FINAL MASTER PROJECT (EMaCS-04-01)				
DEGREE PROGRAM:	Master in Computer Science for the Human-Centric and Sustainable Industry			
SEMESTER: Fourth	**TYPE:** Basic	**CREDITS:** 30 ECTS	**WORKLOAD:** 750 hours	**MENTORING:** 5 hours/week
LANGUAGE: English				

OBJECTIVES	
General	Develop an original project, proving the intellectual maturity and the research skills of the student developed in EMaCS.
Specific	• Manage and coordinate projects, work groups and organizations in the field of information and communications technologies. • Deepen and specialize in some of the pathways acquiring the whole competences and capabilities of the degree. • Ensure, manage, audit and certify the quality of computer processes and products in accordance with the principles of quality management governed by established standards. • Design, develop, manage and evaluate certification and security guarantee mechanisms in the processing and access to information in a local, networked or distributed processing system, in accordance with current legislation and regulations.

SUSTAINABILITY

The Final Master Project, as outlined in the provided guide, contributes to sustainability through several competences and learning outcomes. The emphasis on managing and evaluating data, information, and digital content aligns with sustainable practices, promoting efficient and responsible use of resources. The inclusion of ethical reflection and consideration of personal data protection and privacy underlines the commitment to ethical and responsible use of technology, essential for sustainable and socially responsible projects. Additionally, the emphasis on exploring and critically thinking about the project's outcomes ensures that sustainability challenges and opportunities are thoroughly considered in the decision-making process. The learning outcomes stress the importance of understanding market needs and fulfilling them with a focus on safety, quality, and approval, all of which are integral components of sustainable practices.

RESILIENCE AND HUMAN-CENTRIC DEVELOPMENT

The Final Master Project actively contributes to resilience and human-centric development by nurturing competences and learning outcomes that prioritize user needs and ethical considerations. The development of original projects related to laboratory subjects, internships, or professional life issues fosters practical applications with a focus on solving technical problems and problem framing. The acquisition of skills to model, design, implement, and manage applications and systems highlights the importance of creating technology that aligns with human requirements. The awareness of workplace values such as initiative, entrepreneurship, leadership, and commitment to quality reinforces a human-centric approach, emphasizing the importance of developing solutions that not only meet technical requirements but also contribute positively to the work environment and user experience. The mentoring aspect of the project, with five hours per week, ensures personalized guidance, fostering an environment where the development of projects is aligned with the principles of resilience and human-centric development.

SUBJECT MATTER

Each student will develop an original project, related to the themes of the laboratory subjects, the internships or the problems detected in their professional life. Project with clear practical applications are going to be enhanced.

COMPETENCES

C3. MANAGING AND EVALUATING DATA, INFORMATION AND DIGITAL CONTENT
C5. PROGRAMMING
C6. USING MACHINE LEARNING AND A.I. TECHNIQUES

| C7. PROTECTING PERSONAL DATA AND PRIVACY |
| C9. REFLECTING ON ETHICAL OUTCOMES |
| C10. EXPLORATORY AND CRITICAL THINKING |
| C11. PROBLEM FRAMING |
| C14. SOLVING TECHNICAL PROBLEMS |
| C15. MANAGING SYSTEMS and/or PROJECTS |
| C17. COMMUNICATING EFFECTIVELY |

LEARNING OUTCOMES

Knowledge	• Know the whole basic and advanced principles, methodologies and resources associated with the pathway coursed by each student, in such a way that awards her/him to fulfil current needs of the market.
Skills	• Acquire the capacity to manage research, development and innovation projects, guaranteeing safety for people and property, the final quality of the products and their approval. • Be able to model, design, define the architecture, implement, manage, operate and administer and maintain applications, networks, systems, services and computer content. • Develop the ability to ensure, manage, audit and certify the quality of computer developments, processes, systems and products.
Attitudes/values	• Be aware of the importance in the workplace of skills and attitudes such as initiative, entrepreneurship, leadership and commitment to the quality of work.

TEACHING METHODS

The student will develop an individual work under the supervision of an academic tutor, and, if it is done in a company, there will also be a tutor from the company who supervises and directs the work. This project will be carried out individually, following standard project development methodologies (see Annex 3), and emphasizing some of the skills acquired in the master's subjects.

EVALUATION

Procedure described in Annex 3 – Study, credit recognition and examinations regulations.

PRECONDITIONS

To have passed all the subjects of the Master's degree.

DEPARTMENT	-
LECTURERS	Any of the professors belonging to UBU, UVT or Turku UAS, involved in teaching the master's degree.
LITERATURE	-