EUROPASS CERTIFICATE SUPPLEMENT

TITLE OF THE DIPLOMA (ES)

Técnico en Sistemas Microinformáticos y Redes

TRANSLATED TITLE OF THE DIPLOMA (EN) (1)

Technician in Microcomputer Systems and Networks

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(1) This translation has no legal status.

DIPLOMA DESCRIPTION

The holder of this diploma will have acquired the General Competence with regard to:

Installing, configuring and maintaining isolated or networked microcomputer systems, as well as local networks in small settings, guaranteeing their functionality and applying the quality protocols on safety and respect for the environment.

Within this framework, the PROFESSIONAL MODULES and their respective LEARNING OUTCOMES acquired by the holder are listed below:

"Assembly and Maintenance of Computers"

The holder:

- Selects integration components in a standard microcomputer system, describing their functions and comparing services offered by different manufacturers.
- Assembles a microcomputer system, interpreting the manufacturer's plans and instructions and applying assembly techniques.
- Measures electrical parameters, identifying the type of signal and relating it with their characteristic units.
- Maintains computer systems interpreting the manufacturers' recommendations and relating failures with their causes.
- Installs software in a computer system using an image stored in a memory medium and justifying the procedure to be followed.
- Recognises new tendencies in the assembling of microcomputer systems describing their advantages and adapting them to the characteristics of use of the computer.
- Maintains peripherals, interpreting the manufacturers' recommendations and relating failures with their causes.
- Complies with the rules on labour risk prevention and environmental protection, identifying associated risks, measures and equipment to avoid them.

"Single-user Operating Systems"

The holder:

- Recognises the characteristics of file systems, describing their types and applications.
- Installs operating systems, relating their characteristics with the computer hardware and application software.
- Carries out elementary tasks for the configuration of operating systems, interpreting requirements and describing the procedures followed.
- Performs basic operations for the management of operating systems, interpreting requirements and optimising the system for its use.
- Creates virtual machines identifying their field of application and installing specific software.

"Office Automation Applications"

The holder:

- Installs and updates office automation applications, interpreting specifications and describing the steps to be followed in the process.
- Prepares documents and templates, describing and applying the advanced options of word processors.
- Prepares documents and accounting templates, describing and applying advanced options of spreadsheets.
- Prepares documents with office automation data bases describing and applying data management operations.
- Manipulates digital images analysing the possibilities of different programs and applying basic capture and editing techniques.
- Manipulates video sequences analysing the possibilities of different programs and applying basic capture and editing techniques.
- Prepares multimedia presentations describing and applying basic implementation and design rules.
- Performs operations to manage mail and electronic agenda, relating use needs with their configuration.
- Applies support techniques for the use of applications, identifying and solving incidents.

"Network Operating Systems"

The holder:

- Installs network operating systems describing their characteristics and interpreting technical documentation.
- Manages users and groups within network operating systems, interpreting specifications and applying system tools.
- Carries out domain management tasks identifying needs and applying tools for domain management.
- Manages the shared resources of the system, interpreting specifications and determining security levels.
- Carries out monitoring tasks and use of the network operating system, describing the tools being used and identifying main incidences.
- Carries out tasks for the integration of free and proprietary software, describing the advantages of sharing resources and installing specific software.

"Local Networks"

The holder:

- Recognises the structure of local networks analysing the characteristics of application environments and describing the function of their components.
- Installs the wiring of a local network interpreting specifications and applying assembling techniques.
- Interconnects computers within wired local networks describing wiring standards and applying techniques for the assembly of connectors.
- Installs computer networks, describing the services they offer and applying assembling techniques.
- Maintains a local network interpreting the recommendations of the hardware or software manufacturers and establishing the relationship among failures and their causes.
- Complies with the rules on labour risk prevention and environmental protection, identifying associated risks, measures and equipment to avoid them.

"Computer Safety"

The holder:

- Applies passive security measures in computer systems describing environment characteristics and relating them with their needs.
- Manages storing devices describing the procedures carried out and applying techniques to assure information integrity. Applies active security mechanisms describing their characteristics and relating them with the computer system use needs.
- Guarantees privacy of the information transmitted through computer networks describing vulnerabilities and installing specific software.
- Recognises regulations on security and data protection analysing the consequences in case of failure to comply with them.

