MSFC (MSFC)

MSFC 400. MSFC Orientation. 0 Unit.
This will cover introduction to the MSM-Finance program in China, along with discussion of the administrative and curricular rules governing this program. Prereq: For MSM-Finance students in Shanghai, China

MSFC 403. Financial Management. 1.5 Unit.
Serves as a prerequisite for several advanced electives in banking and finance. Its purpose is to familiarize the student with the theory and application of models used in financial decision-making by corporations. Issues relating to efficient markets, financing decisions, capital budgeting, risk and return, and securities valuation are among the topics considered. Prereq: For MSM-Finance students in Shanghai, China

MSFC 404. Financial Modeling & Value. 1.5 Unit.
Firms try to create value. In their day-to-day operations, they are faced with numerous challenges. Should we accept trade credit or borrow? Will an acquisition create or destroy value? Should we introduce a new product line even if it cannibalizes an existing one? In each of these situations they try to quantify the impact on the value of their firm. The goal of this course is to develop your skills in financial modeling and valuation, so you can tackle issues like the ones described above. The course is designed to be "hands-on": You will learn to apply the theory and develop spreadsheet modeling skills through homework, case studies and a group project. By the end of the course you will have a good understanding of both the theory and practice of valuation, and possess a set of cutting-edge financial modeling skills. This course is designed for students who aspire to work in a regular company, a bank or a consulting firm in (i) corporate finance (including mergers and acquisitions); (ii) strategy; or (iii) equity analysis. Prereq: For MSM-Finance students in Shanghai, China

MSFC 428. Financial Strategies and Value Creation. 3 Units.
The intersection between the theory of perfect markets and the reality of market imperfections provides the basis for the exploration of value creation in this course. Opportunities in both product and financial markets are explored using case studies to develop a framework for strategic financial decisions. Prereq: For MSM-Finance students in Shanghai, China

MSFC 429. Portfolio Management and Asset Allocation. 3 Units.
This course explores the characteristics of financial investments and markets and develops modern techniques of investment analysis and management. The goal is to help students develop a level of analytical skill and institutional knowledge sufficient to make sensible investment decisions. Topics include: an overview of stock, debt and derivative asset markets, practical applications of modern portfolio theory, equilibrium and arbitrage-based approaches to capital market pricing, the debate over market efficiency, the term structure of interest rates, bond portfolio management, and uses of derivative assets in investment portfolios. Prereq: For MSM-Finance students in Shanghai, China

MSFC 430. Derivatives Markets and Models. 3 Units.
This course is intended to give students an understanding of options and futures markets both in theory and practice. The emphasis is on arbitrage and hedging. The course concentrates on listed common stock and index contracts as well as commodity markets. Various theories for trading strategies are studied. Prereq: For MSM-Finance students in Shanghai, China

MSFC 431. Fixed Income Markets and Models. 1.5 Unit.
This class is concerned with fixed income securities, interest rate risk management, and credit risk. Fixed income securities account for about two thirds of the market value of all outstanding securities, and hence this topic is important. The course covers the basic products of fixed income markets including treasury and LIBOR products, such as interest rate swaps. Risk management and hedging strategies are covered as well as selected topics in credit risk models and mortgage-backed securities. Prereq: For MSM-Finance students in Shanghai, China

MSFC 432. Corporate Risk Management. 1.5 Unit.
This is a unique strategic risk management course aimed at participants who wish to enhance their understanding of the risks faced by corporate firms, both financial and non-financial, learn techniques to identify and measure these risks, and understand how derivatives and risk management solutions can be used to manage these risks, create value, and advance the strategic goals of the firm. The course is designed in a manner such that it would be of use to executives of all corporations, financial and nonfinancial, across all functional areas. Prereq: For MSM-Finance students in Shanghai, China

MSFC 433. Quantitative Risk Modeling. 3 Units.
This course exposes students to state-of-the-art quantitative techniques in risk modeling. The course covers the analytical as well as simulation based implementation of different types of risk models using Excel, including several Value-at-Risk (VaR) models. It also covers volatility modeling, correlation estimation, extreme value theory, back-testing, and stress testing of risk models. This course is for MSFC students in Shanghai, China only. Prereq: For MSM-Finance students in Shanghai, China

