

SA.510 (INTERNATIONAL ECONOMICS, & FINANCE)

Courses

SA.510.100. Advanced Topics in Trade Theory. 4 Credits.

A rigorous seminar on international trade and commercial policy covering a broad set of policy-oriented topics. Covers both theory and applications, but emphasizes tools and analytical techniques rather than case studies. Overall goal is to develop a broad conceptual understanding of ongoing issues in international trade and familiarity with the analytical techniques used by economists in developing policy recommendations. Prerequisite: International Econ I

Prerequisite(s): Students may not register for this class if they have already received credit for SA.300.743[C];SA.100.303[C] OR SA.300.699[C] OR SA.300.700[C] OR SA.999.699[C] OR SA.999.700[C] OR SA.310.700[C]

SA.510.101. Business Strategies for Global Financial Institutions. 4 Credits.

The objective of the course is for students to learn about the global financial services industry and to equip them with the content and skills necessary to obtain professional employment in financial services, consulting, or other industries. The course combines academic teachings with Business School cases in “traditional” global financial services, as well as “Fintech” and “Crypto”. The course emphasizes three areas: (1) Gaining fundamental knowledge of corporate business strategy (2) Understanding how global financial institutions execute (or fail to execute) their strategies (3) Developing students’ commercial skills, such as communications, presentation skills and teaming. The class is highly participatory. The work is demanding. Students are urged to review the syllabus in detail. Corporate Finance, Financial Decision-Making or similar undergraduate classes are recommended but not mandatory. If you have questions, please contact me (jkocjan2@jh.edu)

Prerequisite(s): Students may not register for this class if they have already received credit for SA.390.101[C]

SA.510.102. Corporate Finance. 4 Credits.

Introduces quantitative tools and framework of financial decision-making. Examines present-value techniques, pricing of financial instruments, trade-off between risk and return, portfolio theory, capital budgeting, financial ratio analysis, behavior of financial markets, capital structure decisions, corporate cost of capital issues, option theory and risk management. Approach is rigorous and analytical, and goal is to provide students with conceptual understanding of the ideas of financial theory as well as the quantitative methods necessary to pursue careers involving financial decision-making. Students without a background in finance/business should consider taking the online Introduction to Accounting course prior to enrollment or concurrently. In addition, students should take International Economics I concurrently with this course.

Prerequisite(s): Students may not register for this class if they have already received credit for SA.380.760[C];SA.100.303[C] OR SA.300.699[C] OR SA.300.700[C] OR SA.999.699[C] OR SA.999.700[C]

SA.510.103. Development Finance. 4 Credits.

“Basically, the 19th century was the age of return, the 20th century was the age of risk-return, and the 21st century appears to be the age of risk-return-impact” - Bertrand Badre (2018). Bertrand wrote this in the context of the challenge facing the financial system post the 2007-2009 financial crisis; and the recognition by governments across the world that the attainment of the SDGs will only be possible with innovation in financial markets, and a massive partnership with the sources of private capital. The financial consequences of the Covid 19 pandemic are still unfolding but limited public resources will be stretched further. Compounding the challenge are the events unfolding in Ukraine and the tightening of monetary policy as authorities try to confront inflation. Governments, especially in developing countries, need closer collaboration with private and international capital to explore nontraditional mechanisms to finance crucial development projects. This course explores the role that Development Finance Institutions (DFIs) have today. To be effective in mobilizing capital requires that DFIs fully understand what providers of capital are looking for, and the fiduciary responsibility they have towards those whose savings they manage. The course will enable students to understand key mechanisms and instruments used by DFIs, the role of governments, private capital providers, and different institutions, and emerging trends in international development finance. The course will build on theoretical foundations of corporate finance and project finance to help students unpack the approaches to development financing. The course takes a mixed approach of teaching concepts, case studies, and hands-on assignments to help students build the analytical skills required to launch a career in International Development Finance.

