critical **FUTUREVET** thinking

MANUAL FOR VET STUDENTS

VOCATIONAL TRAINING CAN BE THE PATH TO THE TECHNOLOGICAL FUTURE

This document is a result of the project:

"Building the vocational training of the future: companies and educational centres facing the challenge of the organization and integration of a more inclusive and digital VET"

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INTRODUCTION

In recent years, especially after the challenges experienced since 2020, the member countries of the European Union have begun to apply educational laws that promote Vocational Training (VET) that is more adapted to the labour market and guarantees equal access to it[i].

This is the case in Spain, where in 2022 the Government approved Organic Law 3/2022, of 31 March, on the organisation and integration of Vocational Training for the modernisation of Vocational Training in Spain with the aim of improving standards and making VET more attractive to young people.

In a context of major changes in education, it is essential that students know the opportunities that Vocational Training represents for their future, especially in the technology sector.

For this reason, the partners of the Erasmus Plus project BUILDING THE VOCATIONAL TRAINING OF THE FUTURE: COMPANIES AND EDUCATIONAL CENTERS FACING THE CHALLENGE OF THE ORGANIZATION AND INTEGRATION OF A MORE INCLUSIVE AND DIGITAL VET, technology companies from Spain, Portugal and Italy and Vocational Training educational centers from Spain and Greece, have created this manual that allows students to explain all the characteristics of the new Vocational Training model in Spain. as well as VET education in Italy, Portugal and Greece.

Our goal is for you to know the opportunities offered by Vocational Training, as well as the realization of mobilities in technology companies, participating in innovative research projects and working side by side with experts.
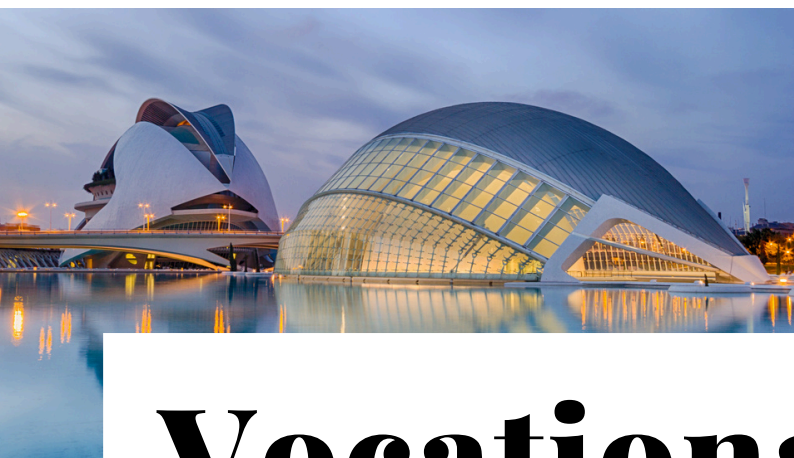
Vocational training in SPAIN

In 2022, the new Organic Law on the Organisation and Integration of Vocational Training was approved for the modernisation of Vocational Training in Spain with the aim of improving standards and making VET more attractive to young people. All this, through the introduction of flexible learning pathways, as well as the updating and development of new educational programs that meet the demands of the future of the labor market. The new VET model seeks to ensure learning opportunities for all with a unified, flexible and easily accessible system.

In summary, the new Law aims to make the VET education system a gateway to quality employment for young people, responsive to their interests, expectations and aspirations, as well as to the demands of companies.

With the new law, vocational training in Spain will be flexible and modular, divided into 5 ascending grades. Vocational Training will be divided into 5 degrees, with which you will have the possibility of configuring your own training itineraries.

What opportunities does each of these grades offer?

The first three degrees (A, B, C) are aimed at people who have work experience in a certain sector, but do not have any qualifications to prove it.

GRADE A

This degree includes the most basic training offers that allow you to obtain a **partial accreditation of a competence of a professional module** (A professional module is each of the subjects of the training cycle). To access this degree you do not have to meet any academic or professional requirements.

GRADE B

With this degree you can obtain a **Certificate of Professional Competence**. Like Grade A, it has no academic or professional requirements. You will be able to obtain this certificate by passing the training or obtaining all the corresponding partial accreditations of competence of GRADE A.

GRADE C

This degree allows you to obtain the **Professional Certificate** through the training of several professional modules. You can obtain this certificate by completing the training of a professional module or by obtaining all the corresponding Grade B certificates.
In addition, the courses of this degree will include a period of in-company training.

The access requirements will depend on the level:
- **Level 1:** They have no academic or professional access requirements.
- **Level 2**: it will be necessary to be in possession of the Compulsory Secondary Education Graduate.
- **Level 3**: it will be necessary to have a Technician's degree, a Baccalaureate degree or equivalent, a level 3 professional certificate, a certificate of competence included in the offer, or a level 2 professional certificate from the same professional family.

GRADE D

This degree includes the **Basic, Intermediate and Higher Level Training Cycles that already existed.**

- The **BASIC LEVEL TRAINING CYCLES** will have training in the field of communication and social sciences, applied sciences, professional fields and an annual collaborative project. These cycles will last for **2 years**. During this time, only in specific cases will there be in-company training.

- The **INTERMEDIATE AND HIGHER LEVEL TRAINING CYCLES** will have a modular offer that will include a compulsory core part, an optional part and an annual or biannual project that you must defend before the teachers and the company's tutor (if required).

  These cycles will last **2 or 3 years**, depending on the cycle. During this time you will undergo training in the company.

GRADE E

This degree includes specialization courses that allow you to specialize in a specific field of the Vocational Training sector that you have taken and passed. They will last between 300 and 900 hours. In the event that you successfully complete and pass an Intermediate Level specialization course, you will obtain the title of **Specialist** of the corresponding profile. In the case of the Higher Degree, you will obtain a **Master's Degree in Vocational Training**.

With the new law, all the training offered in grades C, D, and, where applicable, E, will have a **dual character**

What does it mean that all vocational education is dual in nature?

The training cycles will combine periods of training at the educational centre with periods of training in companies or equivalent bodies. In this way, at the same time that you acquire skills from your studies, you will become familiar with the work environment and acquire key skills for your future access to the labor market.

Depending on the characteristics of the in-company training period, dual vocational training can be general or intensive.

What is General Dual Vocational Training?

With the general dual vocational training you will have an internship period in a company of 25% (500h) of the total duration of your training course. The in-company training will be carried out in two periods:

- 1st course with a minimum duration of 120h and a maximum of 240h. It will take place preferably between March and June.
- 2nd course with a minimum duration of 260h and a maximum of 380h. It will take place preferably between January and March.

To carry them out, you will work 35 hours per week.

What is Intensive Dual Vocational Training?

With the intensive dual vocational training program you will have an in-company training period of 35% (700h) of the total duration of your training course. The in-company training will be carried out in two periods:
- 1st course with a duration of 335 hours.
- 2nd course with a duration of 365 hours.

To carry them out, you will work 35 hours a week.
In this case, it will be the educational center who organizes the periods of training in the company according to the availability of these.
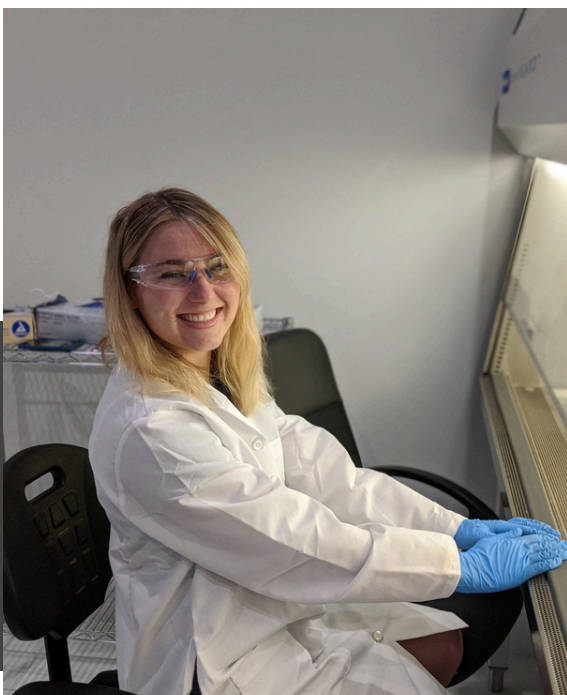
What are the main characteristics of dual training involving students?

- You will be able to carry out training periods in one or more companies.

- These in-company training periods must take into account the specific characteristics of the sector of your training.

- You must be 16 years old to access the training in the company.

- Both the company's technicians and the school's tutors will supervise your training period in the company.

- Communication with the company is promoted from the first months of training.

- You will have a tutor both in the company and in the school.

What are the objectives of in-company training periods?

- That you acquire professional skills from their training cycle.

- That you know the reality of the labor market.

- That you participate in the development of an entrepreneurial identity.

- That you acquire skills required by the labor market.

- That you have a greater capacity for their insertion into the labour market.
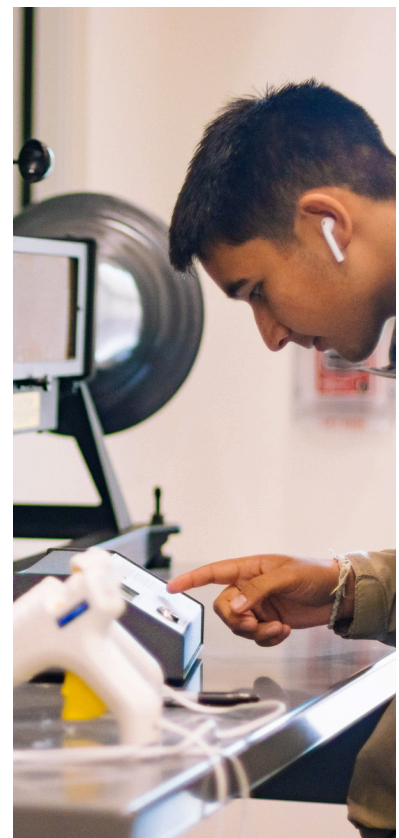
Vocational training in PORTUGAL

In Portugal, Vocational Training aims to guarantee the right to quality and equal education. VET education programmes encompass general, scientific, technological and work-based training. Based on this, vocational education in Portugal is divided into three levels (secondary, post-secondary, and higher).

Secondary level. It is optional to secondary academic education.

Taking these courses is optional and you can access them after completing the 9 years of basic education. The aim of these courses is to prepare you for access to the labour market or higher education courses.

These courses include:

- **Professional courses**. They last for 3 years and train you to access the labor market. In addition, these courses include an in-company hands-on training module.

- **Apprentice system**. These courses are of different lengths for people between 15 and 25 years old whose training offer covers various fields of employment (electricity, commerce, finance…). To take these courses, you must sign a contract with the school and the company.

- **Education and Training Courses**. They are short courses, from 125 to 276 hours for people over 15 years old.

- **Specialized art courses**. These are three-year courses that offer you training in visual and audiovisual arts.

- **Technology courses**. 3-year Professional Courses that offer technical, scientific and technological training.

Post-secondary level

They are technological specialization courses that last 1 year or 1 year and a half that offer specialized training for access to the labor market. For this reason, they have internships in companies.
If you take these courses you will obtain a diploma of technological specialization.

Higher level (non-tertiary)

These are 2-year professional courses with which you will obtain the title of Higher Professional Technician (it is not a university degree).

Main objectives

- Promote quality Vocational Training.

- Provide students with the skills needed to support the transition to a digital and greener economy.

- Encourage collaboration with the business world.