"Network Services"

The holder:

- Installs dynamic configuration services, describing their characteristics and applications.
- Installs name solving services, describing their characteristics and applications.
- Installs file transfer services, describing their characteristics and applications.
- Manages email servers identifying use requirements and applying configuration criteria.
- Manages web servers identifying use requirements and applying configuration criteria.
- Manages remote access methods describing their characteristics and installing the respective services.
- Installs secure wireless networks justifying the chosen configuration and describing the procedures of implementation.
- Establishes the access from local networks to public networks identifying possible settings and applying specific software.

"Web Applications"

The holder:

- Installs content management systems, identifying their applications and configuring them in accordance with requirements.
- Installs e-learning management systems, describing the website structure and the generated directory hierarchy.
- Installs web files management services, identifying their applications and verifying their integrity.
- Installs web office automation applications, describing their characteristics and use environment.
- Installs web desktop applications, describing their characteristics and use environment.

"Professional Training and Guidance"

The holder:

- Selects job opportunities, identifying the different possibilities of labour integration, and the alternatives of lifelong learning.
- Applies teamwork strategies, assessing their effectiveness and efficiency on the achievement of the company's goals.

- Exercises rights and complies with the duties derived from labour relationships, recognising them in the different job contracts.
- Determines the protective action of the Spanish Health Service in view of the different covered eventualities, identifying the different types of assistance.
- Assesses risks derived from his/her activity, analysing job conditions and risk factors present in his/her labour setting.
- Participates in the development of a risk prevention plan in a small enterprise, identifying the responsibilities of all agents involved.
- Applies protection and prevention measures, analysing risk situations in the labour setting of the Technician in Microcomputer Systems and Networks.

"Business and Entrepreneurial Initiative"

The holder:

- Recognises skills related to entrepreneurial initiative, analysing the requirements derived from job positions and business activities.
- Defines the opportunity of creating a small enterprise, assessing the impact on the performance setting and incorporating ethic values.
- Carries out the activities for the setting-up and implementation of a company, choosing the legal structure and identifying the associated legal obligations.
- Carries out basic administrative and financial management activities of an SME, identifying the main accounting and tax obligations and filling in documentation.

"On the Job Training"

The holder:

- Identifies the company's structure and organization, relating it to the production and marketing of the product and services offered.
- Applies labour and ethic habits in his/her professional activity according to the characteristics of the job position and the procedures established by the company.
- Assembles computer systems, following the processes of the established quality system.
- Participates in breakdown diagnosis and repair applying corrective maintenance techniques.
- Installs operating systems and applications following the work plan and customers' needs.
- Participates in the installation, implementation and maintenance of installations with local network services and Internet, documenting the intervention.
- Helps users, solving problems related to the operation of applications, in accordance with the company's regulations.
- Participates in the tasks of installation, implementation and maintenance of systems that manage contents, e-learning and files among others, following the established work plan.

RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE DIPLOMA

The Technician in Microcomputer Systems and Networks works mainly in service sector companies practising their activity on trade, assembly and repair of computers, networks and microcomputer systems in general, as a part of computer support to organisation, or in companies of any size and productive sector using microcomputer systems and data networks for their management.

The most relevant occupations or jobs are the following:

- Technician in computer system installation-repair
- Computer systems technician
- Data networks technician
- Repairer of microcomputer systems peripherals
- Microcomputer sales representative
- Teleassistance operator
- Systems operator

AWARD, ACCREDITATION AND LEVEL OF THE DIPLOMA

Name of the body awarding the diploma on behalf of the King of Spain: Spanish Ministry of Education or the different Autonomous Communities according to their areas of competence. The title has academic and professional validity throughout Spain.

Official duration of the education/ training leading to the diploma: 2000 hours.

Level of the diploma (national or international)

- NATIONAL: Post-Compulsory Secondary Education

- INTERNATIONAL:
    - Level 3 of the International Standard Classification of Education (ISCED 3).
    - Level 4A of the European Qualifications Framework (EQF4).

Entry requirements: Holding the Certificate in Compulsory Secondary Education or holding the corresponding access test.

Access to next level of education/training: This Diploma may provide access to Advanced Training Cycles provided that an entry exam is passed.