Prerequisite(s): SA.310.722[C] OR SA.380.760[C] OR SA.510.102[C]; Students may not register for this class if they have already received credit for SA.380.710[C]

SA.510.104. Economic Development. 4 Credits.

This course introduces students to the study of economic development. Different disciplines have different methods – this class uses the tools of economics to examine the reasons why some places are so much more prosperous than others. Specifically, we will use mathematical modeling and econometrics to develop and test theories of economic growth, structural transformation and poverty alleviation. While the core questions in economic development could be examined anywhere in the world, we will focus on low- and middle-income countries, with some references to the historical literature in richer countries like the United States. This class is targeted at anyone considering a career in research or policymaking in developing countries, but will also provide useful skills and insights to those working on issues of poverty and growth in more developed countries as well.

Prerequisite(s): Students may not register for this class if they have already received credit for SA.320.744[C];(SA.100.304[C] OR SA.300.701[C] OR SA.300.706[C] OR SA.999.701[C]) AND (SA.100.303[C] OR SA.300.699[C] OR SA.300.700[C] OR SA.999.699[C] OR SA.999.700[C]) AND (SA.100.501[C] OR SA.340.709[C] OR SA.999.702[C])

SA.510.105. Game Theory. 4 Credits.

Traditional economic theory tends to avoid interactive influences among decision-makers. Game theory focuses on analyzing the effects of interaction among individuals and groups with competing and conflicting goals. The course covers cooperative and noncooperative game theory, explaining the nature and selection of pure and mixed strategies, the various equilibrium concepts used and the theory's relationship to traditional optimization analysis. Draws examples from microeconomic theory, international trade and trade policy, arms control, international relations as well as other fields. The course is self-contained with respect to mathematics content.

Prerequisite(s): Students may not register for this class if they have already received credit for SA.300.713[C];SA.100.303[C] OR SA.300.699[C] OR SA.300.700[C] OR SA.999.699[C] OR SA.999.700[C]

SA.510.106. Global Risk Management and Valuation. 4 Credits.

Covers issues related to both international financial markets and financial decision-making within the international environment. Focuses on understanding and forecasting financial conditions in international markets; identifying, measuring and managing exchange-rate risk; taxation of international income; implications of political risk on project valuation; and cost of capital for international projects. Prerequisite: Corporate Finance.

Prerequisite(s): SA.380.760[C] OR SA.510.102[C] OR SA.310.722[C];Students may not register for this class if they have already received credit for SA.380.761[C]

SA.510.107. Impact Evaluation in Development. 4 Credits.

The goal of this course is to provide students with an introduction to key methods of quantitative policy analysis and impact evaluation used to analyze policy relevant questions in developing countries. We develop the statistical toolkit of regression analysis, reviewing the bivariate regression model and then continuing with multiple regression, and explore how these methods are applied to policy analysis in five benchmark techniques: randomized trials, direct regression analysis, instrumental variables, regression discontinuity, and difference in differences. We emphasize the distinction between regression as a statistical tool and the additional context knowledge (and occasionally assumptions) that are required to address causal policy questions. We will rely on empirical microeconomic studies (mostly in developing countries) to analyze behavior under different types of market failures and to evaluate the impacts of policy interventions. Pre-requisite: Econometrics. Previous knowledge of STATA will be helpful.

Prerequisite(s): SA.100.401[C] OR SA.340.710[C] OR SA.310.770[C];Students may not register for this class if they have already received credit for SA.320.731[C]

SA.510.108. International Financial Markets. 4 Credits.

This is a survey course covering issues in international financial markets. We will cover various markets and financial instruments, including bonds and bond markets, an introduction to derivatives and structured financial products. We also cover the theory of investment, including modern portfolio theory, behavioral finance, fat-tailed distributions/Black Swans and efficient market theory. Finally, we close the course with a selective history of financial crises, which also introduce basic issues related to financial intermediation (banking and shadow banking). There is a strong emphasis on real world financial instruments, institutions and issues. There are no prerequisites, though International Economics II or International Finance will be helpful. Limited to 50 students.

