analysis for duration data, randomized controlled trials, differences in differences, synthetic control, regression discontinuity design, event study, generalized method of moments, local projections. By the end of the course, students will conduct their own empirical projects on topics of their interest using the analytical tools they learned. Prerequisite: ECON-SHU 301 Econometrics OR BUSF-SHU 101 Statistics for Business and Economics OR MATH-SHU 235 Probability and Statistics OR MATH-SHU 238 Honors Theory of Probability OR MATH-SHU 234 Mathematical Statistics Fulfillment: Economics Major Advanced Economics Electives.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Advanced Elective

**ECON-SHU 416 Game Theory: Advanced Applications (4 Credits)**

*Typically offered occasionally*

Game theory investigates incentives and behavior in interactive decision making. Compared to Introductory Game Theory, in this course we aim to develop a more advanced understanding of strategic reasoning and of its consequences in relevant economic settings, especially when agents' information about the incentives of the opponents is incomplete. Compared to Advanced Economic Theory, we analyze the behavior of economic agents when the choice of each agent has a non-negligible impact on the outcome for the other agents, so that the relevant uncertainty cannot be summarized with a market outcome or with an exogenous random variable. The course is divided into four blocks. In the first block, we analyze static games with complete information. These are games where every player moves without observing the moves of the other players, players' moves are sufficient to determine the final outcome, and players' preferences for outcomes are common knowledge. The second block is devoted to static games with incomplete information. In these games, outcomes and payoffs also depend on exogenous variables, and players are asymmetrically informed about the realization of these variables. In the third block, we analyze dynamic games with complete information. In these games, players may move after observing past moves of other players --- like in almost all games we play for fun! Finally, the fourth block is devoted to dynamic games with incomplete information. Basic knowledge of multivariate calculus constitutes a necessary mathematical background to follow the course. Prerequisite: ECON-SHU 3 Microeconomics, or ECON-SHU 10 Intermediate Microeconomics, or ECON-SHU 216 Introduction to Game Theory Fulfillment: Economics advanced elective; Social Science Methods or Political Economy 400 level course.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Economics Advanced Elective
- SB Crse Attr: NYU Shanghai: Social Science Focus Political Economy
- SB Crse Attr: NYU Shanghai: Social Science Methods Course

**ECON-SHU 453 Economics Honors Seminar (2 Credits)**

*Typically offered Fall and Spring*

Prerequisite: department consent is required. Fulfillment: ECON Capstone Electives; Business China Business Studies (depending on topic); IMB Business elective.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** Yes

- SB Crse Attr: NYU Shanghai: Economics Required
- SB Crse Attr: NYU Shanghai: IMB Business Elective

**ECON-SHU 997 Economics Independent Study (2-4 Credits)**

*Typically offered Fall and Spring*

Prerequisite: None. department consent is required. Fulfillment: Economics Major Elective.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** Yes

- SB Crse Attr: NYU Shanghai: Economics Elective

**ECON-SHU 9301 Econometrics (4 Credits)**

The course examines a number of important areas of econometrics. The topics covered include regression analysis with cross-sectional data; classical linear regression model and extensions; model specification, estimation and inference; regression with qualitative variables; heteroskedasticity and GLS; serial correlation and heteroskedasticity in time series regression. In addition to covering the relevant theoretical issues, the course includes the application of these methods to economic data. Pre-requisites: Statistics (BUSF-SHU 101 OR MATH-SHU 235 OR MATH-SHU 233 OR ECON-UA 18 OR STAT-UB 103 OR STAT-UB 1 OR MATH-GA 2901 OR SOCS-UH 1010Q OR ECON-UA 20). Fulfillment: Economics Required; Data Science Major Data Analysis Courses.

**Grading:** Ugrd Shanghai Graded

**Repeatable for additional credit:** No

- SB Crse Attr: NYU Shanghai: Data Science Required Data Analysis
- SB Crse Attr: NYU Shanghai: Economics Required