EUROPASS SUPPLEMENT TO THE CERTIFICATE OF THE HIGHER DEGREE SPECIALIZATION COURSE

NAME OF THE SPECIALIZATION COURSE

Advanced Vocational Training Specialization Course in Cybersecurity in operating technology environments.

DESCRIPTION OF THE SPECIALIZATION COURSE

The holder has acquired the general competence relating to:
define and implement security strategies in organizations and industrial infrastructures by performing cybersecurity diagnostics, identifying vulnerabilities and implementing the necessary measures to mitigate them by applying current regulations and industry standards, following quality, occupational risk prevention and environmental respect protocols.

Within this framework, each PROFESSIONAL MODULE includes the following LEARNING RESULTS acquired by the holder.

"Cybersecurity in industrial projects".

The titleholder:

- Determines the cybersecurity elements to be included in the design of an industrial project by analyzing the security already implemented in the organization.
- Establishes purchase management plans determining the cybersecurity requirements to be met by suppliers.
- Establishes the cybersecurity measures in the execution and startup of an industrial project in compliance with the quality requirements demanded.
- Implements the cybersecurity activities of the operation and maintenance phase of an industrial project by documenting the activities performed.
- Implements cybersecurity activities in the decommissioning of facilities complying with the requirements established in destruction and/or preservation of systems in a secure manner.

"Safe industrial control systems".

The titleholder:

- Determines the changes for the convergence of IT (Information Technology) and OT (Operational Technology) technologies by analyzing the situation of these environments in organizations.
- Evaluates technological risk scenarios in control systems of industrial facilities applying recognized methodologies.
- Documents the diagnostic, analysis and other processes related to a facility's systems industrial cybersecurity, generating reports of different levels of complexity.
- Designs security policies for industrial control systems taking into account the analysis performed, industry standards and applicable regulations.
- Configures industrial control systems minimizing possible risk scenarios.
- Detects anomalies in industrial control systems using monitoring tools and analysis procedures.

"Secure industrial communications networks".

The titleholder:

- Determines the security levels in an automated industrial environment by analyzing the characteristics of the protocols and communications used and proposing solutions to new security requirements.
- Evaluates technological risk scenarios in industrial networks applying recognized methodologies.
- Implements industrial networks applying switching and routing techniques.
- Implements industrial wireless networks applying industry standards.
- Implements remote access in industrial environments ensuring secure communications.
- Design the automation network by applying the necessary segmentation in the organization's networks.

- Identifies vulnerabilities in industrial network devices and proposes countermeasures.
- Detects incidents in real time in industrial networks by applying analysis procedures and using the appropriate tools.
- Defines verification and supervision procedures obtaining compliance metrics of the security policies.
- Configures industrial network devices while minimizing potential risk scenarios.

"Forensic analysis in industrial cybersecurity".

The titleholder:

- Develops forensic analysis processes in industrial control systems applying recognized methodologies.
- Develops the process of forensic analysis in control systems and programmable logic controllers applying recognized methodologies.
- Develops the process of forensic analysis in industrial robotics applying recognized methodologies.
- Develops the process of forensic analysis in Internet of Things (IoT) devices, from industrial and other sectors such as transportation, health, construction, etc., applying recognized methodologies.
- Responds to a cybersecurity incident that affects the organization by taking the following necessary actions.

"Comprehensive security".

The titleholder:

- Integrates physical security standards and procedures into cybersecurity in OT environments identifying potential risks.
- Integrates operational security standards and procedures into cybersecurity in OT environments identifying potential risks.
- Integrates quality standards and procedures in cybersecurity in OT environments by identifying potential risks.
- Applies cybersecurity measures in security instrumented systems (SIS) in compliance with applicable standards.
- Integrally manages security risks by applying recognized methodologies.

JOBS THAT CAN BE PERFORMED WITH THIS SPECIALIZATION COURSE

The Higher Vocational Training specialization course in cybersecurity in operating technology environments.

The most relevant occupations and jobs are as follows:

- Expert in cybersecurity in operating environments.
- Cybersecurity auditor in operating environments.
- Cybersecurity consultant in operating environments.
- Cybersecurity analyst in operation environments.