Prerequisite(s): Students may not register for this class if they have already received credit for SA.380.722[C]

SA.510.109. Introduction to Economic Development. 4 Credits.

This course is designed to familiarize students with the key economic challenges facing developing countries. It will combine theoretical with empirical analysis and use specific examples from the developing world to deepen understanding of the drivers of economic development and the obstacles that stand in their way. This is an introductory course, without prerequisites, and is appropriate for students without prior course work in development.

Prerequisite(s): Students may not register for this class if they have already received credit for SA.320.724[C]

SA.510.110. Project Finance. 4 Credits.

Provides a practical and quantitative approach to understanding project finance transactions. Focuses on energy transactions in emerging markets. Integrates principles of corporate finance with an understanding of specific technologies, industrial organization, regulatory framework and country-specific policies. Examines foreign exchange issues, taxation, risk evaluation and mitigation and key contractual structures. Discusses typical loan structures and inter-creditor issues. Goal is to understand how the financial structure for a project finance transaction is analytically determined. Students build and apply detailed quantitative financial models. Prerequisite: Corporate Finance. Cannot take if you have already passed Infrastructure Finance and Modeling.

Prerequisite(s): SA.380.760[C] OR SA.510.102[C] OR SA.310.722[C];Students may not register for this class if they have already received credit for SA.380.834[C]

SA.510.111. Public Finance. 4 Credits.

Introduces the key concepts in public finance that underpin most discussions of public policy regarding the role of the government sector, including public goods (both national and global), externalities and market failure, tax policy, macrofiscal policy and fiscal federalism. Using these concepts, seeks to highlight some of the challenging real-world public policy issues confronting the government sector in different parts of the world and how these are evolving in a globalizing world. Prerequisite: International Econ I

Prerequisite(s): SA.100.303[C] OR SA.300.699[C] OR SA.300.700[C] OR SA.999.699[C] OR SA.999.700[C];Students may not register for this class if they have already received credit for SA.300.754[C]

SA.510.112. Quantitative Global Economics. 4 Credits.

Focuses on issues relevant to understanding the world economy: modeling and forecasting of exchange rates, modeling the sustainability of external imbalances, determining the importance of international capital flows and implementing monetary-policy rules. Examines empirical studies in each of these areas by looking at their assumptions, weaknesses and strengths and considering whether there are alternative methods of addressing a given issue. Students learn to develop an independent opinion of how theoretical ideas are applied to policy questions by asking: How much? Does it matter? How do you know?

Prerequisite(s): SA.100.304[C] OR SA.300.701[C] OR SA.300.706[C] OR SA.999.701[C] OR SA.310.701[C];Students may not register for this class if they have already received credit for SA.340.734[C]

SA.510.113. Microfinance and Development. 4 Credits.

Designed for those who wish to gain a deeper understanding of the financial, operational, and public policy aspects of microfinance, this course is ideal for students interested in careers in microfinance analysis, advisory, or investing and in the wider spheres of ethical banking, fintech, and impact investing. The early weeks of the course will explore the foundations of the microfinance movement, dive deep into the products and services associated with financial services for the poor, and ground students in the structure, operations, and technologies used in microfinance institutions. Next, students will take an investor's perspective on microfinance, looking at the application of commercial investment to the sector and its implications, teaching students how to perform financial analysis of microfinance institutions, and discussing how government policies can impact a country's microfinance sector. Finally, we explore the literature on the impact of microfinance, analysis using randomized controlled trials and other research methodologies, and review the criticisms of the modern microfinance movement. The course concludes with a capstone reading and discussion of where the microfinance industry is headed over the next decade, and how to prepare for career opportunities in the field. Prerequisite or Corequisite: Financial Decision-Making.

Prerequisite(s): SA.380.760[C] OR SA.510.102[C] OR SA.310.722[C]

SA.510.114. Sustainable Finance: Application and Methods. 4 Credits.