- Increase the percentage of students in VET.
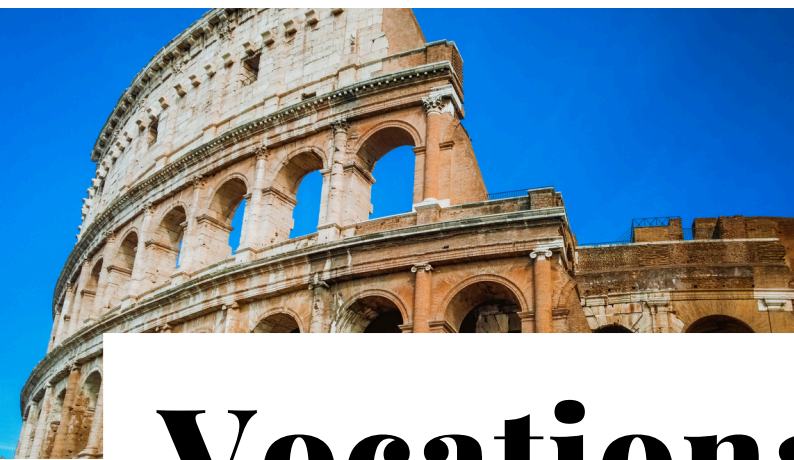
Vocational training in GREECE

In Greece, Vocational Training lasts 3 years and is taught at the vocational education school (Epalgematiko Lykeio, EPAL). This training, which leads to a specialization degree, accounts for more than 25% of work-based learning. Once you have obtained your VET qualification, you have the possibility of taking the official national exams for access to higher education.

One of the main priorities of the Government of Greece in education policy is to adapt training to the needs of the labour market. For this reason, in 2020 the Ministry of Education and Religious Affairs introduced a new Law (4763/2020) with the aim of regulating Vocational Training and establishing it at the national level at levels 3, 4 and 5 of the European Qualifications Framework (EQF). With this new law, they seek to offer more labour market-oriented training that facilitates the transition from education to the labour market and contributes to reducing youth unemployment.

Main featues

- Enable VET graduates to access higher education by taking an entrance exam.
- Establish a certification process based on the needs of the labor market.
- Offer professional advice and guidance.
- It expands the possibility of carrying out internships in companies.
- The introduction of Vocational Training Schools (EPAL) at the upper secondary level.
- Introduction of experimental vocational training institutes (IEK) at post-secondary level.
- The social partners are involved in the design and implementation of vocational training and lifelong learning.
- Improving synergies between the national VET system and the labour market.

Vocational training in ITALY

In recent years, the Government has carried out educational reforms that make vocational training more flexible and responsive to the needs of the labour market[i]. To this end, training itineraries have been implemented characterized by a greater number of hours of in-company training (they must complete at least 400 hours per year) or the virtual simulation of in-company training, as well as individualized training plans. [ii]

To train you in your access to the labour market, in Italy you can access courses at technical or vocational institutes or vocational training schools (IeFP):[iii]

Instituto de Formazione Professionale (IeFP)

These are public schools that offer three-year training programs[i] for the technical and vocational preparation necessary for access to the labor market. After 3 years you obtain the title of operator of the chosen sector, while if you finish the 4 years you obtain a title of Technician.
IeFP courses are administered by the regions and are characterised by a higher level of practical training than the courses in vocational schools and a lower number of theoretical teaching hours. After completing and passing these courses, students obtain a professional degree or a technical diploma (depending on the area of training chosen) and do not have the possibility to continue their education at university. To do this, they must first be trained at technical or vocational institutes.
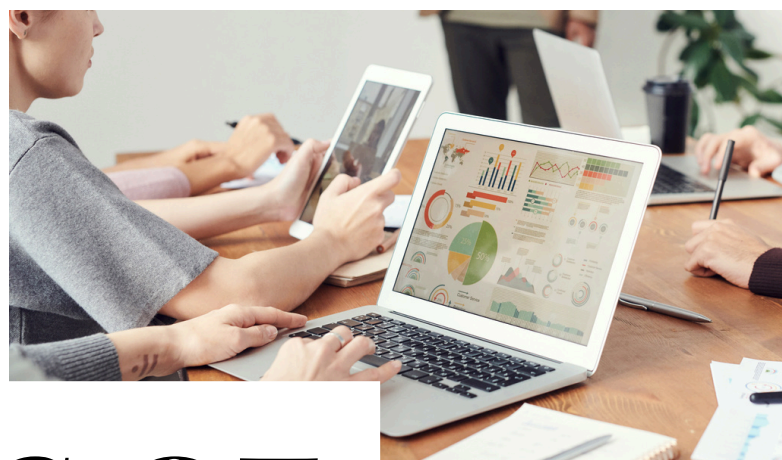
Instituti professionali

It is a type of vocational secondary school run by the government and organized at the national level. The training courses given in these schools have a duration of five years; Upon completion and completion of these courses, students obtain a diploma and the possibility of continuing their education at the university.
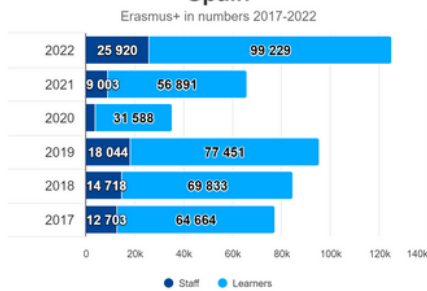
Instituti Tecnici

They are schools that train you in the economic or technological sector for 5 years. After completing your studies, you can enter the job market or continue your studies at university.

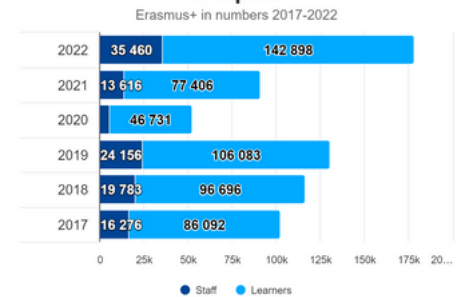# ANALYSIS OF VET STUDENTS MOBILITIES

Spain

Erasmus + participants leaving Spain
Erasmus+ in numbers 2017-2022

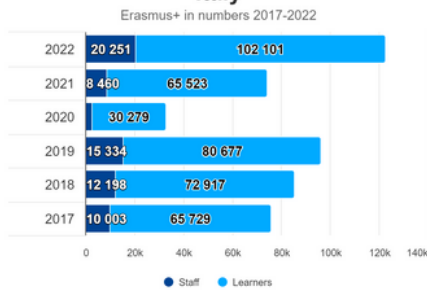| Year	Staff	Learners
2022	25 920	99 229
2021	9 003	56 891
2020		31 588
2019	18 044	77 451
2018	14 718	69 833
2017	12 703	64 664

● Staff ● Learners

Regarding students who took mobilities under the Erasmus+ Programme, according to data from the European Commission[i] in 2022, 142.898 students took mobilities in Spain, while, that same year, 99.229 Spanish students took mobilities in other European Union countries.

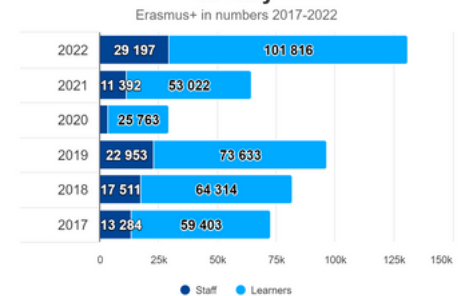**Erasmus+ participants travelling to Spain**
Erasmus+ in numbers 2017-2022

Year	Staff	Learners
2022	35 460	142 898
2021	13 616	77 406
2020		46 731
2019	24 156	106 083
2018	19 783	96 696
2017	16 276	86 092

● Staff ● Learners

Italy

Erasmus + participants leaving Italy
Erasmus+ in numbers 2017-2022

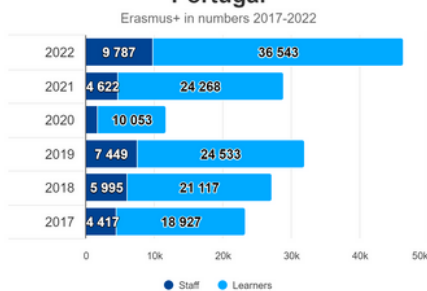| Year	Staff	Learners
2022	20 251	102 101
2021	8 460	65 523
2020		30 279
2019	15 334	80 677
2018	12 198	72 917
2017	10 003	65 729

● Staff ● Learners

Finally, in Italy[i] in 2022, 101.816 students took mobilities in Italy, while, in the same year, 102.101 Italian students took mobilities in other European Union countries.
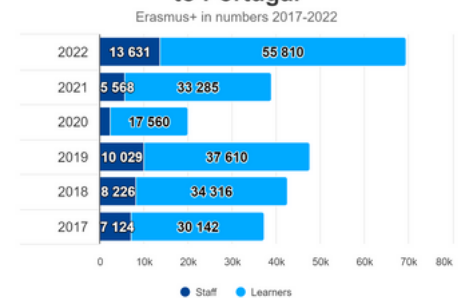
Erasmus+ participants travelling to Italy
Erasmus+ in numbers 2017-2022

Year	Staff	Learners
2022	29 197	101 816
2021	11 392	53 022
2020		25 763
2019	22 953	73 633
2018	17 511	64 314
2017	13 284	59 403

● Staff ● Learners

Portugal

Erasmus + participants leaving Portugal
Erasmus+ in numbers 2017-2022

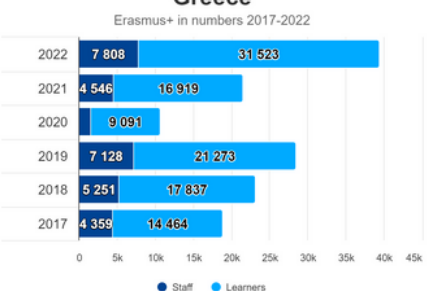| Year	Staff	Learners
2022	9 787	36 543
2021	4 622	24 268
2020		10 053
2019	7 449	24 533
2018	5 995	21 117
2017	4 417	18 927

● Staff ● Learners

As far as Portugal is concerned[i] , in 2022, 55.810 students took mobilities in Portugal, while, that same year, 36.543 Portuguese students took mobilities in other countries of the European Union.

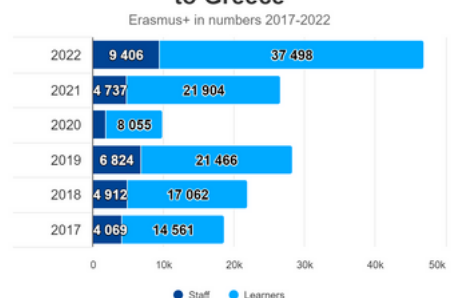**Erasmus+ participants travelling to Portugal**
Erasmus+ in numbers 2017-2022

Year	Staff	Learners
2022	13 631	55 810
2021	5 568	33 285
2020		17 560
2019	10 029	37 610
2018	8 226	34 316
2017	7 124	30 142

● Staff ● Learners

Greece

Erasmus + participants leaving Greece
Erasmus+ in numbers 2017-2022

Year	Staff	Learners
2022	7 808	31 523
2021	4 546	16 919
2020		9 091
2019	7 128	21 273
2018	5 251	17 837
2017	4 359	14 464

● Staff ● Learners

In the case of Greece[i] in 2022, 37.498 students took mobilities in Greece, while, in the same year, 31.523 Greek students took mobilities in other European Union countries.

Erasmus+ participants travelling to Greece
Erasmus+ in numbers 2017-2022

Year	Staff	Learners
2022	9 406	37 498
2021	4 737	21 904
2020		8 055
2019	6 824	21 466
2018	4 912	17 062
2017	4 069	14 561

● Staff ● Learners

WHY CARRY OUT MOBILITIES?

The advantages that students derive from all types of mobility within the EU are numerous and significant, and these experiences have a positive impact on their subsequent academic and professional careers.

In both CSE studies conducted by the Commission of the European Communities in 2019 and the European Commission in 2014, more than 80% of students claimed to feel deeply connected to Europe after their study abroad program (Vassilopoulos et al., 2021).

