

SA.630/635 (GLOBAL RISK)

Courses

SA.630

SA.630.720. Microeconomic Risk and International Trade. 4 Credits.

The goals of this course are two-fold. First, it provides a basic understanding of the theory of price determination and markets and underlying microeconomic concepts necessary for economic policy and welfare analysis at the national level. Second, it applies these microeconomic tools in the context of international trade and trade policy, including the economic underpinnings of globalization, implications for economic agents, effects of protectionism and industrial policy, and the economics of regional cooperation. It also reviews multilateral and regional institutions that govern modern trade and considers their future in the post-Covid era.

SA.630.721. Macroeconomic Risk and International Finance. 4 Credits.

This course covers essential concepts and the basic theory underlying international macroeconomics and finance. Topics include: basic macroeconomic aggregates and key macro-financial indicators; central banking and monetary policy; exchange rates and the foreign exchange market; expectations, interest rates and capital flows; international financial markets and the macroeconomic linkages of open economies; monetary and fiscal policy in open economies; and macroeconomic policy in open economies. Interactive exchanges will be highly encouraged, especially as students engage in role-playing scenarios where they assume the role of economic advisors to a Prime Minister or President. They will be tasked with providing policy briefings and delivering in-class presentations, offering their expert recommendations. Basic algebra and graphical analysis will be used in this class. This course is reserved for students in the MAGR program.

SA.630.723. Math Review for Risk Assessment. 2 Credits.

This course develops the basic quantitative tools that are necessary for risk analysis. It gives a review of basic mathematical concepts used in economics and risk analysis, including pre-calculus and calculus principles. It also develops tools for data management using Excel. The course therefore provides students with a ready-to-use statistical toolbox that can be used during the remainder of the program.

SA.630.724. Introduction to Statistics. 4 Credits.

In order to understand and evaluate risk and uncertainty it is essential to have a strong command of basic statistical concepts and techniques. This course is designed to furnish students with the fundamental tools of statistical analysis, including analysis of descriptive statistics, probability distributions, statistical inference and related tests, correlation and conditional expectation. In addition to providing familiarity with statistical principles, the course will also include an introduction to basic statistical software packages, namely STATA and advanced tools in Excel. It is a required course for quantitative approaches to risk assessment.

SA.630.725. Fundamentals of Corporate Finance. 2 Credits.

This two-week intensive course introduces students to the basic toolkit for understanding risk in financial markets, with a focus on corporate-finance-related issues and capital markets. It begins with an introduction to net present value and basic accounting. From there it introduces standard financing instruments – equity, bonds, retained earnings, and bank credit. The course then explains how these instruments are priced, traded and hedged. It concludes with analysis of debt financing and risk management. Students will come away with an understanding of the time value of money, the structure and management of corporate financing, and the relationship between corporate finance, banks, and capital markets.

SA.630.726. Quantitative Approaches to Risk Assessment. 4 Credits.

The classical approach to decision theory builds on a three step iterative process: decision-makers assign probabilities to different possible outcomes, they generate welfare estimates depending upon the different outcomes (relative costs and benefits) for the decision makers involved, and they calculate the expected values of different contingencies. The process is iterative in the sense that decision-makers reassess probabilities as they gain more information (it is Bayesian), they also make assessments as they learn more about the welfare implications for other important actors (it is game-theoretical), and they learn more about their own possibilities to control events (it is causal). The purpose of this course is to introduce students to the quantitative techniques used in each stage of this process. The course begins by exploring the assignment of probabilities both on the basis of prior assumptions and using more advanced techniques (like Monte Carlo simulations). It then shows how these probabilities can be updated in a Bayesian manner as a result of new information. It looks at how these probabilities can be fed into decision making with multiple actors (through game theory). And it concludes with techniques to evaluate the overall success of the decision-making process. Students will need basic statistics and principles of economics in order to get the most out of this course. Basic skills using spreadsheets would also be of use. The course will provide introductory information about simulation modelling.

SA.630.727. Topics in Corporate Finance. 2 Credits.