This course aims to provide students with a set of quantitative tools and reasoning abilities that mirror those used by professional financial analysts, portfolio managers, and policymakers. While many of these skills will be universally applicable, this course grounds them in the application of addressing issues of sustainable finance from a global perspective. The course will focus on using the R programming language and Excel, to a lesser extent, as tools for transforming real-world data into actionable insights and conveying those insights in a manner consistent with the real-world job responsibilities of sustainable finance analysts.

Prerequisite(s): SA.380.760[C] OR SA.510.102[C] OR SA.310.722[C]

SA.510.115. Public Sector Economics. 4 Credits.

The course analyzes both the role of the state in the economy, including its manifestation as a Welfare State, and the role played in the public sphere by civil society organizations. The first part deals with the theory of market failures and government failures, the theory of collective economic action, the economic theory of democracy, the analysis of tax systems. The second part of the course uses the concepts developed in the first part to analyze specific governmental institutions, expenditure programs and taxes in a comparative international perspective. These include health care (special attention will be devoted to the Covid-19 pandemic), social insurance, redistribution programs, education, the politics of institutional choice, government decentralization (federalism), political capitalism, the digital revolution and the labor market.

SA.510.117. Asian Economic Development. 4 Credits.

This course gives a survey of the Asian economic development experience over the past half-century, with a focus on its international dimensions. In addition to evaluating the source of the remarkable growth and development of the region, the course considers the many challenges that the region has and will continue to face, from the Asian Financial Crisis in 1997-98 to the Covid-19 pandemic shock. It also looks at conflict and cooperation in the region in the 21st century.

SA.510.118. Cryptocurrencies and FinTech. 4 Credits.

This course is for students wishing to explore the world of cryptocurrencies and related Fintech innovations. The goal of the course is to analyze their characteristics, the enabling technological innovations, their economics and role in modern Finance, and potential applications. The course begins with a brief insight on the theory and history of money and Financial innovation. After providing some technical background on how cryptography works, the course studies the cryptocurrency Bitcoin and then moves to other cryptocurrencies or crypto platforms such as Ethereum or Cardano. It will also analyze stablecoins and Central Bank digital currencies. Students will gain an understanding of the economic, technical and public policy issues associated with blockchain technology, distributed ledgers and smart contracts.

SA.510.119. Theories and Models of Economic Development. 4 Credits.

This course provides an introduction to Development Economics, aiming to familiarize students with key economic concepts, theories and models underlying the basic process of economic growth and development. It takes an intuitive and non-technical approach, focused on the key concepts and arguments around economic growth and development, rather than on the more formal and technical details of econometric or theoretical models. The course will explore the big questions and challenges that affect the majority of the world's population, living in lower-income countries, such as: 1) Why do some countries grow more than others? 2) What are the root causes of raising inequality and what can be done about it? 3) Where can countries raise the revenue needed to fund their development goals? 4) How do people live on less than 2 dollars a day? 5) What can international aid to help countries develop, and does it work? The course takes a practical angle in showing how the relevant theories and models apply in the real world, based on empirical evidence.

SA.510.120. Renewables: The Challenges of Transitioning from Marginal to Mainstream Source of Energy. 4 Credits.

This course provides an overview of the renewable energy sector. Students will be exposed to all of the building blocks necessary to take a renewable energy project from concept to reality, spanning regulation/economics, technical, project development and financing aspects. By necessity the topic is multi-disciplinary and also international in its scope. The course will also place renewable energy in the wider energy debate. The professor invites experts in the field to some lectures in order to expose students to hundreds of years of renewable energy project development, technical and financial experience. The topics covered by the speakers will be fully integrated into the syllabus. Each speaker will typically have a 30 minute slot to cover a specific topic (20 minute presentation & 10 minute Q&A). Subject to travel plans, speakers will make themselves available after the lecture to students wishing to engage in more detailed discussions.

SA.510.121. European Economic Integration. 4 Credits.

