ESIROI
ÉCOLE D'INGÉNIEURS
UNIVERSITÉ DE LA RÉUNION

DEPARTMENT : *IT*
SEMESTER : *S8*

IDENTIFICATION

Course code :	ESI-SPI-CI-IN4-S8-UE4-EC2
ECTS :	1

DURATION

Lectures :	4
Tutorial classes :	0
Labs :	2
Total :	6

Project :
Personnal work :

ASSESSMENT

Competence will be assessed based on the deliverables provided, using a criterion-based grid presented to engineering students in advance.

TEACHING MATERIALS

All documents used during teaching sessions. If necessary, additional documentary references may be consulted.

LANGUAGE

English

CONTACT

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UE8-CYBER

Cybersecurity SAE

SCOPE OF THE CHALLENGE

WORKING SITUATION

Design, deploy, and/or audit a security policy and document the work.

COMPETENCES AND LEVEL ASSESSED

Managing the security of an information system

EXPECTED OUTPUTS

- The **commented source code** of the developed malware (ransomware + exfiltration module), stored in a private Git repository.
- A **comprehensive technical report** including :
  - Description of the malware architecture and technical choices
  - Evasion techniques implemented and their justification
  - Generated indicators of compromise (IoC)
  - Limitations and recommended countermeasures
- A **20-minute oral presentation** to a jury, with a *live* demonstration in a virtualized environment.

In addition to the technical aspects specified in the expected level description, the SAE will be assessed based on the following criteria :

- Compliance with national and international legal frameworks
- Continuous scientific and technological monitoring
- Communication with stakeholders, both written and oral, in French and English
- Continuous reduction of cyberattack risks and impacts

RESOURCES

- Mathematics and cryptography instructor
- Cybersecurity specialist, particularly in regulatory aspects
- English instructor