



EMaCS

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EUROPEAN MASTER IN COMPUTER SCIENCE FOR THE HUMAN-CENTRIC
AND SUSTAINABLE INDUSTRY

EXECUTIVE SUMMARY

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*Total reading time: 10 minutes

THE NEED

INDUSTRY IS ONE OF THE DRIVING FORCES OF THE EUROPEAN ECONOMY

According to the report of the European Commission (EC) [Industry 5.0 – Towards a sustainable, human centric and resilient European industry](#), between 2009 and 2019 this sector represented around 20% of the EU's GDP, creating thousands of jobs, opportunities for business and wealth in all the Member States. However, today's economy faces constant challenges that the industry has to work with, such as globalization, the geopolitical landscape or failures in value chains.

Sustainability, the leadership of people and resilience become the three main axes of the new industry.

- ✓ Sustainability, understood as the efforts to reduce the carbon footprint, promote circularity and the incorporation of production systems based on renewable energies.
- ✓ Limelight of the person, to treat human and fundamental rights as a priority, for example, with the General Data Protection Regulation, and so that workers benefit from the digital transition and the advantages of technology.
- ✓ Resilience, considered as the ability to adapt to difficult economic and community situations, and to take action for a recovery based on ecological, digital and social priorities.

WHY INDUSTRY 5.0?

- ✓ Industries can play an active role in providing solutions to challenges for society including the preservation of resources, climate change and social stability.
- ✓ The Industry of the Future approach brings benefits for industry, for workers and for society.
- ✓ It empowers workers, as well as addresses the evolving skills and training needs of employees. It increases the competitiveness of industry and helps attract the best talents.
- ✓ It is good for our planet as it favours circular production models and support technologies that make the use of natural resources more efficient.
- ✓ Revising existing value chains and energy consumption practices can also make industries more resilient against external shocks, such as Covid-19 crisis.

EMACS

INTERNATIONAL

A single program developed jointly by 5 prestigious international universities, with official validity in countries where the students attend the master's degree.

- ✓ Universidad de Burgos (UBU, Spain).
- ✓ Instituto Politécnico de Coimbra (IPC, Portugal).
- ✓ Hochschule für Angewandte Wissenschaften Hamburg (HAW, Germany).
- ✓ Universitatea de Vest din Timisoara (UVT, Romania).
- ✓ Turun Ammattikorkeakoulu (TUAS, Finland).

OBJECTIVES

- ✓ To invest in building mind-sets, multidisciplinary skills and capabilities for complex adaptive business to empower graduates and active practitioners towards a comprehensive understanding on industry government 5.0.
- ✓ To ensure that industry becomes a pillar and driver of sustainability, regeneration of nature and inclusion rather than constituting a threat.
- ✓ To optimise the understanding of the impact that automation and digitization have on skill requirements and preparing for the future of work, in terms of real value approaches and wider organisation acceptance.