Through these programs, young people's personal development is promoted, offering them the opportunity to live in a different country, interact with young people, and develop vital interpersonal skills, also known as soft skills (Lesjak et al., 2015).

The main objective of mobility programmes is to create world-ready students who can navigate Europe's complex and interconnected economy.

MAIN ADVANTAGES

WORK SKILLS

Mobility significantly improves skills such as teamwork, self-confidence, problem-solving, self-organization, time management, planning, critical thinking, creativity, and tolerance.

PERSONAL SKILLS

Improves comprehension, empathy, responsibility, interpersonal and intercultural communication skills, and foreign language proficiency

EXPERIENCE

It provides experiences within different contexts, creates a sense of belonging, and improves the likelihood of benefiting from those different experiences. Participation in student mobility initiatives allows you to create connections that transcend national borders.

INDEPENDECE

One of the important advantages of Erasmus+ is its ability to promote independence and flexibility among participants. It offers you a unique opportunity to live in a foreign country at a young age, exposing you to unpredictable everyday circumstances. This report not only matures you, but also prepares you for your future working life.

FIRST EMPLOYMENT

It can be a stepping stone to securing first employment and building a successful early career.

LEARNING SKILLS

It helps to improve learning outcomes, such as knowledge, skills, competences and language skills with the aim of enhancing your personal development.

VISION OF EUROPE

Mobility shapes your vision of Europe and your sense of European identity.

CULTURES

Mobility programmes enhance understanding and appreciation of different cultures and nations through openness (OECD, 2022).
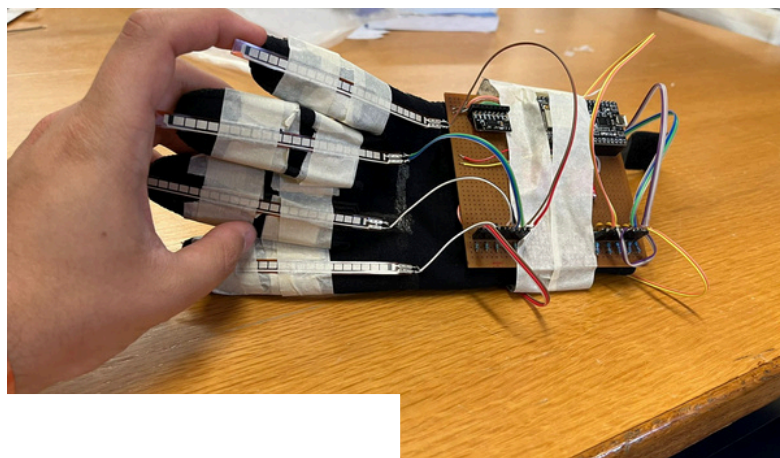
Summarizing all of the above, it is obvious that participation in the Erasmus+ programme helps students to develop in various ways, including academic, social and personal aspects. In addition, it equips them with skills that improve their job prospects.

Perhaps the greatest benefit of Erasmus+ lies in its ability to expose young people to different teaching styles, practices and lifestyles. It also offers them an understanding of different cultures, lifestyles, and daily routines.

This program offers young people the opportunity to directly experience the daily life, traditions, and educational approaches of a new culture.

Go for it

IN–COMPANY TRAINING

As we mentioned at the beginning of this manual, all training cycles will have a dual character and the company will have to take responsibility for part of your training.

Depending on the dual VET regime (general or intensive), the in-company training period will be between 25% and 35% of the total (general regime) or between 35% and 50% of the total (intensive regime).

During the training periods in the company, you will acquire professional skills specific to your training cycle and you will carry out tasks related to your training.

However, common to all training cycles, during these periods you will have the opportunity to:

Internships involve work experience and the opportunity to acquire transversal skills such as commitment, responsibility, teamwork, communication skills, etc.

01 Know the reality of the sector's work environment. This will allow you to know the dynamics within a company, the employment opportunities you have and will help you make decisions about possible educational paths that you take in the future.

02 You will acquire key skills for problem solving, decision-making, searching for information...

03 Learn to adapt to change.

04 Acquire skills related to your profession in a work context. These are set out in the Official State Gazette (BOE).

05 Learn to work in multidisciplinary teams.

06 Ethical and work habits such as personal attitudes (empathy and punctuality), professional attitudes (order, responsibility and safety), prevention of occupational and environmental risks, communication with the team, etc.

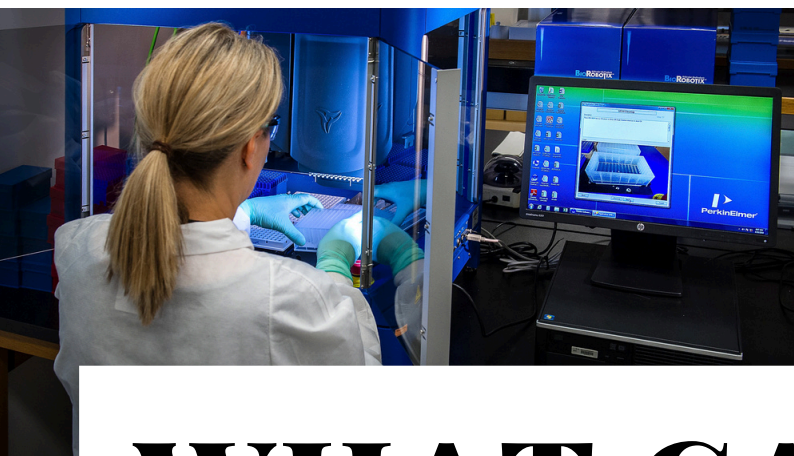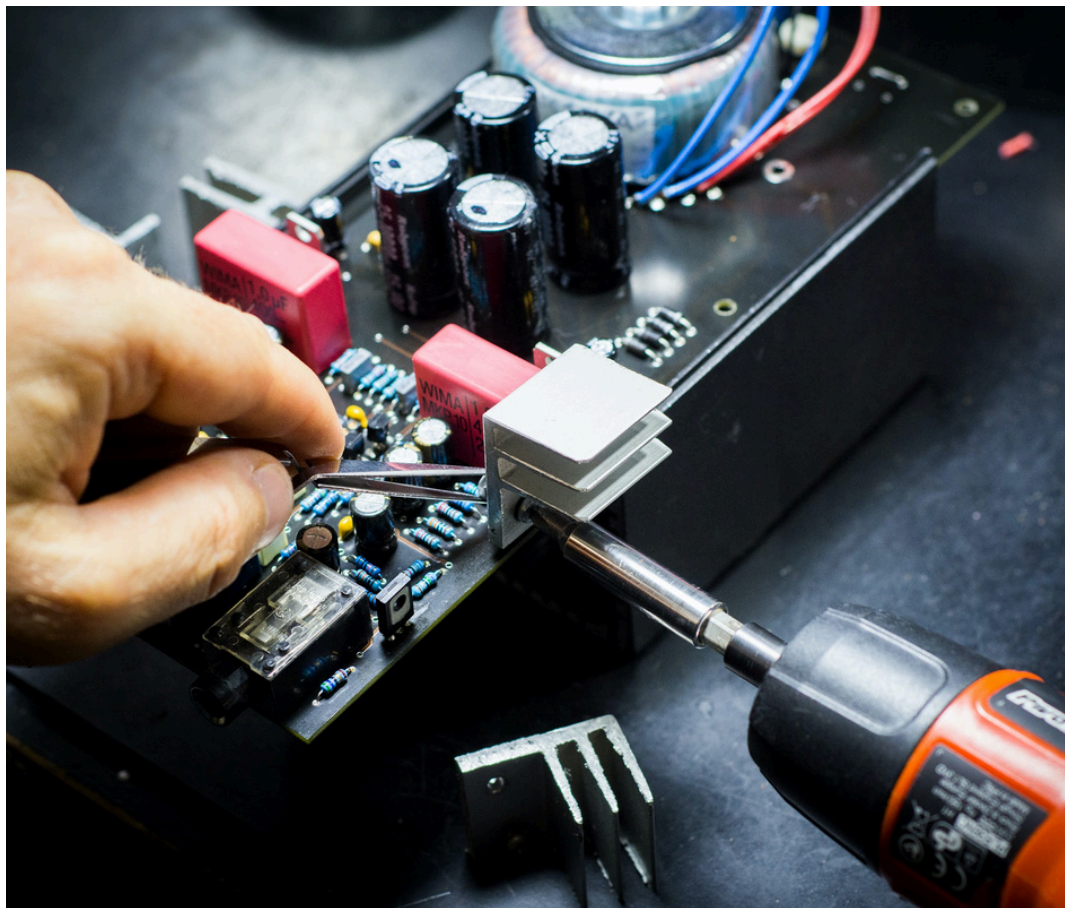**07** You will learn how to document work activities.

08 The structure and organization of the company (work procedures, market characteristics, commercial channels, etc.).

09 Work procedures such as equipment and materials, calculation of parameters and selection of tools, cost estimation, preparation of tools, maintenance, assembly, programming of equipment, etc.

WHAT CAN I WORK ON?
## The Technology sector as a path to employability

The technology sector offers a path to employability for Intermediate Level Technicians in companies, research centres, consultancies… Depending on your training, there are different job opportunities.

In this manual we are going to mention the main job opportunities established in the curriculum of the Intermediate Level training cycles with which we work in the criticalthinking4vet network. However, it is important that you bear in mind that in addition to the main job opportunities offered by your training cycles, many companies in the technology sector develop technological innovation projects that require specialists in electricity and electronics, chemistry, mechanics and computer science to carry out their projects.

In other words, your job opportunities are not limited exclusively to those established in the curriculum of your training cycle, with the training you have received, practice and above all a lot of interest in continuing to learn, you can go a step further and be part of work teams in companies and participate in the development of innovative projects.

ELECTRICAL & ELECTRONICS

- **Telecommunications Installations Technician.** You will develop your activity in companies in the installation and maintenance of telecommunications. Specifically, when you finish your training you will be able to work on the installation and maintenance of antennas, security systems, telephone circuits, telematics equipment, public address systems, home automation systems, telecommunications circuits in residential buildings, local networks, sound installations, computer equipment.

- **Technician in electrical and automatic installations**. You will carry out your activity in companies in the installation and maintenance of antennas, telecommunications infrastructures in residential buildings, home automation and automated systems, telephone and photovoltaic solar energy installations and low voltage electrical installations.
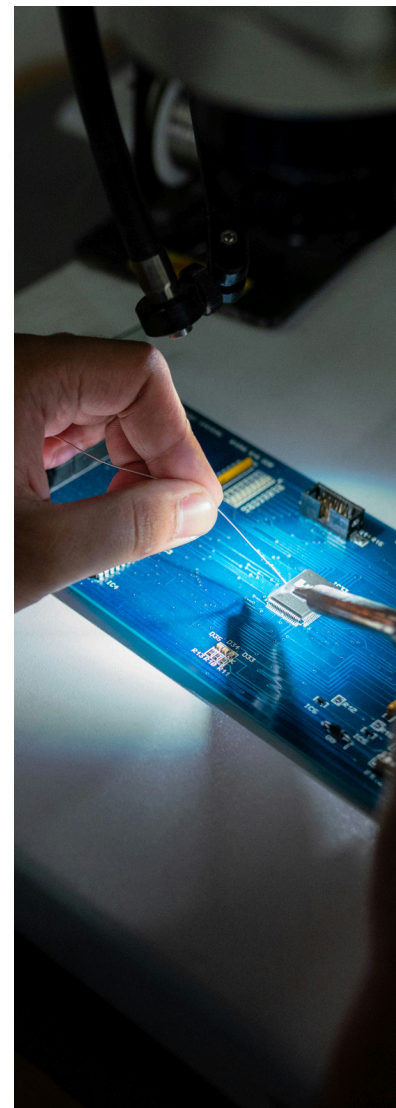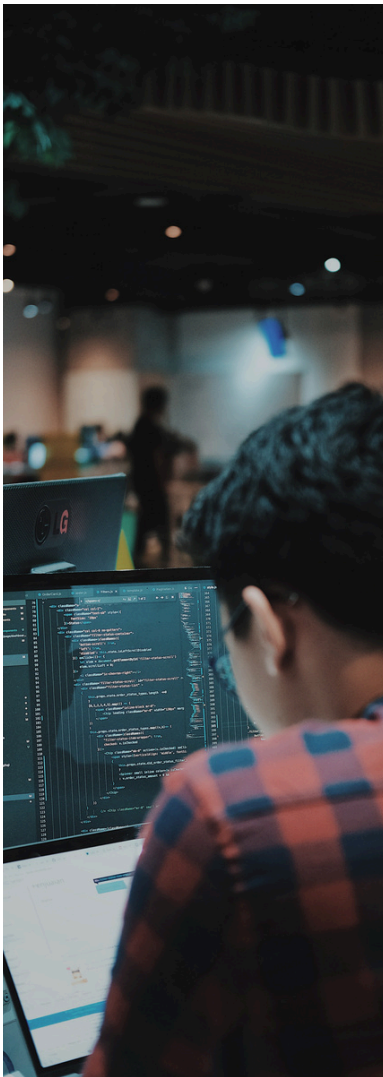
MECHANICS

Machining technician. You will develop your activity as an operator of metalworking machines, tools and industrial robots, metal polisher, in the manufacture of tools, or as a turner and/or milling machine.

