

EUROPASS SUPPLEMENT TO THE CERTIFICATE OF THE HIGHER DEGREE SPECIALIZATION COURSE

NAME OF THE SPECIALIZATION COURSE

Advanced Vocational Training Specialization Course in Cellular Cultures

DESCRIPTION OF THE SPECIALIZATION COURSE

The holder has acquired the general competence relating to:

Obtain, process and preserve cell and tissue cultures to support diagnosis, therapeutic trials, drug discovery, creation and maintenance of cell banks, research and other fields of interest, maintaining the facilities and equipment involved in the processes and complying with quality, risk prevention and environmental protection specifications.

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

"Cell Cultures."

The titleholder:

- Identifies the different cell types, relating them to their biological characteristics.
- Applies cell isolation and selection techniques, ensuring the viability and asepsis of the process.
- Applies techniques for the culture of primary cells and immortalized cell lines, following established protocols.
- Selects and applies techniques for cryopreservation and thawing of cells, following procedures to ensure their viability and traceability.
- Applies cell packaging techniques, ensuring traceability, viability and asepsis.

"Complementary techniques in cell culture."

The titleholder:

- Applies counting techniques and determination of cell viability, following established procedures.
- Applies nucleic acid extraction techniques, following established procedures.
- Characterizes flow cytometry, recognizing its possible applications.
- Applies cell culture contamination control techniques, recognizing the different types of contaminants.
- Applies genetic modification techniques through transfection, following the following procedures established.
- Applies cell differentiation and reprogramming techniques, following established procedures.

"Quality and regulatory standards applicable to cell cultures".

The titleholder:

- Characterizes the basic quality standards, as well as the Hygiene and Biological Safety Standards applicable to cell culture laboratories, relating them to the type of work to be performed.
- Characterizes the documentation applicable to a cell culture laboratory for the correct performance and recording of processes, ensuring quality and traceability.
- Assesses the importance of calibration, qualification and validation of processes, ensuring compliance with quality standards.
- Applies the Waste Management regulations in the cell culture laboratory, avoiding contamination and preserving the environment.
- Assesses traceability in the handling of biological samples, recording all the information related to each step taken.

"Cell Culture Laboratory".

The titleholder:

- Analyzes the structure of a cell culture laboratory, recognizing the functions of the different areas.
- Characterizes the equipment of a cell culture laboratory, considering its applications and maintenance.
- Characterizes the material and reagents in the culture laboratory, relating them to their usefulness.
- Prepares materials and reagents following established procedures.
- Stores and conserves materials, reagents and products, complying with biological and environmental risk prevention standards.

"Cell culture applications".

The titleholder:

- Analyzes the concepts of regenerative medicine, recognizing its possible applications.
- Applies cell cultures for drug screening, following established procedures.
- Applies procedures for the creation and maintenance of biobanks, following established procedures to ensure their operability.
- Applies cell culture techniques in three-dimensional matrices following established procedures.
- Applies biomolecule production techniques, assuring the quality of the products generated.
- Applies diagnostic techniques through the use of cell cultures, considering their applications.
- Applies in vitro fertilization techniques following established procedures.

"Workplace Training".

The titleholder:

- Identifies the structure and organization of the company, relating them to the productive activity it develops.
- Applies ethical and work habits in the development of their professional activity, in accordance with the characteristics of the work position and with the procedures established in the company.
- Prepares areas, means and auxiliary services of a cell culture laboratory, following standard procedures.
- Performs the necessary operations to obtain, process and cryopreserve cell and tissue cultures, following standard procedures.
- Participates in the development of cell culture applications, following standardized procedures.

JOBS THAT CAN BE PERFORMED WITH THIS SPECIALIZATION COURSE

The most relevant occupations and jobs are as follows:

- Expert in cell culture.

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: 600 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-5.5.4).
 - Level 5C of the European Qualifications Framework (EQF 5C).

Access requirements: In order to access the specialization course it is necessary to hold one of the following The following higher vocational training degrees:

- a) Degree of Higher Technician in Analysis and Quality Control Laboratory, established by the Royal Decree of the Ministry of Health, established by the Royal Decree of the Ministry of Health, established by the Royal Decree of the Ministry of Health. Decree 1395/2007, of October 29, 2007.
- b) Degree of Higher Technician in the Manufacture of Pharmaceutical, Biotechnological and Related Products, established by Royal Decree 832/2014, of October 3.
- c) Title of Higher Technician in Clinical and Biomedical Laboratory, established by Royal Decree 771/2014, of September 12.
- d) Degree of Senior Technician in Pathological Anatomy and Cyto diagnosis, established by Royal Decree 767/2014, of September 12.

Legal Basis. Regulations establishing the specialization course in Cell Cultures: Minimum teaching requirements established by the State: Royal Decree 93/2019, March 1, 2009, which establishes the Specialization course in cell culture and the basic aspects of the curriculum are established.

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
Cell cultures.	8
Complementary techniques in cell culture.	8
Quality and regulatory standards applicable to cell cultures.	3
Cell culture laboratory.	4
Cell culture applications	6
Workplace training.	7
	TOTAL CREDITS
	36
OFFICIAL DURATION OF THE SPECIALIZATION COURSE CERTIFICATE (HOURS)	600

* The minimum teaching requirements for the specialization course reflected in the table 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