SA.630.740. Risk in International Politics and Economics. 4 Credits.

This is a course on social science research methods as they apply to decision-making under conditions of uncertainty. In other words, it looks at how the skills of a social scientist can be put to use in the 'real world'. The course begins by looking at how decision makers anticipate future events, it explores what evidence they consider and what they ignore, and it looks at the standard models they apply in projecting the future based on the present. The case studies applied in this early part of the course focus on seemingly straightforward economic and financial questions. The problem is that most of the predictions that were made in these areas ended in disaster. Hence the course turns to explore the bias that is built into estimates of the future to understand whether the problem lies in the way the world works or in how we try to understand it. It introduces students to a conceptual vocabulary based on systems theory to make it easier to build more complex relationships into the analysis. And it explores the unintended consequences of policy decisions. Here the case studies move from economics to politics and from crisis to stagnation. This does not offer much of an improvement. Therefore the course makes a third analytic turn to bring the dynamics of human interaction more firmly into focus. It looks at negotiation, communication, and culture as possible sources of error or misunderstanding. The case studies focus on conflict, terrorism, and popular protest. By the end of the course students have a better grasp of where their predictions are likely to falter. They will also understand why such predictions must nevertheless be made. Risk in the international political economy derives from decision-making under conditions of uncertainty. The problem is that uncertainty is inevitable, but decisions must be made regardless of this.

SA.630.742. Instability and Political Change in Consolidated Democracies. 4 Credits.

The purpose of this course is to use a case study methodology to assess how even established democratic societies can rapidly become politically unstable. Again and again, we see nations that are regarded as successful and prosperous democracies descending into acute political turmoil. There is no one model to explain why such swift turnarounds in national fortunes occur (and nor could there ever be one), but by using the case study approach we can identify factors (ideological polarization, defective electoral systems, poor leadership, mistaken macroeconomic policy, constitutional paralysis, class or ethnic conflict, external shocks) that were capable of undermining stability. The presumption of this course, indeed, is that the management even of consolidated democratic societies is a constant struggle against the forces that tend to political dissolution. To this end, the course will examine democratic theory, constitutional law and two important case studies: Great Britain 1970-1979 and Italy 1979-1996.

SA.630.743. Strategic Foresight for Political Risk Analysis: Working with Scenarios. 4 Credits.

Geostrategic risk is the term used to bracket one of the most important collections of variables in macroeconomic policymaking, trade and investment. The onset of war or other forms of violent conflict can close access to foreign markets, disrupt global supply chains, threaten energy resources, and depress business and consumer confidence. Therefore, of primary concern are the points at which diplomacy gives way to conflict and conflict results in violence. Terrorism is similarly disruptive, but the actors involved are different and the scale of direct destruction is (usually) more limited. But these are only the most obvious sources of geopolitical risk. Governments and business leaders should also pay attention to any rise in cross-cultural tensions; they should look at migration flows, human trafficking, and organized crime. Cross-border reputational risk is also a potential problem: today's special relationship can easily develop into tomorrow's embarrassment and the next day's major problem. Finally, there are the unique dynamics associated with multilateral bargaining and international organizations. Students will come away from this course understanding how the broad array of 'international relations' factors into political and economic calculations. They will gain exposure to a range of causal mechanisms tied to issues like the onset of war, terrorist attacks, criminal activities, cross-cultural sensitivities, complex negotiations and supranational institutions. Along the way, students will prepare case studies to illustrate just how these risks have emerged in diverse parts of the world, but also how they have been managed from the perspective of a single firm or government.

SA.635**SA.635.700. Microeconomics and International Trade Theory. 4 Credits.**

The aim of this course is two-fold. First, we study the microeconomic effects of incentives on the consumer and the producer and their relationship with efficiency. By developing a detailed analysis of the market system, the course provides the framework for policy intervention and the assessment of their effectiveness. Second, we develop an understanding of how the economy works at the aggregate level: this does not only provide the foundations for macroeconomic analysis but, by focusing on the economic interaction of individuals, the course develops the theoretical and empirical foundations required to analyze international trade, its evolution toward global value chains and the challenges to contemporary commercial policy.