COMPUTER SCIENCE AND TELECOMMUNICATIONS

Technician in microcomputer systems and networks. You will develop your activity in companies in the installation and repair of computer equipment, data networks, microcomputer services, computer supports. You can also work as a system operator or telecare.

CHEMISTRY

Laboratory Operations Technician. You will carry out your activity in companies and laboratories being able to carry out quality control and maintenance of auxiliary services, equipment and warehouse and/or physical, chemical and microbiological tests.

JOB SEARCH

Vacances

Joboffer number #243536
Part Time Sorter

Joboffer number #243547
Med Tech- Part Time

Joboffer number #243612
Part Time Student Server

HOW DO I FIND A JOB?
The Technology sector as a path to employability

To access the job market, you need to have the right tools for companies to get to know you. At Europass you can find all the tools you need. Europass is an online toolkit created by the European Commission that will allow you to manage your skills, plan your career and look for a job in Europe.

# *How do I plan my career and look for a job?*

STEP 1: Analyze your competencies and skills.

- Make a list of all the training you have done (courses, training cycles...).
- Think about and describe the skills you have acquired through your training.
- Make a list of the mobilities you have done and if you have previous work experience.
- Analyze what your most valuable skills are in your area of study.
- Analyze and d
- Define your career goals and interests.

STEP 2: Create your personal Europass profile

Once you've analysed and reflected on your competencies, skills and experience, it's time to put it on your free Europass profile.

In the profile you can include your work and volunteer experience (including reference letters), education (including degrees), language and digital skills.
To create your Europass profile you must register.
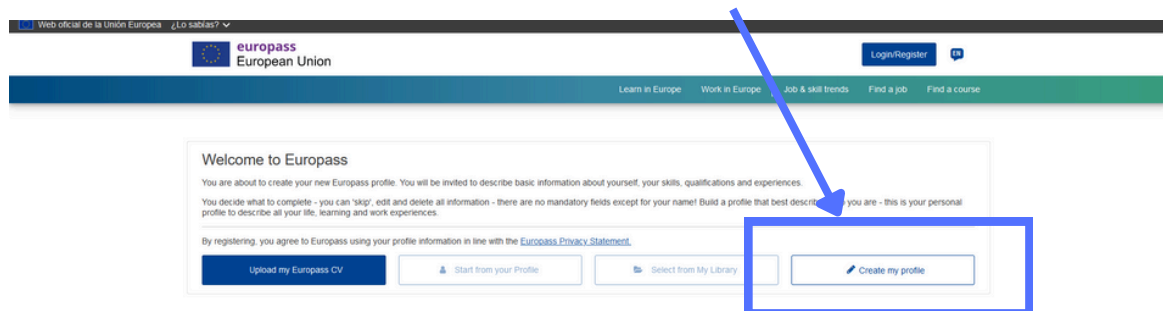
Once you have added all your information to your Europass profile, you will be able to access a tool that allows you to see an overview of your capabilities and get personalised proposals.

REGISTER HERE
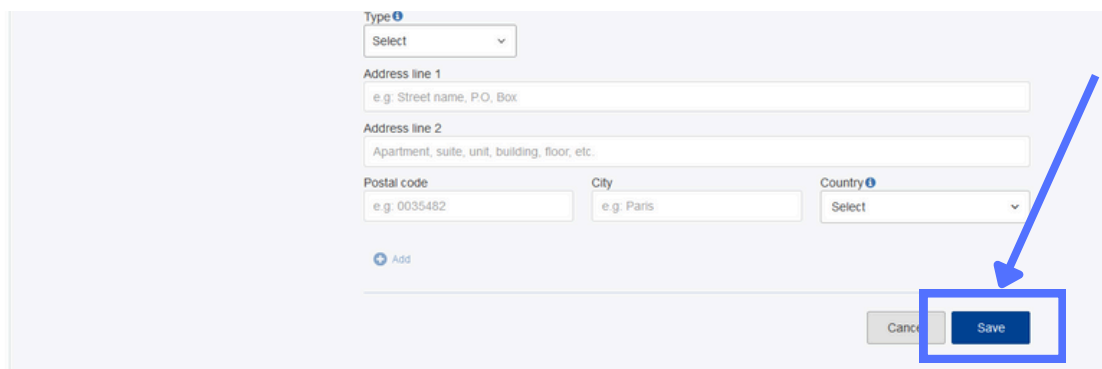
STEP 3: Create your Europass CV

Once you have accessed the link you must click on "create a new CV". You can prepare your CV from the information you have included in your profile, or by creating one from scratch.
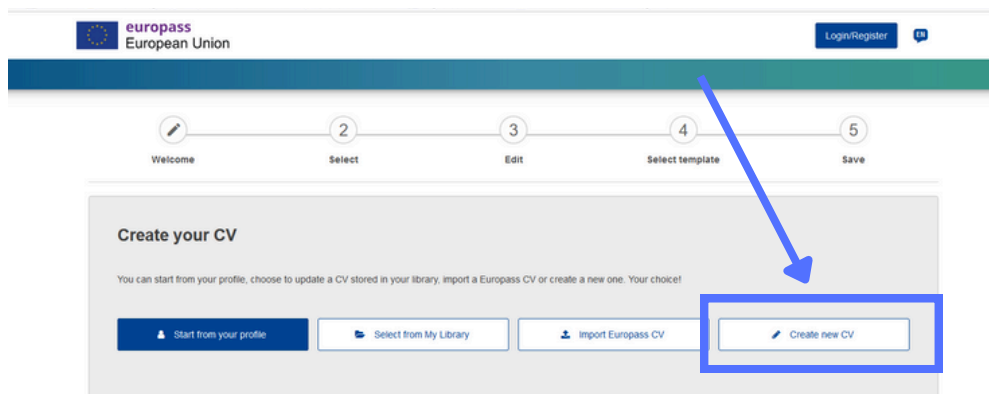
From there you will access the Europass CV editor. On the left, you can select the language of your CV and the format of the date. In addition, you will be able to fill in all the fields about your personal information.
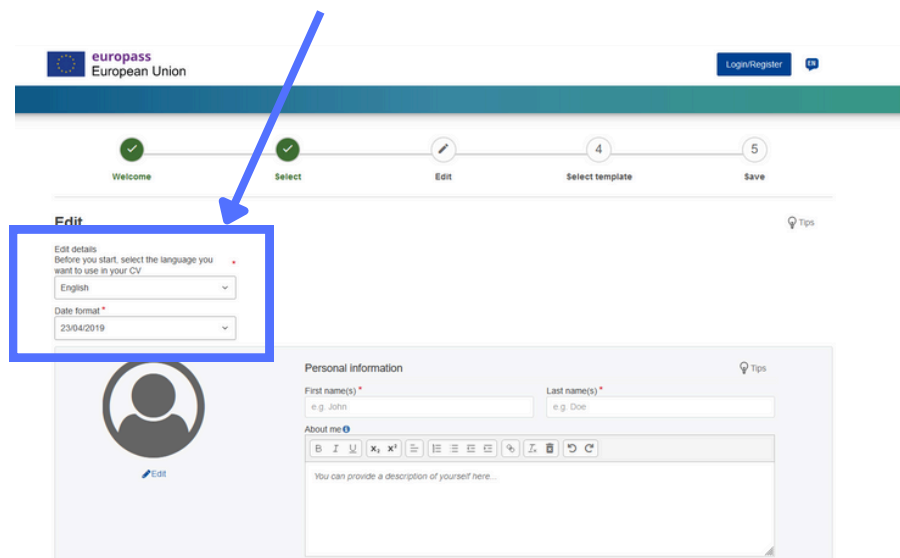
When you've included all of your personal information, click "Save" on the bottom right button.
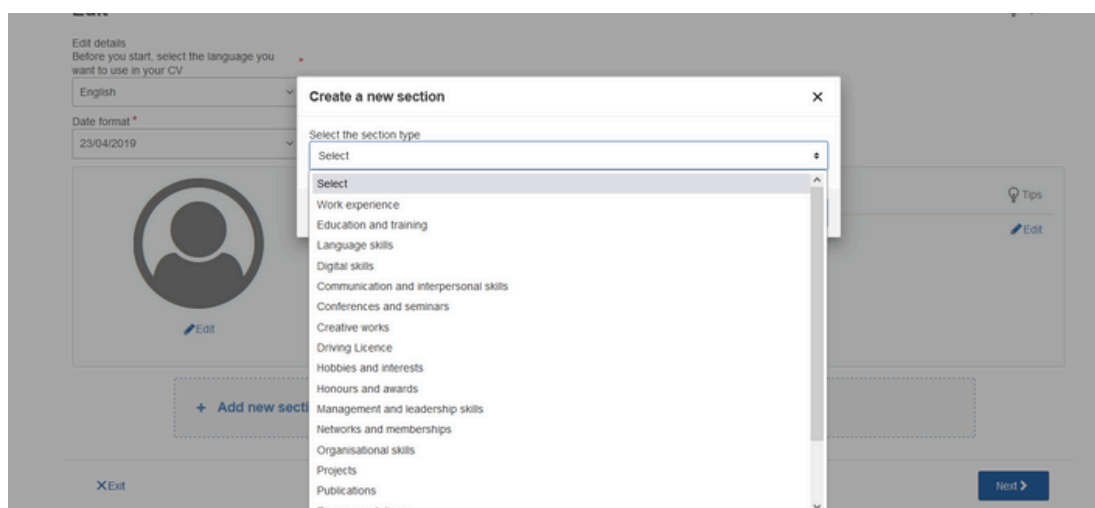

Once saved, you can add new sections such as work experience, education and training, language skills, digital skills, letters of recommendation, etc.