CERTIFICATE ISSUANCE, ACCREDITATION AND LEVEL

Body issuing the certificate of the higher degree specialization course on behalf of the King: Ministry of Education and Vocational Training or the autonomous communities within the scope of their own competences. The certificate has academic and professional effects valid throughout the State.

Official course duration: 400 hours.

Certificate level (national or international).

- NATIONAL: Non-university higher education.
- INTERNATIONAL
  - Level P-5.5.4 of the International Standard Classification of Education (ISCED P-5).

- Level 5C of the European Qualifications Framework (EQF 5C).

Access requirements:
To access the Specialization Course in Cybersecurity in operating technology environments it is necessary to be in possession of one of the following degrees:

- Degree of Higher Technician in Electrotechnical and Automated Systems, established by Royal Decree1127/2010, of September 10, 2010, which establishes the title of Higher Technician in Systems and Automation and establishes its minimum teaching requirements.
- Degree of Higher Technician in Industrial Mechatronics, established by Royal Decree 1576/2011, of November 4, which establishes the title of Higher Technician in Industrial Mechatronics and sets its minimum teachings.
- Degree of Higher Technician in Automation and Industrial Robotics, established by Royal Decree1581/2011, of November 4, 2011, which establishes the title of Higher Technician in Automation and Industrial Robotics and its minimum teaching requirements are established. Title of Higher Technician in Telecommunications and Computer Systems, established by Royal Decree 883/2011, of June 24, which establishes the title of Higher Technician in Telecommunications and Computer Systems and sets its minimum teachings.
- Title of Higher Technician in Electronic Maintenance, established by Royal Decree 1578/2011, of November 4, which establishes the title of Higher Technician in Electronic Maintenance and sets the minimum education requirements.

Legal Basis. Regulation establishing the course of specialization in cybersecurity in operating technology environments:
Minimum teaching requirements established by the State: Royal Decree 478/2020, of April 7, which establishes the Cybersecurity Specialization Course in operating technology environments and sets the basic aspects of the curriculum.

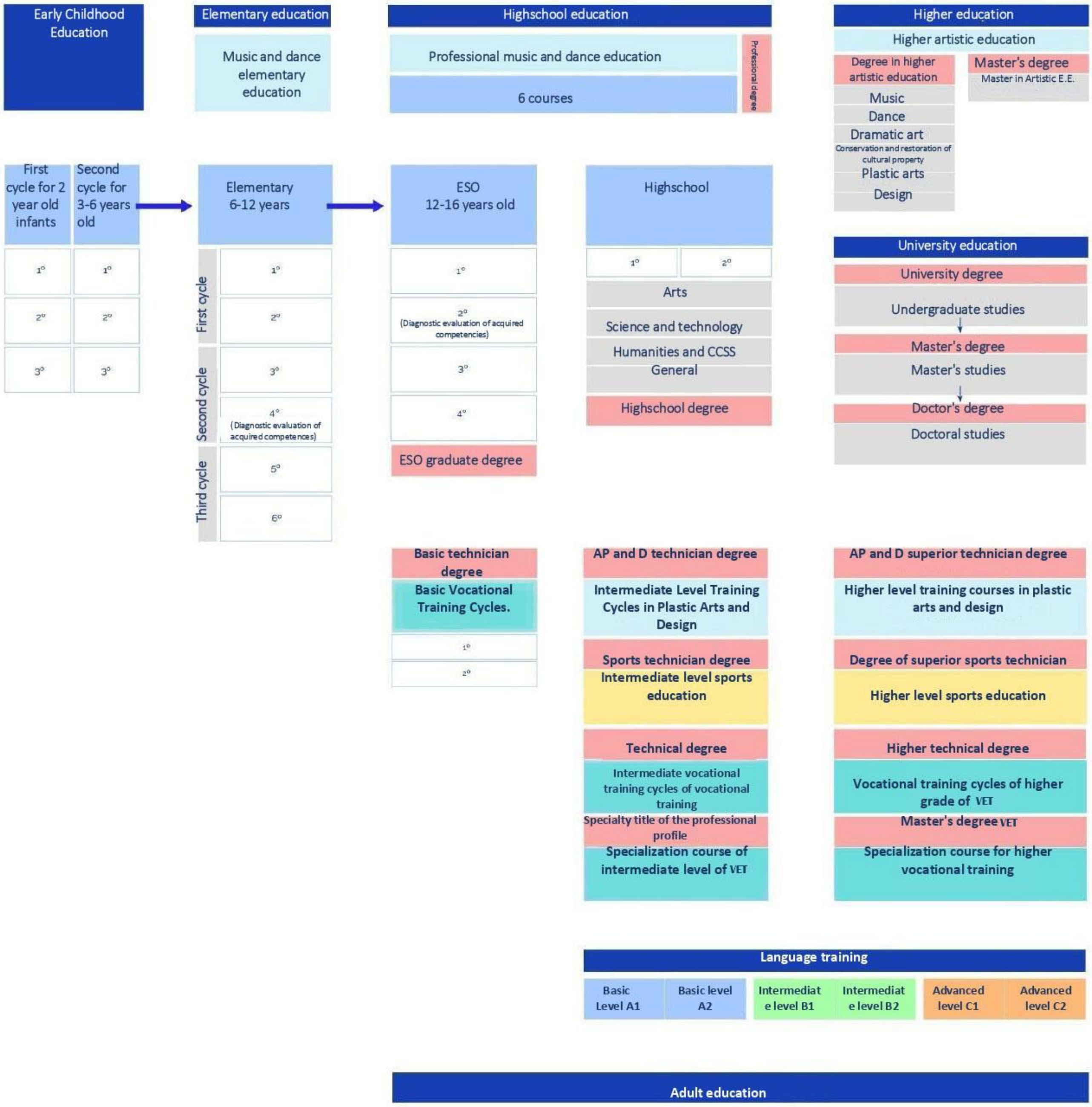
Explanatory note: This document is intended as additional information to the title in question, but has no legal validity whatsoever.

