



1SC2792 – Response to a viral attack on an information system

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Department: DOMINANTE - MATHÉMATIQUES, DATA SCIENCES
Language of instruction: ANGLAIS, FRANCAIS
Campus: CAMPUS DE PARIS - SACLAY
Workload (HEE): 40
On-site hours (HPE): 27,00

Description

In this course you will be facing a cyber crisis, not unlike those that sometimes undergo large companies and industrial sites. Harnessing an ongoing incident, you will assist a client in figuring out the best course of action.

You will be tasked with understanding the nature and impact of the incident ; then communicate this to different stakeholders, and ultimately come up with realistic and concrete countermeasures, along with talking points, for the decision-makers to consider.

In particular you are expected to model the viral-like nature of the threat, taking into account the uncertainty and stakes at hand.

Quarter number

ST2

Prerequisites (in terms of CS courses)

Information systems and programming
Algorithms and complexity
Modeling
CIP

Syllabus

You are For five days and 24 hours a day, you will have to deploy your knowledge, creativity, and organizational skills to best respond to a crisis situation related to the propagation of malware on an information system.

- In 2019, it was a viral attack on a large bank.
- In 2020, it was a virus attack on a water treatment facility.
- In 2021, it was a virus attack on NATO.
- In 2022, it was a virus attack on a satellite control center.

The 2023 topic will be revealed on the first day of the EI.



Grading

The capstone project is graded through observation of your work and behavior during the week, your intermediate reports, your report and your defense.

Resources

Instructors:

Rémi Géraud

Hugo Waltsburger

Learning outcomes covered on the course

At the end of this teaching you will be able to

- Taking a step back from an industrial issue and placing it in its technological, economic and social context
- Modelling a propagation phenomenon on the basis of partial information
- Choose one or more models to meet a given objective
- Adjusting your speech to different people in the business world
- Developing language elements for crisis communication
- Present your results with rigour, precision, conciseness and honesty

Description of the skills acquired at the end of the course

This EI term contributes to the **acquisition** of several CentraleSupélec engineer competencies, including C1, C4, C6, C7, C8 and C9.

The integration capstone project will be a place for the **evaluation** of C1, C4, C7 and C8 competencies.