SA.635.709. Mathematics and Statistics. 4 Credits.

In order to understand and evaluate risk and uncertainty it is essential to have a strong command of basic statistical concepts and techniques. This course is designed to furnish students with the fundamental tools of statistical analysis, including analysis of descriptive statistics, probability distributions, statistical inference and related tests, correlation and conditional expectation. In addition to providing familiarity with statistical principles, the course will also include an introduction to basic statistical software packages, namely STATA and advanced tools in Excel. It is a pre-requisite course for quantitative approaches to risk assessment. Moreover, this course develops the basic quantitative tools that are necessary for risk analysis. It gives a review of basic mathematical concepts used in economics and risk analysis, including pre-calculus and calculus principles. It also develops tools for data management using Excel. The course therefore provides students with a ready-to-use statistical toolbox that can be used during the remainder of the program.

SA.635.710. Static Models for Understanding Risk. 4 Credits.

This is a course on social science research methods as they apply to decision-making under conditions of uncertainty. In other words, it looks at how the skills of a social scientist can be put to use in the 'real world'. The course begins by looking at how decision makers anticipate future events, it explores what evidence they consider and what they ignore, and it looks at the standard models they apply in projecting the future based on the present. The case studies applied in this early part of the course focus on seemingly straightforward economic and financial questions.

SA.635.715. Economics of Global Markets. 4 Credits.

This course highlights the economic sources of risk in the international arena. Different economies interact by trading goods and services and by exchanging progressively larger capital flows. In the age of globalization, the economic interdependence of countries generates highly novel challenges: exchange rates are not determined solely by capital movements, but also by the evolution of governance in the international monetary system – a system in which the Eurozone, the newest currency union, is emerging as a global and volatile player. The course develops a rigorous analysis of the different arrangements in the international financial system and their effects on trade direction and intensity and international capital flows.

SA.635.720. Systemic Approaches to Understanding Risk. 4 Credits.

The problem encountered in the Static Models course is that most of the predictions that were made in the areas of finance and economics ended in disaster. Hence this course turns to explore the bias that is built into estimates of the future to understand whether the problem lies in the way the world works or in how we try to understand it. It introduces students to a conceptual vocabulary based on systems theory to make it easier to build more complex relationships into the analysis. And it explores the unintended consequences of policy decisions. Here the case studies move from economics to politics and from crisis to stagnation.

SA.635.725. Statistical Analysis and Financial Management. 4 Credits.

This course is an introductory course in finance. It serves two purposes. First it is an introduction to corporate finance and provides a framework for understanding and analysing investment and financial decisions of corporations. Second, it introduces topics in the investments area of finance that are important for the understanding of how prices are set and markets behave. The course is divided into four parts. The first part provides the basic knowledge and understanding of the firm, its financial statements and working environment together with standard tools to analyse future projects and firm performance. The second part introduces the main modern portfolio theories used as a basis to properly price the cost of capital accounting for risk and exploit the risk return trade off. The third part applies the tools acquired in the previous two parts and considers the implications of different capital structures and how they can be used to create value in the firm. In addition, models, principles and measures to evaluate a firm's performance and its ability to create value through time will be discussed. Part IV introduces the main risks the firm faces during its operating activities and project management. It presents basic financial techniques and strategies to hedge risk and ensure stable value creation.

SA.635.730. Risk and Crisis in the Global Economy. 4 Credits.**SA.635.735. Quantitative Models for Risk Assessment. 4 Credits.****SA.635.740. Understanding Risk in Complex Environment. 4 Credits.****SA.635.745. Regions of the World 1. 4 Credits.****SA.635.746. Regions of the World: Europe. 2 Credits.****SA.635.750. Regions of the World 2. 4 Credits.****SA.635.900. MAGR Capstone Residency I. 1 Credit.****SA.635.901. MAGR Capstone Residency II. 1 Credit.****SA.635.902. MAGR Capstone. 4 Credits.**