Legal basis. Basic regulation according to which the diploma is established:

- Minimum teaching requirements established by the State: Royal Decree 1691/2007, of 14 December, according to which the diploma of Technician in Microcomputer Systems and Networks and its corresponding minimum teaching requirements are established.

Explanatory note: This document is designed to provide additional information about the specified diploma and does not have any legal status in itself. An Annex I may be added and will be filled in by the corresponding Autonomous Community.

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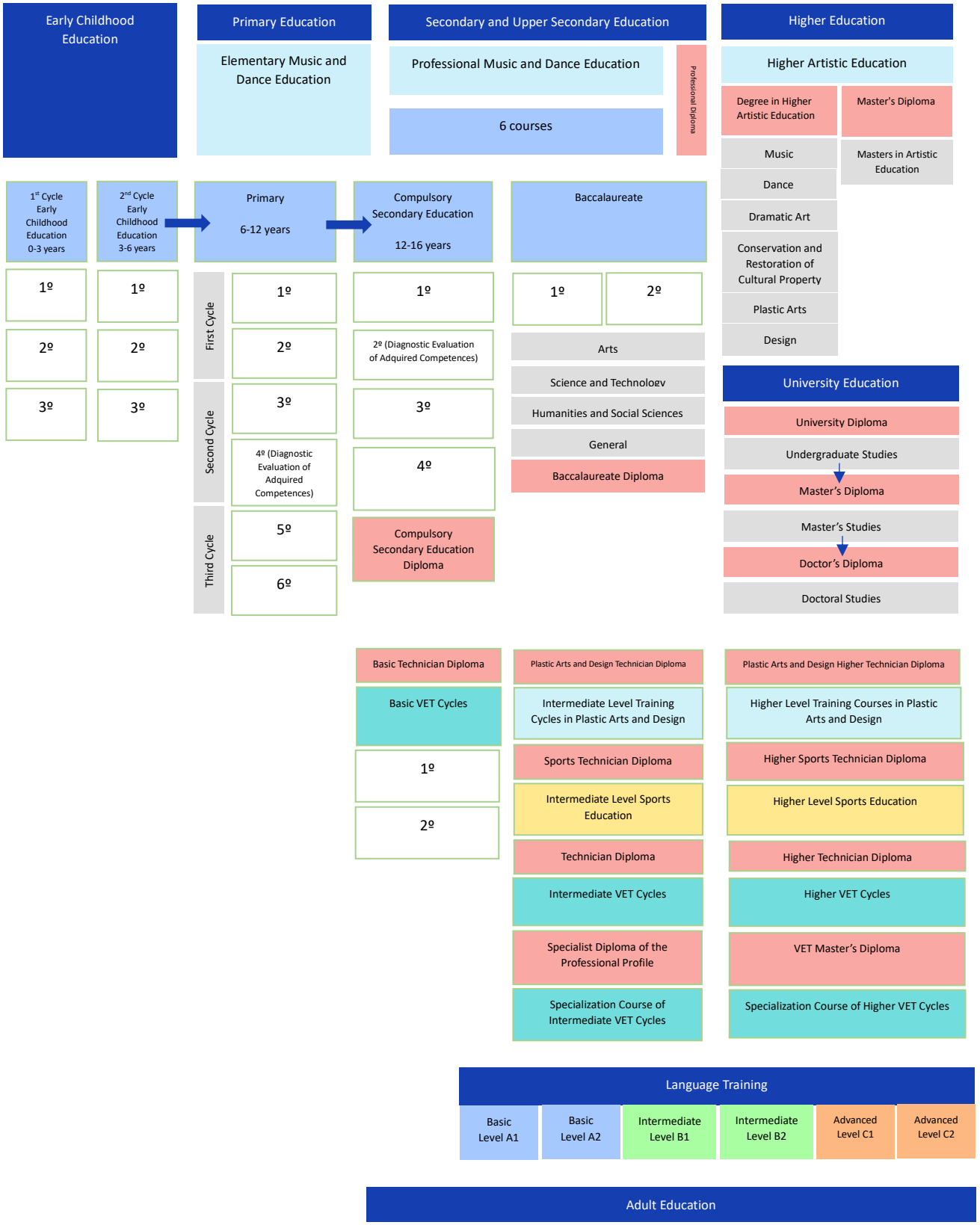
INFORMATION ABOUT THE EDUCATION SYSTEM