International Joint Post-Graduation in Industry 4.0 Digital Innovation and Transformation

The International Joint Post-Graduation in Industry 4.0 Digital Innovation and transformation address the existing (and potentially growing) gap between industry and higher education offer by developing new, innovative and multidisciplinary approaches to teaching and learning for upskilling and reskilling of the current workforce, stimulating an entrepreneurial mind-set and digital skills, while facilitating the exchange, flow and co-creation of knowledge.

This innovative course offers the possibility for participants to learn in an international environment and in a collaborative way, inspired by real scenarios based on challenges and problems faced by industry.

This initiative is a result of the collaborative efforts of the Universities for the Future consortium members. The delivery of this international course is a joint responsibility of P.PORTO, Aalto University and Warsaw University of Technology.

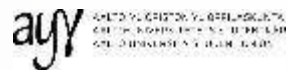| HIGHER EDUCATION INSTITUTIONS	COMPANIES	PUBLIC BODIES
PORTO DESIGN FACTORY P. PORTO (COORDINATOR)	IKEA INDUSTRY PORTUGAL, LDA.	ANI - AGENCIA NACIONAL DE INOVACAO, SA
AALTO-KORKEAKOULUSAATIO	CONSAIR OY	TEKNIIKAN AKATEEMISET RY
POLITECHNIKA WARSZAWSKA	WILLSON & BROWN WB SP. Z O.O.	POLSKA KOMISJA AKREDYTACYJNA

SUPPORT PARTNERS

PLATONIQ SISTEMA CULTURAL

INOVA+, INNOVATION SERVICES S.A.

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JUNTA DIGITAL

Educative Assets

Lessons for students
Short courses for professionals
Joint International Post-Graduation

universitiesofthefuture.eu
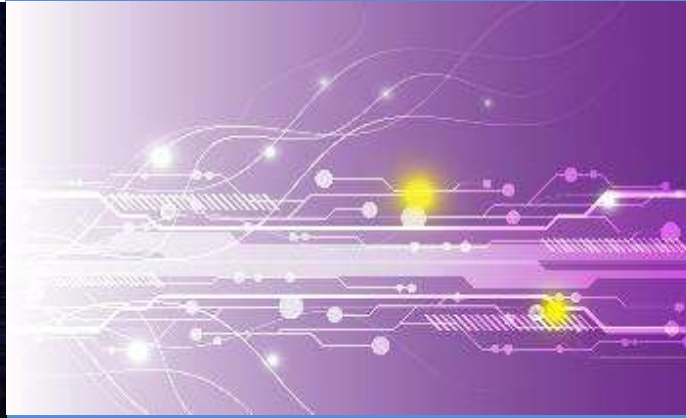
International Joint Post-Graduation: structure

Corresponding to 30 ECTS, the Post-Graduation in Industry 4.0 Digital Innovation and Transformation has **the full duration of 720 hours and includes six modules, covered in the span of 21 weeks.**

This course is divided into 200 contact hours (online synchronized lessons of 2 hours duration, complemented with some on-site activities and two intensive working weeks in an international environment) and 520 hours of participants autonomous work.

The Post-Graduation is supported by a Virtual Factory, based on real challenges and problems from industry (hands-on projects), with joint international students working together as a team using the collaborative platform, streaming, etc.

International Joint Post-Graduation: target groups

The Post-Graduation targets the current industry workforce interested in reskilling and upskilling their competences and putting into practice projects to accelerate their company's digital innovation and transformation processes.
Participants will be selected upon the following criteria:

- **Bachelor's degree** (preferably in Engineering or Management or in any related study areas)
- **At least two years of professional experience**, assuming currently a decision taking job position
- **Involved, conducting or expecting to be in any digitization process**
- **Fluent in English**
- **Motivated and willing to invest his/her time in an innovative learning process**

COURSES AND LESSONS

12 lessons for students at bachelor and master levels were produced, promoted in Portugal, Poland and Finland, organized respectively by P.Porto, WUT and Aalto.

Each lesson was designed to have a 1h duration and integrated into existing curricula or offered as an extra lesson for the students.
Initially planned to be held face-to-face, most of them had to be implemented online due to the lockdown caused by the pandemic COVID-19 which as prevented the evaluation process as not all the lessons were evaluated by the students.

Artificial Intelligence	Intellectual Property	Wireless communication for IoT devices
Soft skills, Smart Teams and Transformation Leadership	Introduction to I4.0	Tips to Improve Communication
5G and I4.0 Cisco	System thinking	Basics of Prototyping
Internet of Things	Sensors for Cyber-physical systems	Basics of Additive Manufacturing

10 short courses for professionals (continuous professional education) promoted in Portugal, Poland and Finland, organized respectively by P.Porto, WUT and Aalto.
Each course was designed to have 24h duration, corresponding to 2 ECTS, and were planned to be held face-to-face, but due to the lockdown in 2020 caused by the pandemic COVID-19, some of the courses were held online.

Machine Learning and Data Analytics to Predictive Maintenance	Systemic design for sustainability
Building Internet of Things Solutions	Business Processes Modelling
Vanguard Leadership Program for Industry 4.0	User-Centered Product Development
Additive Technology - 3D Modelling and Printing	Ethical Product Development
Circular economy in Industry 4.0 - a practical approach	Sustainable Product Development