When you have added all the information and sections you want, click on "Next" and you will access the selection of templates for your resume:
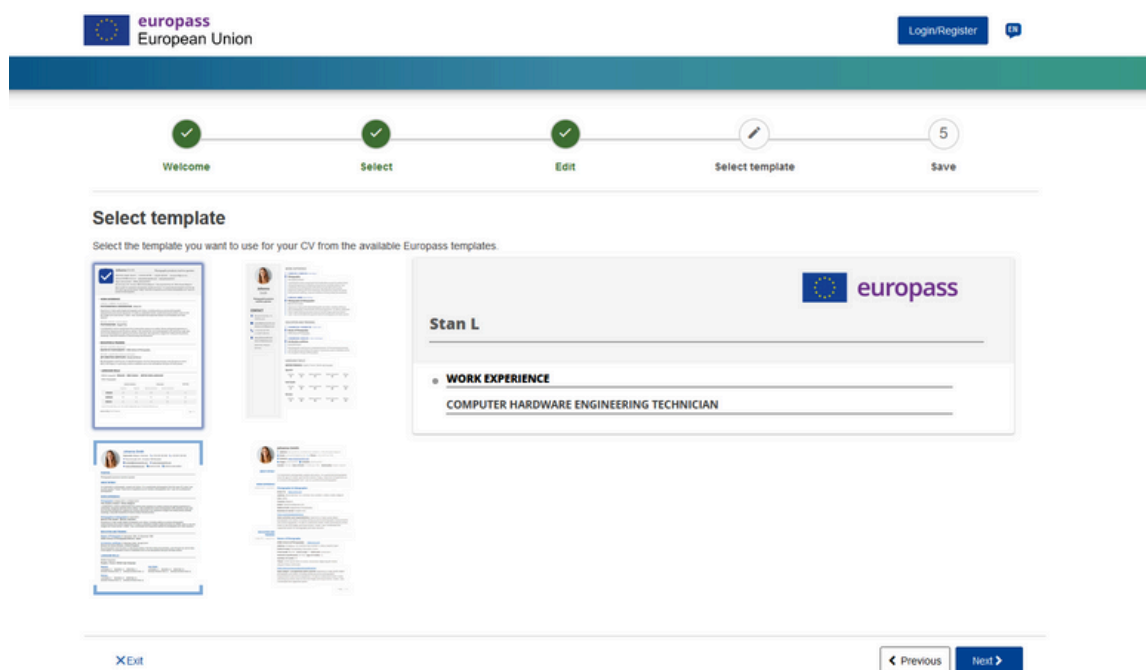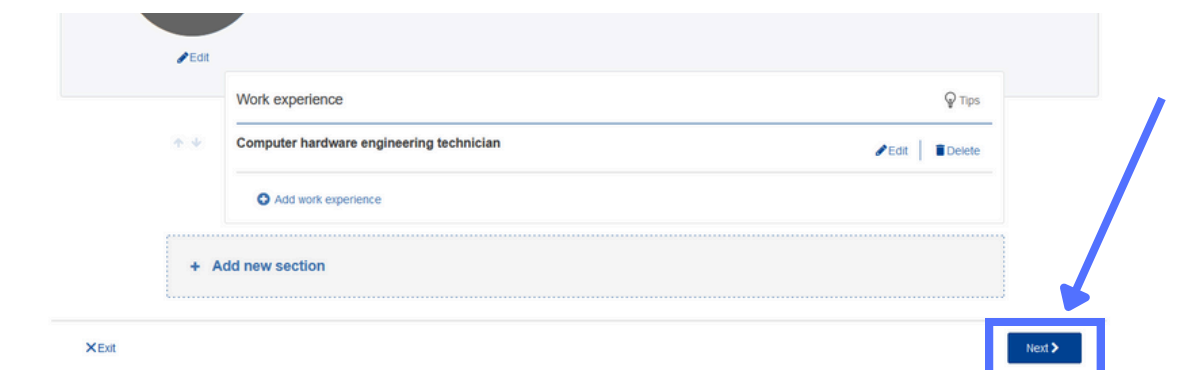
Finally, you will need to choose a name to save your CV and you will be able to download it, save it in your Europass library and/or publish it in EURES (EURopean Employment Services), the European employment office.
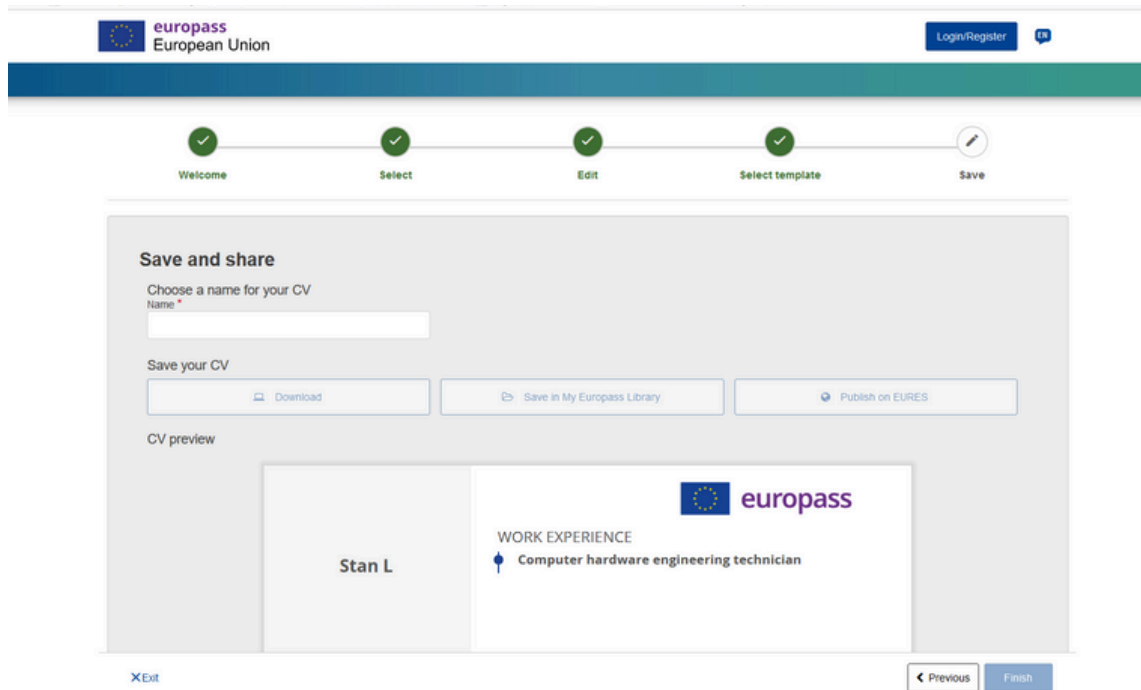
CREATE YOUR CV

STEP 4: Create Your Cover Letter

The way it works to create a cover letter is very similar to that of a CV. To create one, you have several options: import a cover letter, select one that is stored in your Europass library, or create one from scratch.
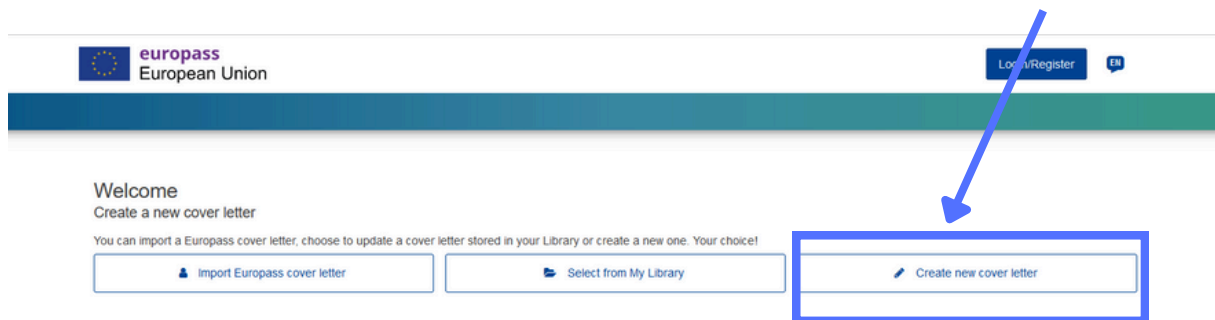
As with your CV, the next step will be to fill in all the fields of your personal information and save.

The next step will be to fill in the main sections of your cover letter: details of the person or organization to whom it is addressed, location, date and subject, content and farewell.

Once you have filled in all these fields, save your presentation tasting and click on "Next" (bottom right).

Finally, you will access the selection of templates for your cover letter and save and share it, using the same method you have used with your Europass CV. However, the cover letter can only be downloaded and saved in your library, as it does not allow you to publish it on EURES.

CREATE YOUR COVER LETTER

STEP 5: Access information and help about working in your country

Europass offers information and help on work in more than 30 countries. From here you will be able to select the country that interests you the most and you will access information about the national and European Union services to work in that country.

ACCESS

STEP 6: Look for a job

From the Europass platform you can search for jobs all over Europe (the search results come from the EURES platform).

ACCESS
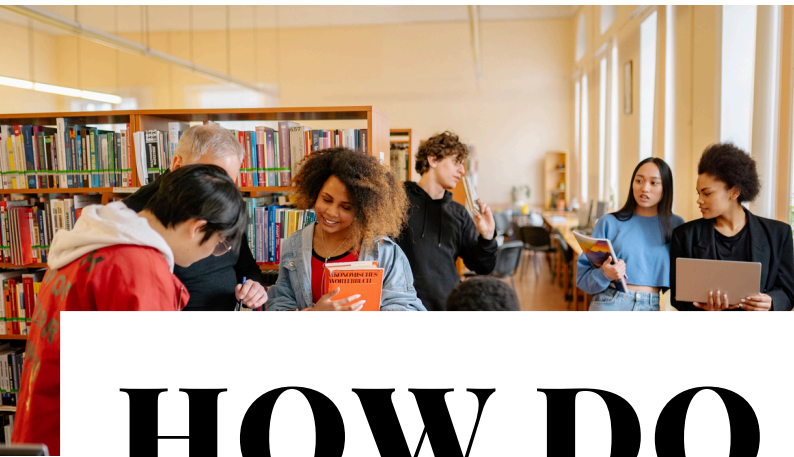
HOW DO I CONTINUE MY EDUCATION AFTER VET EDUCATION?

Continue to study in Spain

- Take a specialization course in your specific field. These courses last between 300 and 900 hours and will allow you to obtain a "Specialist Title". With the new law, they correspond to GRADE E.

- Study another intermediate level training cycle that complements your training.

- Study a higher level training cycle that broadens your knowledge in the same professional family or in another and that allows you to later access university.

- To study Baccalaureate and access university.

Continue to study in Greece

In the Greek education system, when you complete your vocational studies you have two options:

- Participate in the national university entrance exams

- Continue your education for 1 more year and once you graduate you will be able to participate in the exams for access to any university.
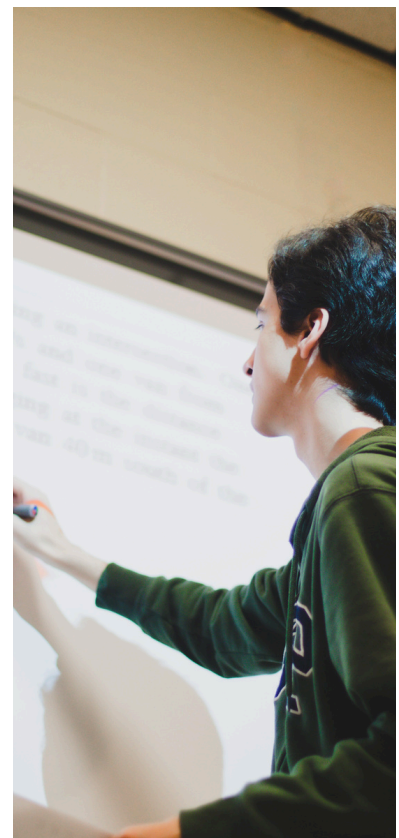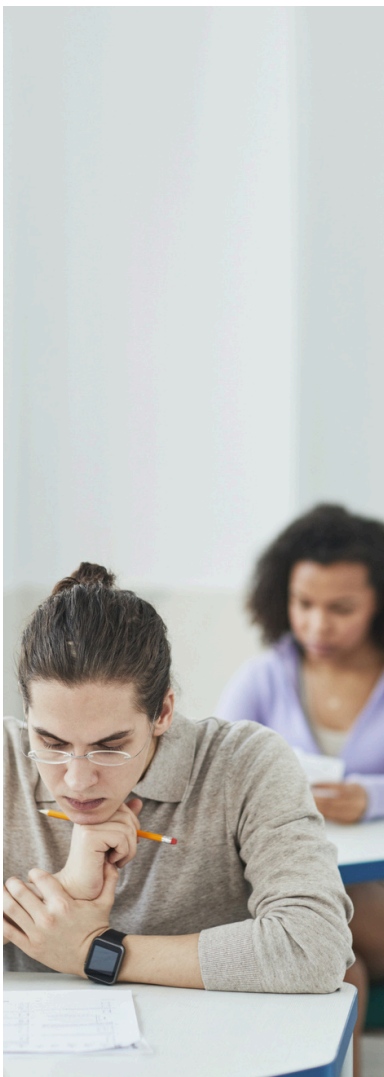
Continue to study in Italy

If you have studied at an Instituto de Formazione Professionale (IeFP) and obtained a professional degree or technical diploma and want to continue your studies at university, you must train at technical or vocational institutes.

