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MAPP_F_MSI464_2023 - CYBER SECURITY	2

Number of ECTS credits : 2

Course language : Anglais

Course leader : BERNARDIN EMMANUELLE

Speakers : JALLOT Philippe

≡ COURSE DESCRIPTION

Today, organizations have to manage very large volumes of data. Big data analysis techniques are multiplying, as well as the connections between data from inside and outside the company, which increases their vulnerability. Beyond IT security, which focuses on securing networks and safeguarding data, cybersecurity encompasses the ability to prevent, detect and respond to threats. These capabilities are based on the realization that it is no longer a question of if they will be attacked but when and how.

≡ COURSE OBJECTIVES

The objective of this course is to provide a general culture in terms of cybersecurity. It should enable students to identify the major issues that cyber security poses for companies and give them a global approach to preventing these risks.

≡ LEARNING OBJECTIVES

C4B learning goal	LG1 - Analysis
C4B learning objective	LO3 - Use cross-disciplinary approaches
Outcomes	Lev. 2 - Select appropriate disciplinary fields to resolve a problem / situation

≡ TACKLED CONCEPTS

Cyber risk assessment, control measures, needs assessment.

≡ LEARNING METHODS

Lessons, exercises, case studies.

≡ EXPECTED WORK AND EVALUATION

Continuous assessment: case study (subject to change)

Exam: Quiz

≡ BIBLIOGRAPHY

TBD

≡ EVALUATION METHODS

50 % : Continuous Assessment

50 % : Exam

≡ SESSIONS

1

Global introduction

LECTURE & CASE STUDIES & EXERCISES : 02h00

The challenges of security (context, issues, maturity)

2

Needs assessment

LECTURE & CASE STUDIES & EXERCISES : 02h00

In this session, we will assess the security needs of companies (physical, human and environmental resources)

3

What are the vulnerabilities?

LECTURE : 02h00

We will discuss the concepts of vulnerability/threat/attack in the cloud and on site (types of threats, types of hackers)

4

Types of threats

LECTURE & CASE STUDIES & EXERCISES : 02h00

We will discuss the main types of threats: man in the middle, examples of standard attacks.

5

Cyber risks evaluation

LECTURE & CASE STUDIES & EXERCISES : 02h00

We will see how to assess cyber risks (CVSS, vulnerability assessments)

6

How to deal with cyber risks

LECTURE & CASE STUDIES & EXERCISES : 02h00

We will discuss cyber policy and notation models (scoring, insurance).

7

Regulations

LECTURE & CASE STUDIES & EXERCISES : 02h00

We will see here the regulations and sanctions for bad behavior in terms of cyber risks (ANSSI, GDPR, sanctions in terms of brand image).

8

Organization and cyber risks

LECTURE & CASE STUDIES & EXERCISES : 02h00

We will see here how companies can anticipate and manage cyber risks from an organizational point of view: security audit within the company (internal control - operational, governance)