Reviews the role of economic forces in the process of deeper European Economic Integration (EEI). The course will offer arguments to substantiate future policy making with an adequate conceptual background, placing each topic into the historical context of the last 70 years. The core of the course is devoted to the main areas of EEI: trade, agriculture, money and finance, industry, services, regional development and welfare, with special attention to the changes brought about by the 1992 Single Market, the 1999 Single Currency and the 2004-07 enlargement. The empirical analysis is framed within economists' theoretical frameworks on customs unions, economic convergence and polarization, the impact of technological innovations on labor markets and management styles, growing inequalities and welfare systems, and the impact of international political instability on migration flows. Special reference is made to the implications of Brexit and the consequences of war in Ukraine.

SA.510.122. European Financial Markets. 4 Credits.

The purpose of this course is to encourage students to develop a deeper understanding of European financial market integration. The course begins with the completion of the internal market in the late 1980s and ends with current efforts to form a European banking union. Along the way, it introduces both common institutions and distinctive national frameworks. It also looks at how regulations promulgated within Europe interact with those developed at the global level. Students should have a good understanding of Macroeconomics. Some background in international monetary theory and corporate finance would be advantageous but is not required.

SA.510.123. The Economies of Central Asia. 4 Credits.

Gives an analytical review of the economies of the Central Asian countries. After considering the geographical, cultural and historical basis for identifying a Central Asian region, focuses on the post-independence economies of Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan and on the economic influence of the region's major natural resources (cotton, minerals, oil and gas). Examines regional integration and relations to neighboring (and other) economies. Special reference is made to the implications of changes in leadership since 2017, the role of improved China-EU connectivity, and implications of war in Ukraine.

SA.510.124. International Financial Crises. 4 Credits.

The course will provide students with a basic understanding of how political-economy and macro-financial constraints affect countries' vulnerability to financial crises. Exploring three decades of evidence, it will discuss the main drivers of currency, banking, and debt crises in emerging markets. The course will build upon the material covered in IE 2, or in a similar intermediate macroeconomics course, and requires familiarity with empirical analysis. Students are expected to participate actively preparing and discussing case studies.

Prerequisite(s): SA.630.721 [C] OR SA.100.304 [C]; IE2 or Macro Risk are prerequisites for this course;

SA.510.125. Cryptocurrencies, Money and The Financial System. 4 Credits.

This course is for students wishing to explore the world of cryptocurrencies and related fintech innovations. The goal of the course is to analyze their characteristics, the enabling technological innovations, their economics and role in modern finance, and potential applications. The course begins with the study of the Cryptocurrency Bitcoin and then moves to other cryptocurrencies or crypto platforms such as Ethereum, Solana or Cardano. It will also analyze stablecoins and Central Bank digital currencies. Students will gain an understanding of the economic, technical and public policy issues associated with blockchain technology, distributed ledgers and smart contracts. We will review monetary and exchange rate theory, asset pricing and the workings of the financial system through the lens of cryptocurrencies and related fintech innovations.

SA.510.126. International Economic Policy. 4 Credits.

This course examines macroeconomic policy in open economies. After covering the basic theoretical foundations on how monetary and fiscal policy should be conducted over the business cycle, we will analyze how such policies are actually conducted in practice and explore why. This is a hands-on course where students will be asked to gather data and perform an empirical investigation on how macroeconomic policies are carried out in their home countries.

Prerequisite(s): SA.310.724 [C] OR SA.100.304 [C] OR SA.300.708 [C]

SA.510.127. Sustainable Finance and Impact Investing. 4 Credits.

