



Integrative Education

Risk Case Study Challenge

Risk Case Study Challenge (MSc/MAS)

The Risk Case Study Challenge runs in cooperation with a Risk Center corporate partner. Student teams with eclectic backgrounds work on business-relevant, risk-related challenges. The corporate partner provides the challenges, necessary input and occasional support. Supported by ETH faculty, students explore the challenges and develop solutions. They apply their knowledge, creativity and logical problem-solving skills with an emphasis on evidence and application. Challenges are complex, contain ambiguities, and may be addressed in more than one way.



Design

Each challenge involves a Risk Center Corporate Partner. The various challenges, connected by an overarching theme, are developed with Risk Center and ETH lecturers. They offer students a concrete environment to apply their knowledge, logic, creativity, and problem-solving skills with an emphasis on applications. Typically, the Case Studies are complex, contain ambiguities, and may be addressed in more than one way.

The course is offered as an elective in the ETH D-MTEC curriculum and other ETH MSc Programs. It is open to MSc and MAS Students from D-MTEC and from other ETH departments, and to PhD students.

Students work in groups of 4 under the supervision of a Case Manager from the Industry Partner. Risk Center lecturers offer regular coaching sessions. Finally, students get content impulses from ETH Faculty.

Objectives

The Risk Case Study Challenges helps students learn to "think like a scientist", with an emphasis on evidence, in order to solve real-world problems. Students learn to aggregate information from various sources under a time constraint

Students also engage in active inquiry and in-depth discussions, coordinating within and across groups, and with their Case Managers. Each team is left to manage their time and interactions (with case managers and ETH faculty) as they see fit. This requires cooperation skills.

Finally, the Case Studies teach students to process and present their findings to diverse audiences of risk professionals.

A beneficial experience for Students

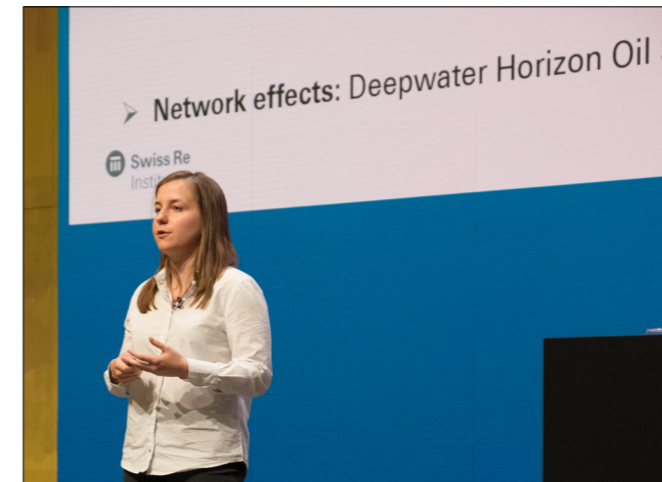
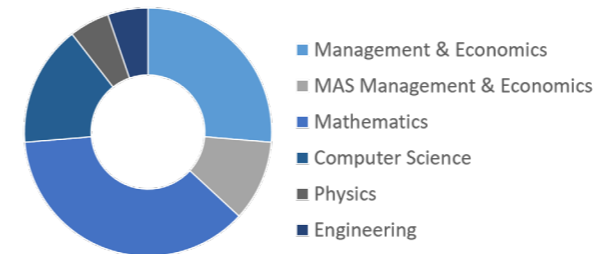
Students acquire a better understanding of risk-management and modelling. They discover new tools and applications for the theoretical knowledge provided by their curriculum at ETH. They learn first-hand to communicate their results in a professional environment. Finally, they learn to work in teams and self-organise, taking responsibility for their progress.

In addition, Risk Center lecturers provide adequate coaching on specific aspects of the relevant discipline(s), as well as communication and presentation skills.

A beneficial experience for the Industry Partner

Case Managers from the Corporate Partner guide the students along the case. They also enjoy interacting with fresh minds and being challenged with creative ideas. Students will present their results in the final session at the partner's headquarters.

Case Study Challenge 2019: Students' Backgrounds



Student's impressions

"I liked the topic because it is a real problem that people in the industry are working on and we had the chance to taste this practical approach" (*Nikolas, PhD Student, BAUG*)

"I will recommend the course to other students. Getting first-hand insights into risk-management from a practical point of view was an enriching experience" (*Claudia, MSc GESS*)

"The group size is ideal for such a task and for communication within the group as well. Having members from diverse disciplines allows us to learn from each other" (*Diya, MSc ERDW*)

"Great opportunity to develop soft skills that are often overlooked when studying technical subjects (presentation skills, communication skills, ability to discuss with the management, receive feedback and implement it, teamwork)" (*Francesco, MSc MATH Statistics*)

"I enjoyed being part of the risk case study challenge of this year. It was a great opportunity for me to study the topic of supply chain from the perspective of an insurance company" (*Ambra, PhD Student, MTEC*)

Feedback from Partners:

"A fast track to revealing solutions"

"We met 4 groups of bright, fresh minds with excellent academic training."

"We all now look at things from a new angle - the students brought us towards revealing solutions - Thank you!!"

How does it work?

- Each student team is connected to an expert (case manager) from the corporate partner. This contact person offers occasional guidance on the task at hand.
- Students organise the interaction with the corporate partner themselves. Depending on the context, they may meet internal / external experts or clients.
- Each team self-organises independently and chooses when to consult ETH faculty for scientific inputs.
- The kick-off and final meetings involve all teams, case managers, and ETH faculty.
- Students sign a nondisclosure agreement if required.

Past and present Risk Case Study Challenges

Spring 2018 on **Conceptualizing and Assessing Reputation Risk**

Spring 2019 on **Supply Chain Risks and Extreme Events**

Fall 2019 on **Machine Learning Applications in Banking and Finance**

Spring 2022 on **User Experience (UX) in Online Banking**





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