MSFC 434. Financial Econometrics. 3 Units.
MSFC 434 represents a rigorous study of the latest developments in the area of financial econometrics. The class assumes no prior knowledge of econometrics. It assumes that you have had a basic statistics class and that you have had regression analysis. It is taught using economic motivations and examples from the financial world. The course concerns modern econometric topics like time-series forecasting, volatility modeling, and panel data analysis. Various concepts and approaches in the course will be subjected to real world data. Students are expected to have basic knowledge of the fundamentals of corporate finance and statistics. The course aims at providing a lasting conceptual framework for model building using modern applied econometric techniques commonly employed in finance. Prereq: For MSM-Finance students in Shanghai, China

MSFC 440. Financial Decisions, Contracting and Value. 1.5 Unit.
This course exposes the students to a more in-depth treatment of some of the topics covered in MSFC 403 and introduces them to new topics. Topics include investment decisions, financing decisions, payout decisions, contracting decisions and performance metrics, internal control systems, risk management, real options, diversification and valuation. Topics covered may vary from semester to semester. Prereq: For MSM-Finance students in Shanghai, China
MSFC 441A. Global Banking and Capital Markets I. 1.5 Unit.
This course will expose students to Banking and Capital Market Structure, Practices, and Regulations. Topics covered include the financial services industry, especially commercial banking and investment banking, regulatory framework, market reactions to various corporate events, understanding risk, the return demanded by investors, activists involvement in target firms, and market reactions to such events. Several case studies are used to expose students to different issues and questions that arise in the day-to-day jobs of financial managers in this industry. Prereq: For MSM-Finance students in Shanghai, China

MSFC 441B. Global Banking and Capital Markets II. 1.5 Unit.
This course will expose students to Banking and Capital Market Structure, Practices, and Regulations. Topics covered include the financial services industry, especially commercial banking and investment banking, regulatory framework, market reactions to various corporate events, understanding risk, the return demanded by investors, activists involvement in target firms, and market reactions to such events. Several case studies are used to expose students to different issues and questions that arise in the day-to-day jobs of financial managers in this industry. Prereq: For MSM-Finance students in Shanghai, China.

MSFC 450. Corporate Valuation and M&A Restructuring. 1.5 Unit.
This course examines the economic rationale and motivation for the different merger and acquisition and recapitalization activity undertaken by firms and individuals in the U.S. market. Emphasis is on the comparable publicly traded proxy company, comparable "change of control" transaction, and discounted cash flow methods of valuing a firm. The class will also review the different types of debt and equity capital employed to fund mergers and acquisitions and recapitalization, how senior lenders and equity investors structure their loans and/or investments, and how investors realize the gains through different exit strategies. The legal and tax ramifications of various forms of M&A activity are also discussed. The course gives the student an excellent understanding of the role that senior commercial banks, insurance companies, pensions funds, LBO funds, investment banking firms, and venture/growth capital investors play in mergers and acquisitions and will strengthen the students' ability to value a business enterprise. Prereq: For MSM-Finance students in Shanghai, China.

MSFC 455. A Foundation in Basic Concepts of Innovations and Applications for Financial Technology. 1.5 Unit.
Over last few years, field of finance has experienced a burst of technological advances that have disrupted and transformed traditional methods of accessing, allocating, and transferring capital. Understanding the evolution of traditional finance methods is increasingly important for finance students so they can meaningfully distinguish advantages and disadvantages of traditional versus emerging methods and models. Main objective of course is to provide foundation in basic concepts of these innovations and their applications. It is this collective financial technology focus that has garnered the name of FinTech. This course will cover many aspects of FinTech proliferation, from notable successes to current innovations and thoughts about future opportunities. Topics will include FinTech applications, blockchains, cryptocurrencies, crowdfunding, payment systems and trading technology. This list may change from semester to semester, in tune with changing technology and as business models become disrupted. Prereq: For MSM-Finance students in Shanghai, China.

MSFC 460. Investment Strategies. 1.5 Unit.
The class describes some of the main strategies used by hedge funds and provides a methodology to analyze them. In class and through exercises, the strategies will be illustrated using real data and students will learn to use "back testing" to evaluate a strategy. Throughout the semester, we will discuss the economics underlying these strategies and we will analyze why certain strategies might work and why others might not. The class also covers institutional issues related to short selling, liquidity, and performance measurement. The class is fairly quantitative. As a result of the advanced techniques used in state-of-the-art hedge funds, the class requires the students to work hard, analyze and manipulate real data, and use mathematical modeling.

MSFC 480. International Finance. 1.5 Unit.
This course introduces students to international finance and foreign exchange risk management by corporations. Topics include foreign exchange markets and international financial institutions; fx contracts; exchange rate risk and corporate risk management; and international aspects of long-term financing. Prereq: For MSM-Finance students in Shanghai, China.