TRAINING OF THE OFFICIALLY RECOGNIZED SPECIALIZATION COURSE

PROFESSIONAL MODULES OF THE ROYAL DECREE OF THE HIGHER GRADE SPECIALIZATION COURSE	**ECTS CREDITS**
Cybersecurity in industrial projects	6
Safe industrial control systems	7
Secure industrial communications networks	9
Forensic analysis in industrial cybersecurity".	11
Comprehensive security	10
	TOTAL CREDITS
	43
OFFICIAL DURATION OF THE SPECIALIZATION COURSE CERTIFICATE (HOURS)	***400***

* The minimum teaching requirements for the specialization course reflected in the chart above, 50%, are valid throughout the national territory. The remaining 50% belongs to each Autonomous Community and may be reflected in **Annex I** of this supplement.

INFORMATION ABOUT THE EDUCATION SYSTEM



Early Childhood Education

First cycle for 2 year old infants: 1º, 2º, 3º

Second cycle for 3-6 years old: 1º, 2º, 3º

Elementary education

Music and dance elementary education

Elementary 6-12 years

First cycle: 1º, 2º

Second cycle: 3º, 4º (Diagnostic evaluation of acquired competences)

Third cycle: 5º, 6º

Highschool education

Professional music and dance education

6 courses

Professional degree

ESO 12-16 years old

1º

2º (Diagnostic evaluation of acquired competencies)

3º

4º

ESO graduate degree

Highschool

1º, 2º

Arts

Science and technology

Humanities and CCSS

General

Highschool degree

Higher education

Higher artistic education

Degree in higher artistic education

Music

Dance

Dramatic art

Conservation and restoration of cultural property

Plastic arts

Design

Master's degree

Master in Artistic E.E.

University education

University degree

Undergraduate studies

Master's degree

Master's studies

Doctor's degree

Doctoral studies

Basic technician degree

Basic Vocational Training Cycles.

1º

2º

AP and D technician degree

Intermediate Level Training Cycles in Plastic Arts and Design

Sports technician degree

Intermediate level sports education

Technical degree

Intermediate vocational training cycles of vocational training

Specialty title of the professional profile

Specialization course of intermediate level of VET

AP and D superior technician degree

Higher level training courses in plastic arts and design

Degree of superior sports technician

Higher level sports education

Higher technical degree

Vocational training cycles of higher grade of VET

Master's degree VET

Specialization course for higher vocational training

Language training

Basic Level A1

Basic level A2

Intermediate level B1

Intermediate level B2

Advanced level C1

Advanced level C2

Adult education