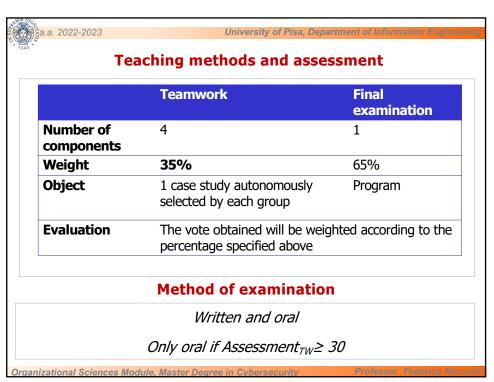


Organizational Sciences Module

Professor Federico Niccolini – Dottoressa Martina Neri

Organizational Sciences Module, Master Degree in Cybersecurity

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Teaching methods and assessment

- Enhance students' **knowledge, analytical skills** about the principles, theories, and methodologies of organizational sciences within cybersecurity related issues
- In-depth analysis of organizational perspectives in the cybersecurity field and increasing interpretive skills with up-to-date and influential material
- Practical application of organizational perspectives within cybersecurity
- Improving the soft skills of learning by interacting, and public speaking, and problem solving thanks to the participatory approach

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Team work

Scope and Objectives

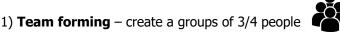
- Analyze through the lens of the principles of cyber organizational sciences a real case study
- Develop critical thinking toward organizational cyber issues
- Interpret the case study and propose possible organizational solutions
- Develop a plan to improve the organization's cybersecurity

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GUIDELINES





2) Case study selection

3) Team work **main phases**:

Phase 1: Case study framework: analysis taking into account: 1) sector; 2) size (micro, small, medium, or large) according to European Commission guidelines; 3) main business activity (type of product or service, target customer)

Phase 2: <u>Case study contingent analysis:</u> examination of the current cybersecurity situation/posture



Phase 3: <u>Planning</u>: according to the previous analysis you will act as a cybersecurity manager, thus proposing a plan to improve the organizational cybersecurity

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4) Elaboration and **presentation**: Max 20 mins of presentation and 10 mins discussion



5) **Constructive criticism by peers**: teams not presenting will follow the presentations and have to identify and expose at least one <u>strength</u> and <u>one point of improvement of</u> of the presentation



- 6) Each team will receive an evaluation based on the quality of **both** the work presented and the criticism produced
- 7) A list of **mandatory and optional topics** to be applied to the analysis will be provided to each team. You must choose **3 topics** (**2 mandatory and 1 optional**). For each topic chosen, you must identify **both** the existing/actual situation and make a proposal to enhance it in the plan.

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MANDATORY TOPICS

- 1) Strategy
- 1.1 SWOT analysis
- 1.2 Operative goals for cybersecurity
- 2) Cyber organizational culture
- 2.1 Organizational mechanism regarding cybersecurity culture
- 2.1.1 Communication channels
- 2.1.2 Training
- 2.1.3 Organizational learning mechanisms
- 2.1.4 Artefacts used to create a cybersecurity culture
- 3) Organizational resilience (including the cyber one)
- 3.1 Tools and practices for anticipation
- 3.1.1 Training
- 3.1.2 Plans implementation

- 3.2 Tools and practices for withstanding and coping
- 3.2.1 Cybersecurity expert role
- 3.3 Tools and practices for recovery and learning
- 3.3.1 Learning mechanism
- 3.3.2 Feedback analysis

4) Organizational structure

- 4.1 Structural designs for organizational cybersecurity (e.g., functional structure over divisional)
- 4.2 Strengths and weaknesses of the structural design
- 4.3 Information-sharing design (e.g., vertical vs horizontal)

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OPTIONAL TOPICS (examples)

- 1) Cybersecurity awareness
- 1.1 Education plans
- 2) Strategic alliances and other partnerships
- 3)

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EXAMPLES

1.1/2 SWOT analysis and strategy: A) Do the SWOT analysis of the actual organizational cybersecurity of the case study; **B)** Propose solutions to the identified weakness; **C)** Propose strategies and activities on how to counteract threats; **D)** Propose strategies and activities on how to exploit opportunities.

4.1. Structural designs: A) identify the structural design of your case study; **B)** Depict its features (e.g., is there a cybersecurity function? Which is the information sharing design?); **C)** propose changes to the structural design to enhance organizational cybersecurity.

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Presentation guidelines

- Time → Max 20 minutes
- **Contents** → The presentation must be developed as follows:
- First slide: Title and table of contents
- · Second and third slides:

Case study framework \rightarrow 1) sector; 2) size (micro, small, medium, or large) according to European Commission guidelines; 3) main business activity (type of product or service, target customer)

Fourth to eight slides:

Current organizational cybersecurity situation

· Nineth and subsequent slides:

Organizational cybersecurity plan

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Presentation guidelines

- **Citations:** At the end of each presentation, it is required to provide a **clear specification of the topics selected** for the case study analysis (you must refer either to the books, articles, and slides). Thus, a bibliography must be presented at the end.
- **Overall requirements:** Please note that students are required to participate in all the phases of the teamwork.

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