After completing and passing a course in these institutes you will obtain a Diploma and you will be able to access the university. The main difference between these two types of schools lies in the type of preparation they offer. The technical institute prepares you in different related professions in the same field, while the professional institute orients you directly to a specific profession.

Continue to study in Portugal

From the professional, specialized art and technology courses at the secondary level of VET you have two ways to continue with your studies:

- Continue specialising with the following levels of VET (post-secondary and non-tertiary higher education).

- Access to university.
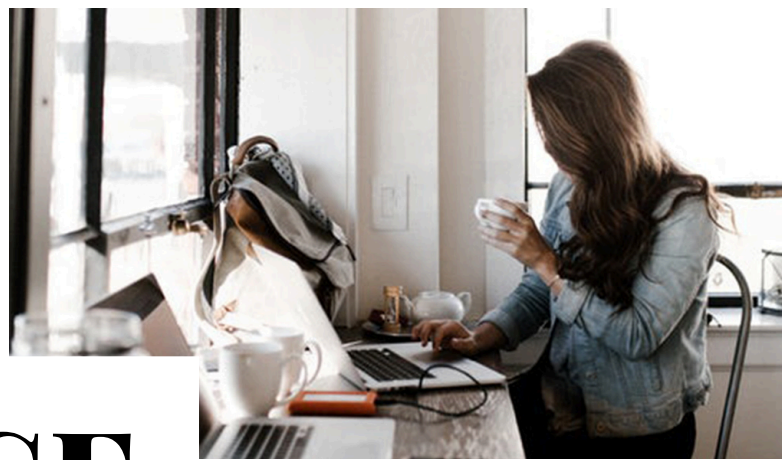
RESOURCE GUIDE

E-learning Platform

Virtual Inclusive Education is an e-learning platform specialized in the third sector that offers various personalized courses and specific materials to acquire class competencies, as well as critical thinking skills through a digital educational process adapted to the needs and characteristics of its users.

VET COURSES

- **Personalized digital course for labor training in a technological center**. Course in which you will be able to acquire the competences and skills necessary to carry out an on-site mobility in technology companies and participate in innovative projects.

- **Digital course: elearning simulation environment in tech centers**. Course in which you will be able to acquire the knowledge and skills to carry out virtual mobilities in technological companies through an elearning simulator.

Come on in and get access

This platform offers a wide variety of courses (for teachers, for volunteers, for adults, for VET students...).

ACCESS

EU ACADEMY

It is the European Union's online learning platform that offers training and resources created by the EU institutions. This platform offers 1352 language learning resources by level, language, duration, type and curriculum.

ACCESS

EUROPASS

Europass is a free service of the European Commission, available in 30 languages, that offers online tools to students, workers and job seekers to manage both the phases of learning and their career. The aim of Europass is for its users to be able to present knowledge, skills, abilities and qualifications in Europe in order to find opportunities tailored to their skills and experiences.

ACCESS

CEDEFOP

It is a decentralized agency of the European Union that supports the promotion, development and implementation of EU policies on Vocational Education and Training. It provides information on VET in Europe, publications and reports, online tools (databases, skills indexes, indicators...) and news.

ACCESS

THE NETWORK

of technology companies and VET educational centers

Criticalthinking4vet is a European network made up of technology companies, educational centres and experts in innovative learning methodologies who develop joint projects in the educational field of Vocational Training (VET).

The main objective of the network is to promote the inclusion and employability of VET students with obstacles in the technology sector.

From the network we believe that VET technicians have a fundamental role in the development of high-tech projects, especially those young people with more obstacles who despite this demonstrate a capacity for self-improvement, dedication and learning that makes them overcome all their barriers. On the other hand, technology centers can play a fundamental role for these young people, providing them with a new experience that helps them access the labor market and develop fundamental skills for their social, professional and personal future.

This section is dedicated to the presentation of the European network with the aim of providing all the relevant information about the participating entities that have the capacity to carry out mobilities for VET students in technological branches.

IKASIA TECHNOLOGIES

Ikasia Technologies is a technology company established in 2015 as a spin-off of the Universitat Politècnica de València and promoted by the Center for Biomaterials and Tissue Engineering. Ikasia develops new innovative technologies in different scientific fields, including 3D printing, additive manufacturing, composite materials and biomaterials.

The aim of Ikasia is to contribute to knowledge and collaborate with the social and technological development of our society, thus contributing to a better future. For this reason, it not only carries out a constant process of research and development, but, through the coordination and participation in projects of the Erasmus Plus Programme, it promotes the inclusion of people with fewer opportunities, especially VET students with obstacles.

In this sense, the entity has 3 main areas of work:

- **Development of educational projects.** Through educational projects in the field of vocational and adult training, it seeks to generate resources that promote critical and scientific analysis to promote inclusion and employability in vocational training students and adults with obstacles in the technology sector, as they consider that the technological field can provide them with an opportunity for employability and essential inclusion. Thus, in the last seven years he has coordinated and participated in seven projects of the Erasmus Plus Programme in collaboration with technology companies in Italy and Portugal and educational centers in France, Greece and Spain. On the other hand, it has hosted various long- and short-term mobilities of more than 20 VET students at its facilities.

- **3D printing.** Ikasia has a 3D laboratory in which it develops hybrid materials with plastic, glass or ceramic components using a 3D additive manufacturing process patented by the entity.

- **3D biotechnology.** We generate state-of-the-art additive manufacturing systems in the field of biomedicine for the development of disease models and tissue regeneration. To do this, we create innovative 3D equipment that allows the creation of personalized and biodegradable models for each patient. Our goal is to contribute to improving the quality of life through the creation of effective personalized treatments without adverse effects on the patient.

[**CONTACT**] [**WEBSITE**]

SMALLCODES

Smallcodes is a software development company for scientific and educational projects. Its activity is framed in three main areas:

- First zone. Promotion of linguistic diversity through technology, with the aim of creating a network between the linguistic and cultural minorities of Europe, in order to guarantee each language a systematic and constant presence in the written world and in the world of ICTs. SC intends to bridge the digital divide between majority cultures and languages and minority and regional cultures and languages. To achieve this goal, it produces software systems for lexicography, spell checking, and neology/terminology planning for lesser-used languages, as well as systems for toponymy cataloguing and bibliographic archiving. These five modules are, according to SC policy, the first step towards a modern use of the language.

- Second zone. Participation in European projects for the dissemination of digital skills, for linguistic and social inclusion, and for the training of disadvantaged people. Their participation in recent projects has allowed them to create an online platform for distance education and training, dedicated in one case to volunteers in the field of social inclusion and to immigrants and refugees in EU countries, and in the second case. , teachers of visually impaired students of various grades. SC also participates in educational projects and creation of materials such as: books, DVDs and e-books and also collaborates with the implementation of ICT resources for school education: educational applications, e-books, e-learning platforms, mobile video games, online courses, language portals, etc.

- Third zone. Software development in the medical field. For several years, SC has been associated with the University of Florence, with which it designs and develops technological applications for the processing of clinical pharmacological data, pharmacovigilance and bioinformatics.

[**CONTACT**](#) [**WEBSITE**](#)

Somatica Materials & Solutions aims to achieve a level of excellence in the field of electroactive materials and solutions.

To make this vision a reality, the company has the support of the Physics Center of the University of Minho where a constant and advanced R+D is carried out in the area of these materials.

Our mission is to understand the needs of the market in order to provide cost-effective solutions following the highest quality standards.

Only by working closely with our partners, collaborators and customers is it possible to fully understand the best ways to integrate our technology into the materials around us.

CONTACT

WEBSITE

SOMATICA, M&S

SOMATICA, MATERIALS & SOLUTIONS is a Portuguese technology-based company that is having a great impact on the technology sector thanks to an intense design and creation of electroactive and intelligent materials, adapted to the specific needs of its customers and capable of performing complex functions. It has the support of the Physics Center of the University of Minho, where constant and advanced research and development is carried out in the area of these materials.

W4A is a dynamic, proactive and specialized company whose objective is to guarantee or exceed the satisfaction of the needs and expectations of its customers and partners, seeking the best quality/price ratio demanded by the market. They seek to develop products of technological innovation, with quality design and systems of reliability, robustness and durability. Likewise, one of the main objectives is the qualified training of their employees, as they consider that the knowledge, talent and experience of their employees are the key to the success of their company.

It has a team of expert engineers and production specialists specialized in the areas of sensor integration, software, communication technologies, manufacturing (PCB and mechanical parts) and safety devices.

CONTACT   **WEBSITE**

W4A

WISE4AUTOMATION (W4A) is a technology-based company located in Braga (Portugal) that emerged as a spin-off of the Universidade do Minho. They develop and produce electronic circuits and software for industrial applications and IoT systems for signal acquisition and processing, where they have solutions developed for national and international customers.

NANOPAINT

Nanopaint is a Portuguese technology-based company that emerged as a spinoff of the Universidade do Minho (Braga) with more than a decade of experience in the development of electroactive polymers, composites, nanoparticle synthesis and innovative functional inks for the printed electronics market (printed sensors, data acquisition electronics, analysis software...).

This company aims to contribute to the evaluation of the Internet of Things (IoT), implementing new sensors printed on a wide variety of objects and devices, thus improving the quality of life of humanity.

The wide range of printed inks and sensors they develop can be applied in many industries, such as:

- Automotive: the knowledge and development of printed sensors allows Nanopaint to support automotive projects with the development of smart materials, in order to reinvent the manufacturing processes of human-machine interface and sensors in the structure and cabin of the car.

- Aeronautics and aerospace: Nanopaint's functional inks allow the production of custom sensors that will be printed directly onto the structure or components of the aircraft, with low weight and volume, as well as the absence of wires.

- Healthcare: The company's team of engineers provides appropriate technical support, helping to develop medical devices.

- Sports: The application of inks or sensors printed on sports clothing and devices allows the possibility of monitoring and quantifying different types of physical parameters, in an easy and flexible way.

CONTACT **WEBSITE**

CF-UM-UP

The Centro de Física das Universidades do Minho e do Porto (CF-UM-UP) started in 2014 and comprises the Centro de Física da Universidade do Minho (CFUM) and the Centro de Física do Porto (CFP), two previously existing research units, recognized and evaluated by the FCT.

The two Centers agreed to join forces and form a comprehensive research center in the broad area of Applied Physics. The partnership aims to build new strategies to harness the enormous potential of more than 80 PhD researchers who constitute CF-UM-UP, in order to conduct high-quality research, both fundamental and applied, in Physics and adjacent areas.

CFUM was founded in 1994, as a research unit with a multidisciplinary scientific profile, encompassing both theoretical research and modelling as well as research and experimental development. CFUM is strongly involved in interdisciplinary research and development activities. The team includes physicists, materials scientists, mathematicians, and specialists in optics and optometry.