This course aims to equip students to analyze sustainable finance and impact investing and understand the range of current approaches being pursued. The class will be in seminar format and students will be expected to participate actively in class. There will be four main elements to assessment: 1. Classwork, reading, group-work and general participation, 2. A mid-term paper focusing on one of the areas covered in the first half of the course, with each student choosing a topic based on a list of questions, 3. Two group-work presentations. 4. A final paper focusing on one of the areas covered in the second half of the course, with each student choosing a topic based on a list of questions. By the end of the course, participants should be able to: Identify and understand how to assess, measure and report on critical environmental and social risks of private investment. Identify and assess key governance risks in managing private firms and investments. Describe and distinguish between different investment strategies in their approach to managing environmental, social and governance risks and impacts, across different asset classes. Describe the motivations of different classes of investors, and understand their constraints in pursuing different sustainable and impact investment strategies. Identify current practices and tools to manage, measure and report on positive environmental and social impacts of an investment portfolio. Critically evaluate theories of change of how private investment impacts the environment and society, both positively and negatively; and the relationship between financial returns and impact. Understand the historic evolution of investment markets and assess current trends and outlook with respect to environment, social and governance risks and impacts.

SA.510.128. Credit Markets & Credit Risk. 4 Credits.

Although the size of credit markets varies across countries, reflecting the level of economic development, its industrial structure and its regulatory regime, globally, credit markets are huge, surpassing by far equity markets as a source of finance for both the private and public sectors. McKinsey estimates that, in 2007, total global financial assets were \$225 trillion, of which only \$50 trillion was equity, the remainder represented various types of credit instruments. The recent Global Financial Crisis had a significant impact on credit markets, something that will be discussed repeatedly during the course. This course will examine credit markets globally, with a specific focus on understanding the particular nature of credit risk. After an overview and definitions, the mathematics of fixed income instruments will be covered. There will then follow two sections on private sector credit risk, one each for the real and banking sectors. A significant part of the course will then incorporate what has been learned in analyzing private sector credit into a discussion of sovereign credit risk.

Prerequisite(s): SA.380.760[C] OR SA.310.722[C] OR SA.510.102[C]

SA.510.129. Investments: From Theory to Practice. 4 Credits.

This course is designed to familiarize students with the theory and practice of investments. The goal is to provide not only “what” investments are but also “how” and “why” they perform, or sometimes do not perform, as expected. We will introduce what constitutes an investment and the different asset classes from which investment returns are derived and the financial ecosystem in which they operate. We will delve into most of the major assets classes in detail: equities, fixed income, derivatives and commodities—their characteristics, pricing / valuation, historical performance and application in a portfolio. We will then look at the dynamic tension between investment return and risk, also in theory and with relevant real-world examples. We will discuss the theory of modern portfolio management and create a model portfolio and measure its return over time. That portfolio knowledge will inform the different investment strategies utilized by asset managers today. We will examine the field of behavioral finance and the impact it has on biases and decision making. That will lead us into a deeper examination of investment management from a practitioner point of view and including periods of time when both theory and practice were exposed to crisis conditions. In addition, prominent subject matter experts from their respective specialties will address class either in-person or on Zoom. (Six guest lecturers over the 13 classes for roughly 30 minutes per class as well as additional time for Q and A).

Prerequisite(s): SA.380.760[C] OR SA.510.102[C] OR SA.310.722[C]

SA.510.130. Advanced International Macroeconomics. 4 Credits.

This is an advanced course on open economy macroeconomics. The main purpose of the course is to cultivate and develop the ability to use formal theoretical models to interpret and understand the complex economic reality around us. Topics include current account determination, the relationship between saving and investment, imperfections in international capital markets, insurance mechanisms, the role of the real exchange rate, and fiscal policy.

SA.510.131. Big Data. 4 Credits.

This is an applied course on big data analytics with focus on data mining. R will be the main tool for problem solving with Python as the other option. Topics will cover data visualization, exploratory analysis, association rules, classification and regression trees, deep learning (neural networks), text mining, and social network analysis. Prerequisites: General understanding and experience with statistical models, including multivariable regression models, analysis of variance, and test of hypotheses. No previous programming experience is required, and the textbook offers extended code that can be used directly or modified.

Prerequisite(s): SA.100.501[C] OR SA.340.709[C] OR SA.999.702[C]

SA.510.132. Environmental Economics. 4 Credits.