

SA.630/635 (GLOBAL RISK)

Courses

SA.630 (SAIS Europe)

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.

Financial markets are environments where participants directly or indirectly operate based on different needs and preferences for risk. Regulators have the responsibility to make sure that all risks are identified, assessed and managed to avoid unnecessary concentrations. The purpose of this course is to provide students with an overview of the different types of risks involved in various market operations. They'll learn how quantitative techniques can be applied to measure and mitigate these risks. The course begins with an overview of financial markets players and concrete use cases are provided to understand what their needs are. Some of the key risk factors will be presented together to examples of instruments that are available for risk management. Stress testing will be explored as a tool to inform decision making and to uncover unpredicted adverse circumstances. Numerical examples and assignments will be given to students to gain a deeper understanding on the topics analysed. Insights to the role of regulators to minimize systemic risk will be offered with specific reference to capital adequacy requirements."

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

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

The purpose of this course is to introduce students to the challenge of understanding risk in international political and economic relations. We will study the nature of global risks, the methods on how to assess them and the challenge of formulating responses to them. We will also have the chance to introduce the practical side of political risk analysis by practitioners (guest lectures) and through concrete class exercises. Students will have to tackle 'how' we understand and 'what' we understand at the same time. Along the way, they will have to consider those things we cannot understand or anticipate with any meaningful degree of precision. As decision-makers in politics and business do, the students will have to deal with the 'uncertainty' that lies beyond the boundaries of 'risk'. The subject matter is, for good or bad, open-ended. Virtually every aspect of politics or economics can be cast in terms of risk and uncertainty, no matter whether we look to the future or reflect upon the past. Therefore, the course builds on a thematically structured, case study approach. Each week introduces a new principle or policy area that is useful in understanding risk; each week provides cases that illustrate the usefulness of those principles. The ultimate goal is to be able to analyze matters of risk and uncertainty as they manifest around decisions taken by leaders in government or business in the real world.

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

The purpose of the seminar is a) to familiarize students with the scenario methodology as a way to think about uncertain futures and the management of risk, b) to do so by having students themselves develop scenarios on "Political Risks for Germany in 2035", and c) to link the scenario techniques to political risk analysis and strategic foresight

SA.635 (Online Programs)

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.

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.

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.

This course explores the challenges to political stability in Europe, with a special focus on democratic backsliding in the region and the effects of European integration on individual member states. Through in-depth analysis of Europe's social, cultural, and political contexts, students will gain a deeper understanding of the region's complexities. The Regions of the World courses will enable you to develop a functional expertise in a particular region of the world, which will give you a deeper understanding of how risk and uncertainty in one issue area play out in a specific locale. Depending on the regional and functional area, some of this knowledge can then be integrated in your capstone project.

SA.635.747. Regions of the World: Americas. 2 Credits.

This course explores the challenges to economic and financial stability in the Americas, with a special focus on previous currency and debt crises in Latin America and the role the U.S. dollar plays in the region. Through in-depth analysis of the Americas' political and economic contexts, students will gain a deeper understanding of the region's complexities. The Regions of the World courses will enable you to develop a functional expertise in a particular region of the world, which will give you a deeper understanding of how risk and uncertainty in one issue area play out in a specific locale. Depending on the regional and functional area, some of this knowledge can then be integrated in your capstone project.

SA.635.748. Regions of the World: Middle East. 2 Credits.

This course explores the challenges to the political and security situation in the Middle East and North Africa, with a special focus on civil war, disaster management and conflict resolution in the region. Through in-depth analysis of the Middle East's political, ethnic and security contexts, students will gain a deeper understanding of the region's complexities. The Regions of the World courses will enable you to develop a functional expertise in a particular region of the world, which will give you a deeper understanding of how risk and uncertainty in one issue area play out in a specific locale. Depending on the regional and functional area, some of this knowledge can then be integrated in your capstone project.

SA.635.749. Regions of the World: Asia-Pacific. 2 Credits.

This course explores the challenges to the economic and environment situation in the Asia-Pacific region, with a special focus on the politics of climate change and the energy transition in China. Through in-depth analysis of the China's political, economic and supply chain contexts, students will gain a deeper understanding of the region's complexities. The Regions of the World courses will enable you to develop a functional expertise in a particular region of the world, which will give you a deeper understanding of how risk and uncertainty in one issue area play out in a specific locale. Depending on the regional and functional area, some of this knowledge can then be integrated in your capstone project.

SA.635.750. Regions of the World 2. 4 Credits.**SA.635.900. MAGR Capstone Residency I. 1 Credit.**

Students will choose their region of specialization (Europe/Americas/Asia/Africa), deepen their understanding of the political and economic context and begin working towards the completion of their capstone project. The student will be in residence to initiate and complete a risk analysis project, working within a team of classmates under direct faculty supervision. The project will combine a conceptual area and a region of the world. Students will be enrolled in two in-person, on-campus, full-time, courses, Capstone Residency I and Capstone Residency II.

SA.635.901. MAGR Capstone Residency II. 1 Credit.**SA.635.902. MAGR Capstone. 4 Credits.**