CFP is a relatively small research center entirely dedicated to research in theoretical physics, in the broad area of Quantum Physics and High Energy and Condensed Matter Fields, exploring synergies between theorists from different fields.

The main objective of the CF-UM-UP as a whole is to conduct internationally competitive research in various areas of Physics, fundamental and applied, linked to other disciplines of natural sciences and engineering, with strong international links and relevant, as far as possible, at the local level. CF-UM-UP has a critical mass of highly qualified researchers and aims to maintain the balance between applied and fundamental research and to be the basis for advanced training in Physics and adjacent areas, in the north of Portugal.

CONTACT

WEBSITE

Research in his laboratories focuses on the engineering of the cell-material interface. They develop and manufacture new systems based on materials of biomedical interest, from hydrogel-based matrices and polymeric scaffolds to microparticles and recombinant protein fragments.

The goal is to develop materials with specific functional properties and understand their interactions with cells in vitro and in vivo, with the guiding principle that we can engineer the combined use of materials, cells, proteins and other molecules, and physical stimuli, to guide cell behavior and stem cell differentiation. They develop most of the systems towards future applications related to tissue engineering and regenerative medicine concepts and to the in vitro modeling of healthy and pathological tissues.

CONTACT   **WEBSITE**

CENTER FOR BIOMATERIALS AND TISSUE ENGINEERING

The Centre for Biomaterials and Tissue Engineering (CBIT) was created in May 1999 to bring together the efforts of researchers from various departments of the Universitat Politècnica de València in the fields of biomedical sciences, biomaterials engineering and their translation into clinical application.

1ST EPALGEMATIKO LYEKIO KATO ACHAIAS

1st Epagelmatiko Lykeio Kato Achaias has been active for more than 10 years in planning and implementing international projects for its students and educational staff. We have successfully implemented many types of projects under the LLP and Erasmus+ programmes.

We have successfully implemented many types of projects under the LLP and Erasmus+ programmes. We have implemented projects in Mobility (IVT-VETPRO), Partnerships, Innovation Transfer, Comenius and Etwinning. The school plays a key role in the local community, supporting other schools that intend to start international cooperation under the Erasmus+ programme.

The training they offer to their students is aimed at promoting technology and its applications in all professional fields. They believe that the future is intertwined with technological development. For this reason, they combine vocational training with technology, believing that it is the path to a successful career in the complex world in which we live.

The main objective is to meet the educational and professional needs of students, as well as to facilitate their employability and give them the opportunity to live a unique experience thanks to the realization of more than 300 student mobilities. The aim of the school's teachers is for students to acquire quality knowledge, experiences and skills that will allow them to break down the economic and social barriers they face.

During this long period they have sent more than 250 students and 25 teachers abroad.

CONTACT　　　**WEBSITE**

ERGASTIRIAKO KENTRO KASTORIA

Ergastiriako Kentro Kastorias is a VET education center founded in 1999 and located in Kastoria, a Greek city located on the outskirts of Western Macedonia.

It has become an educational centre that currently welcomes hundreds of VET students, with the aim that its students can, after the completion of their studies, successfully practice their profession, achieving a smooth integration into society and helping the development of the Greek economy.

To achieve this, the centre has laboratories of various specialities of Intermediate Vocational Training (Computer Science, Health, Electricity, Agriculture, Economics and Applied Arts), in which VET students can receive comprehensive technical and practical laboratory training.

It should be noted that the laboratories cooperate with the Vocational Secondary Schools (EPAL), the General Lyceums (GE.L.), the Gymnasiums, the Public Vocational Training Institutes (DIEK) and the Unified Special Professional Gymnasiums and the Unified Special Professional Halls of Residence. Vocational Schools (EN. EEGYL).) of its scope.

The center has a multidisciplinary team of teachers and administrators focused on the fight for the social and economic inclusion of its students through technical and practical training that facilitates their entry into the labor market.

CONTACT   **WEBSITE**

IES ENRIQUE TIERNO GALVÁN DE MONCADA

IES Enrique Tierno Galván de Moncada is part of the network of public schools managed by the Department of Education, Culture and Sport of the GVA.

Currently, the IES is a type A school with 863 students enrolled and 85 teachers of different specialties. It has become a benchmark educational centre in the region of L'Horta Nord, with a talent project for students with a great capacity for learning, with the incorporation of basic German in the linguistic-humanistic baccalaureate modality and with a Singular Molecular Biology programme thanks to which the students of the CFGS Diagnostic Laboratory carry out different polymerase chain reaction tests.

Finally, in addition to all this wide educational offer, the IES has been programming and organizing different cultural days of high artistic level for the city of Moncada and its region for some decades. First of all, since the campaign began in 2001 under the name "L'IES DE PORTES CAP A FORA", chamber music concerts, sculpture and painting exhibitions, dance festivals, etc., all of them starring performers and artists, have been organized. internationally recognized. At present, they have acquired great relevance, achieving a great diffusion thanks to our award-winning newspaper "El Tierno", Golden Wolf Award 2013 for the best youth newspaper in Spain.

CONTACT

WEBSITE

GRETA DU VELAY

GRETA DU VELAY, located in a rural area in the south of the Auvergne-Rhône-Alpes region, is a public training organization that brings together 21 educational institutions such as VET education centers, adult education and secondary schools, all under the wing of the Ministry of Education.

GRETA DU VELAY is a member of the GRETA network, which covers the entire French territory, making it one of the leading training providers in France (191 Greta and 4350 training places).

Since 1992 he has been involved in several research projects in the European framework for education, training and vocational integration, and has developed various resources (print, online or interactive) that are still used by the professional community to improve social and professional integration. These projects have allowed Greta de Velay to work with partners from all over Europe and thus gain experience in different areas of training.

It employs 4 training advisors and 40 trainers, and offers around 300,000 hours of training per year (hosting between 2,000 and 2,500 trainees). The interests of this entity are multiple, among which the complementarity of know-how, the use of specific resources, training, and the response as close as possible to needs stand out.

Greta du Velay's activity is framed by two main objectives:
- Support small and medium-sized enterprises in their training processes: analysis of training needs, implementation of training programmes, evaluation and monitoring. To this end, they offer courses in various areas, responding to local needs such as hospitality, industry (automation tools, 3D, maintenance, etc.) and tertiary (management, languages, computer science, etc.).

- Support the social and professional inclusion of disadvantaged target groups, such as VET students at risk of exclusion, unemployed adults or immigrants. To this end, they carry out various activities such as the development of key competencies, transversal competencies, providing support to discover and orient themselves towards careers and jobs, etc.

CONTACT   **WEBSITE**

CIFP POLITÉCNICO DE CARTAGENA

An educational VET centre that has been providing vocational training since 1902. The current facility opened in 1989. It is located in Cartagena (Region of Murcia).

It is equipped with modern facilities that are enjoyed by more than 1,400 students and 140 teachers, as well as the administration and services staff. It has assumed a social role, as well as an educational one, structuring local development projects and trying to provide employability and inclusion opportunities to its VET students at serious risk of exclusion.

This centre has the most advanced and widest educational offer in the Region of Murcia, with an extensive programme of training actions from the Regional Employment Service. The IES Politécnico de Cartagena has the Erasmus+ Charter, maintaining a continuous collaboration with social, cultural, academic and business institutions from all geographical areas.

The centre has experience in carrying out mobilities for Higher Level Training Cycle internships.

From 1995 to the present day, they have won a large number of prizes and awards in the field of education.

The main objective of the IES Polytechnic is innovation and excellence in the training of students, as well as promoting their employability thanks to agreements with more than 300 companies and an active and prestigious job bank in the different training sectors of the center.

It is a centre that has been committed, since its inception, to attention to diversity, the reduction of social disadvantages, social inclusion, health and environmental education and the implementation of applied innovation projects.

CONTACT   **WEBSITE**

CIFP HESPÉRIDES

The CIFP Hespérides is an integrated VET centre that offers training aimed at both obtaining qualifications and certificates of professionalism. It provides students with training that allows them to adapt to job changes that may occur throughout their lives, as well as educate people who respect the rules and the environment

It was created in 1953 with the name of "Almirante Bastarreche", which has endorsed its extensive experience in the teaching of Vocational Training.

The Centre is located in the Santa Lucía neighbourhood of Cartagena (Murcia), with a great maritime fishing tradition. The Centre serves nearly 600 students of Intermediate Level Training Cycles, Higher Level Training Cycles and other modalities of Vocational Training for employment aimed at active and unemployed workers.

To carry out its work, the Centre has a team of 56 teachers, organised into 6 professional departments of the family, in addition to the Department of Business Relations and the Department of Information and Career Guidance.

The school's participation in the Erasmus+ programme shows a firm commitment to the international professional development of our students and a firm commitment to the quality of training and the promotion of employment opportunities.

The centre's collaborative projects with companies in Germany, France, Ireland, Italy, Malta, Norway, Poland and Portugal offer our students the possibility of carrying out their professional internships in foreign companies as part of their job training, or as recent graduates.

This educational centre aims to promote and facilitate the education of students at risk of exclusion, as well as to encourage the professional and personal development of these students through innovation in teaching.

CONTACT   **WEBSITE**

In its almost 10 years of history, the entity has become a benchmark in the creation of innovative digital educational processes and methodologies in very diverse educational fields (secondary, primary, adults...), having created specific tools, methods and digital environments to promote inclusion. and the educational success of students with obstacles.

Redtree's projects and areas of expertise are cross-sectoral, working mainly in 4 education sectors: school education, vocational training, adult education and youth training through non-formal and informal education. This social cooperative has developed very diverse functions within these four educational sectors, from the design of educational projects at European level, through didactic materials and tools, the control and monitoring of the quality of projects, advisory and consultancy functions, etc.

Through these projects and materials, RedTree seeks to fight discrimination and social inequality, fostering the employability and inclusion of students with economic and social barriers.

The RedTree team believes that education should provide new perspectives and develop critical and caring analysis skills to gain new qualifications, increase the level of ability and employability, social inclusion, active citizenship and personal development.

REDTREE MAKING PROJECTS COOP. V.

RedTree Making Projects Coop.V. It is a social cooperative, active in the fields of education, training and the design of educational materials

CONTACT

WEBSITE

Other centres where you can study vocational training

These are VET educational centres that, although they are not part of the network, have collaborated in previous projects.