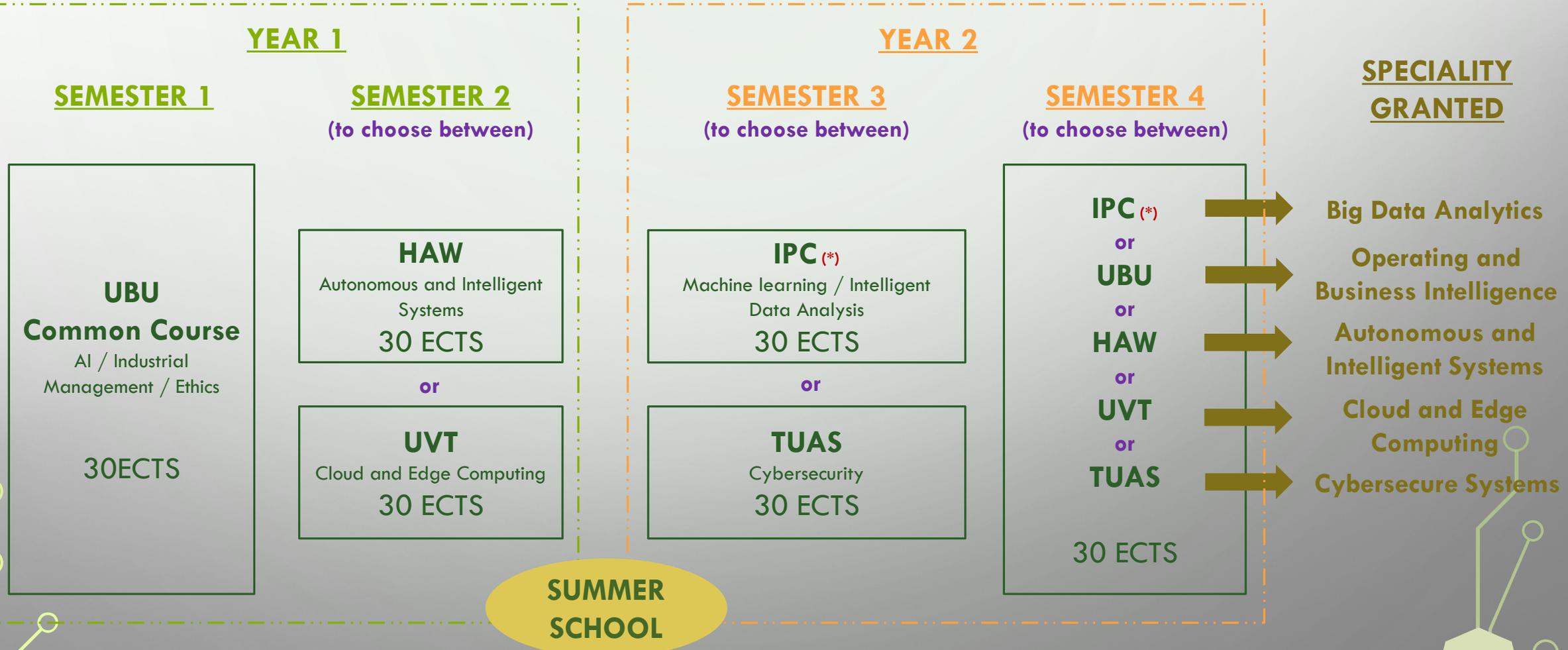
OFFER

- ✓ Between 20 and 25 international students who stand out for their academic and professional excellence will be involved per edition.
- ✓ Financial support for excellence. An annual average of 12 Erasmus Mundus scholarships are available to students who meet the requirements.

THE FUTURE

✓ Leading research lines. A practical, current and quality programme that, after getting the title, grants access to research and doctorate.

✓ Excellent career opportunities. Students will acquire the new competences demanded by the marketplace in the computer science.



(*) The election of IPC in the third semester will condition the development of the fourth semester also in IPC.

THE ASSOCIATED PARTNERS FIGURE

EMaCS is a master's degree designed jointly to emphasize the strengths of each partner **and minimize weaknesses with the incorporation of "external" agents** that contribute to offering a coherent programme, which enables students to address a diverse future (doctorate, research, labour market) and oriented to the search (through training in computer science) of solutions/alternatives for the most pressing European problems at the moment. **These "external" agents are Associated Partners.**

ROLES THAT AN ASSOCIATED PARTNER CAN PLAY

- ✓ Play a role in **dissemination and communication** about the EMaCS master's degree, for the purpose of international student recruitment to help attracting excellent students and acting as a "local" point of contact for bachelor students, to support and to refine the selection process of applicants.
- ✓ Take part in the excellence of the contents of the master's programme, providing international experts with outstanding professional and academic careers in EMaCS course-related subjects to deliver presentations as **guest lecturers**.
- ✓ Accept students for **internship**, providing them facilities, professional advice and sufficient resources for the appropriate development of that practices. The aim of the internship is that students apply and complement their academic training, favouring the acquisition of skills that prepare them for the exercise of professional activities, fostering their employability and entrepreneurial capacity.
- ✓ Contribute financially to its **sustainability**.

BASIC RIGHTS AND DUTIES

- ✓ Official arrangements concerning EMaCS between the Consortium and the Associated Partner, will be regulated separately in a bilateral agreement when the Consortium gets the European Commission funding and, always after the Coordinating Institution, on behalf of all Partners, signs the Grant Agreement. (*)
- ✓ Associated Partners shall be approved by the Consortium.
- ✓ Associated Partners shall appoint a member coordinator to organize and coordinate the activities and the organisation of EMaCS programme in her/his institution, and to act as contact point with the EMaCS Coordinator and the rest of the Partners.
- ✓ After signing the Grant Agreement, Associated Partners may participate in the Steering Committee, if they wish, without voting rights. Otherwise, they must be informed by the Coordinating Institutions of any decision made, and they must receive the minutes of the meetings.

(*) This master's degree programme will be submitted to the next 2024 Erasmus Mundus Joint Master (EMJM) call, funded by the European Commission through the Erasmus+ program.

STEPS TO TAKE



Share this information with colleagues.



Ask for more information if you need it.



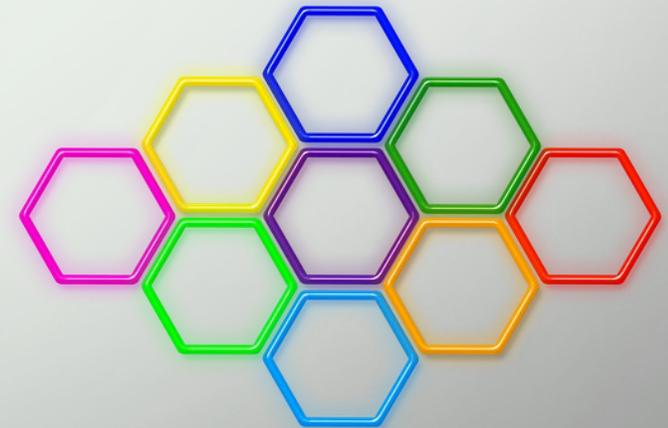
Analyse the interest for your institution.



Decide what role you want to have in EMaCS.



Fill out, sign, seal and send us the commitment letter.



**Keep in touch with us to learn about
EMaCS and create new synergies.**



EMaCS

THANK YOU FOR YOUR ATTENTION

SECRETARIAT: emacs.erasmus.mundus@ubu.es