VET EDUCATIONAL CENTER	COUNTRY	WEB	CONTACT
1 EPAL KAVALAS	EL	https://1epal-kaval.kav.sch.gr/	mail@1epal-kaval.kav.sch.gr
1 EPAL KORYDALLOY	EL	https://epalkorydallou.edu.gr/	mail@1epal-koryd.att.sch.gr
1 EPAL TRIKALON	EL	https://1epal-trikal.tri.sch.gr/	1epal-trikal@sch.gr
Centre Integrat de Formació Professional Francesc de Borja Moll	ES	https://www.cifpfbmoll.eu/	cifpfrancescdeborjamoll@educaib.eu
EPAL Alexandrias	EL	http://1epal-alexandr.ima.sch.gr/autosch/joomla15/	mail@1epal-alexandr.ima.sch.gr
EPAL KAISARIANIS	EL	http://1epal-kaisar.att.sch.gr/wpagegrasy/english.htm	mail@1epal-kaisar.att.sch.gr
EPAL KALAMARIAS	EL	https://1epal-kalam.thess.sch.gr/	1epal-kalam@sch.gr
EPAL NAFPAKTOY	EL	http://1epal-nafpakt.ait.sch.gr/	1epal-nafpakt@sch.gr
EPAL of Sidirokastro	EL	http://epal-sidir.ser.sch.gr/	mail@epal-sidir.ser.sch.gr
ESPERINO EPAL THIRAS	EL	https://espepalthiras.mysch.gr/	espthiras@sch.gr
Centro Integrado de Formación Profesional César Manrique	ES	https://cifpcesarmanrique.es/	fct@cifpcesarmanrique.es

VET EDUCATIONAL CENTER	COUNTRY	WEB	CONTACT
Centro Integrado de Formación Profesional Someso	ES	https://cifpsomeso.edu.es/	cifp.someso@edu.xunta.gal
Centro Integrado Público de Formación Profesional Ciutat de l'Aprenent	ES	http://fpaprenent.com/	961 205 935
CENTRO INTEGRADO PÚBLICO DE FORMACIÓN PROFESIONAL LA COSTERA	ES	https://portal.edu.gva.es/cipfplacostera/es/inici-2/	96 224 90 40
Centro Integrado Público de Formación Profesional Misericordia	ES	https://cipfp-misericordia.org/	961205920 - 961205921
CENTRO PÚBLICO INTEGRADO DE FORMACIÓN PROFESIONAL CORONA DE ARAGÓN	ES	https://www.cpicorona.es/web/	info@cpicorona.es
CIFP FERROLTERRA	ES	https://www.edu.xunta.gal/centros/cifpferrolterra/	cifp.ferrolterra@edu.xunta.es
CIFP TOLOSALDEA LHII	ES	https://tolosaldea.hezkuntza.net/es/inicio	idazkaritza@tolosaldealh.eus
CIPFP VALLE DE ELDA	ES	https://cipfpvalledeelda.com/	966 957 330
CPIFP Bajo Aragón	ES	https://cpifpbajoaragon.com/	978 831 063
de l'Institut Professionnel Lemonnier	FR	https://institut-lemonnier.fr/	contact@institutlemonnier.fr
LYCEE CONDORCET DE MONTREUIL	FR	http://www.condorcet93.fr/	01.48.57.50.63
Lycée Jean Baptiste Dumas	FR	https://jean-baptiste-dumas-ales.mon-ent-occitanie.fr/	https://jean-baptiste-dumas-ales.mon-ent-occitanie.fr/assistance-informatique/contacts-4.htm

VET EDUCATIONAL CENTER	COUNTRY	WEB	CONTACT
Lycée professionnel Albert Londres	FR	https://www.lycees-albert-londres.fr/index.php	
Lycée Professionnel CABANIS	FR	https://lycee-cabanis.fr/	ce.0190010h@ac-limoges.fr
Lycée Professionnel COETLOGON	FR	http://www.lyceecoetlogon.fr/	ce.0351878b@ac-rennes.fr
Centro Formazione Professionale Cebano Monregalese scarl	IT	http://www.cfpcemon.it/	info@cfpcemon.it
ISTITUTO TECNICO INDUSTRIALE STATALE "GUIDO DONEGANI"	IT	https://www.guidodonegani.edu.it/	krtf02000t@istruzione.it
ISTITUTO TECNICO INDUSTRIALE STATALE "M.O.V.M. DON G. MOROSINI"	IT	https://www.itismorosini.edu.it/la-scuola/	frtf06000c@istruzione.it
Istituto Tecnico Settore tecnologico - Liceo Scientifico "E. Mattei"	IT	https://www.itivasto.it/wp/istituto/la-storia/	chis013002@istruzione.it
Istituto Tecnico Settore Tecnologico "E.FERMI"	IT	https://cercalatuascuola.istruzione.it/cercalatuascuola/istituti/BRTF02000P/itst-fermi-francavilla-f/	
EPRALIMA_Escola Profissional do Alto Lima, C.I.P.R.L.	PT	https://www.epralima.com/website/	BRTF02000P@istruzione.it
Escola Profissional do Minho	PT	https://www.esprominho.pt/	geral-braga@esprominho.pt
CIFP SAN JORGE	ES	https://www.fpsanjorge.com/	sanjorge@fpsanjorge.com

VET EDUCATIONAL CENTER	COUNTRY	WEB	CONTACT
ESCOLA PROFISSIONAL DO MONTIJO -Associação para a Formação Profissional e Desenvolvimento do Montijo	PT	https://www.escolasprofissionais.com/categoria/escolas/lisboa-escolas/epm-escola-profissional-do-montijo/	
CIFP AUSIÀS MARCH	ES	https://www.ausiasmarch.net/es	info@escolasprofissionais.com
INSTITUT TECNOLÒGIC BARCELONA	ES	https://www.itb.cat/	info@itb.cat
INSTITUT ESCOLA DE TREBALL DE BARCELONA	ES	https://escoladeltreball.org/ca/	correu@escoladeltreball.org
CIFP LOS ENLACES	ES	https://cpilosenlaces.com/	atencionalpublico@cpilosenlaces.com
CIFP PAU CASESNOVES	ES	https://paucasesnovescifp.cat/	secretaria@paucasesnovescifp.cat
CIFP MAJADA MARCIAL	ES	https://www3.gobiernodecanarias.org/medusa/edublog/cifpmajadamarcial/	35014676@gobiernodecanarias.org
CIFP DE PONFERRADA	ES	http://cifpponferrada.centros.educa.jcyl.es/sitio/index.cgi	http://cifpponferrada.centros.educa.jcyl.es/sitio/index.cgi?wid_form=1
CIUDAD JARDIN	ES	https://ciudadjardin.hezkuntza.net/eu/home	icjardin@icjardin.net

Other technology companies

These are technology companies and research centres that, although they are not part of the network, have collaborated in previous projects.

ENTITY	CONTRY	WEB	CONTACT
BC MATERIALS	ES	https://www.bcmaterials.net/es	info@bcmaterials.net
CICECO - Aveiro Institute of Materials	PT	https://www.ciceco.ua.pt/	ciceco@ua.pt
School of Applied Mathematical and Physical Sciences, National Technical University of Athens	GR	http://semfe.ntua.gr/el/	semfe@central.ntua.gr
Macromolecular Chemistry research group of the UPV/EHU	ES	https://www.ehu.eus/en/web/labquimac	https://www.ehu.eus/en/web/labquimac/contact
Polytechnic Institute of Oporto	PT	https://www.ipp.pt/	ipp@ipp.pt
IMC	CZ	https://www.imc.cas.cz/en/	office@imc.cas.cz
Politecnico di Torino	IT	https://www.polito.it/	politecnicoditorino@pec.polito.it
Czech Technical University in Prague	CZ	https://www.cvut.cz/en	cvut@cvut.cz
Jagiellonian University	PL	https://www.uj.edu.pl/	https://www.uj.edu.pl/kontakt
Carinthia University of Applied Sciences	AT	https://www.fh-kaernten.at/en/	info(at)fh-kaernten.at
Cyprus University of Technology	CY	https://www.cut.ac.cy/?languageId=1	administration@cut.ac.cy
Amsterdam University of Applied Sciences	NL	https://www.amsterdamuas.com/	studentinformation@amsterdamuas.com

ENTITY	CONTRY	WEB	CONTACT
Hochschule Merseburg	DE	https://www.hs-merseburg.de/	https://www.hs-merseburg.de/kontakt/
TECHNOLOGICAL UNIVERSITY DUBLIN	IRL	https://www.tudublin.ie/	https://www.tudublin.ie/connect/staff-directory/
UNIVERSITY COLLEGE DUBLIN	IRL	https://www.ucd.ie/	+353 1 716 7777
UNIVERSITY OF GDANSK	PL	https://en.ug.edu.pl/	+ 48 58 523 30 00
UNIVERSITY OF LATVIA	LV	https://www.lu.lv/en/	lietvediba@lu.lv
WROCLAW UNIVERSITY	PL	https://pwr.edu.pl/en/	https://pwr.edu.pl/en/contact-us
3B´S	PT	https://3bs.uminho.pt/	info@i3bs.uminho.pt
BIOFORGE	ES	http://www.bioforge.uva.es/	https://bioforge.uva.es/contact-us/
CENTRE OF BIOLOGICAL ENGINEERING	PT	https://www.ceb.uminho.pt/	direcao@ceb.uminho.pt
INTERNATIONAL IBERIAN NANOTECHNOLOGY LABORATORY	PT	https://inl.int/	https://inl.int/contacts/
CENTRO ALGORITMI	PT	https://algoritmi.uminho.pt/	https://algoritmi.uminho.pt/contact/

EXPERIENCES
of other VET students

Angelos Verras

1st Epalgematiko Lykeio Kato Achaias

Hi, Verras Angelos, and from 7/1/2024 to 7/29/2024 I worked within the Erasmus Plus program in Valencia, Spain, at the company IKASIA Technologies. My job there was to use the knowledge I acquired in school as a computer science student to create a website that would wirelessly connect to a 3D printer. At first, I thought that the assigned task was difficult and that I would not succeed, but my partner, Luis, helped me by explaining how a 3D printer works. With that help and after some consultations with the boss, where he explained how he wanted the website to be, I got down to work.

The time I had to deliver the website was about four weeks. Thanks to this project I gained new knowledge about programming and especially about web pages. I learned about the different types of 3D and how they work. Finally, the working environment was excellent, I had my own office, my own computer and my colleagues were very polite and talkative. Also, I was lucky to live in a house near the city center, which was only five minutes away from work. Valencia has great places to eat and drink and entertainment. It has a lot of young people and a good nightlife. Finally, price-wise it is quite cheap, which helped me save quite a bit of my salary. The public transportation is great to go wherever you want to go. It was an amazing experience and I thank both my school and the director, Mr. Karampelas, for choosing me. I highly recommend it to any student who is interested.

ABOUT YOUR WORK EXPERIENCE

How long has your mobility lasted?

It lasted from the 1/7/2024 to 29/7/2024 29 days

What does it mean to you to have been able to carry out a mobility in a technology company?

I felt really lucky for being able to work on what I have being studying for the past 3 years

Has the training you received been appropriate to your studies? Have you acquired new knowledge useful for your training?

I havent work on a 3D printer before it was a challenge for me but in the have acquired new knowledge on both how a printer works but also how to make a website in order to control a printer.

Do you consider this experience positive? Why?

Yes my experience was really positive I learned a lot new things I have acquired new knowledge both on 3D printers and websites.

Do you think your job skills have improved (i.e., your ability to work at a company)? What exactly?

The fact that I had to wake up every morning and being to work on time made me more responsible. Also I worked with different people that healped me to become more of a team player. Lastly it was my first time to work for an actual company.

ABOUT THE WORK METHODOLOGY

During your stay at IKASIA you have been subjected to working methods that sought to enhance your technological skills, acquire training and enhance your critical thinking skills for analysis and problem solving.
Thanks to this method we have tried to help you develop mechanisms to analyze what is expected of you when you have been assigned a task; not only by reproducing it like a robot, but knowing how to develop it with initiative and analyze if the results or conclusions are correct and expected. In addition, we have tried to train you in useful topics for your training and your future work.

Do you think that this method of work is an aid for incorporation into the world of work?

Yes it is really important for the employee to know the root of the problem and to use his mind and knoledge to solve it and not just search it online. This type of training helps the employee to develop critical thinking.

Do you think that the application of this working method fosters an understanding of problems, as well as their analysis and resolution? Why?

When you dont have someone above your head telling you how to do things but instead helps you to better understand the problem, you can analyze it and find the sololution for faster but at the same time you get more knowledge.

Do you think collaboration between students/team members improves project execution? Why?

Of course it improves it. When a group of different people talk about a problem and tell their opinion to each other in order to find a solution the students learn new things from their colleagues and they also develop their team spirit.

Do you think that this working method has helped you to develop the project and acquire knowledge?

Through this working method I believe that I have developed a more critical thinking and I have acquired knowledge that I would not have if I searched for every problem that I have faced.

ABOUT THE PROGRAMMING NOTEBOOK

During your stay at IKASIA you have been subjected to working methods that sought to enhance your technological skills, acquire training and enhance your critical thinking skills for analysis and problem solving.
In order to implement this innovative method, it has been suggested that you use the program notebook. To do this, we have not only asked you to study aspects of 3D printing and the application of computer science in this field, but also to develop critical thinking through the performance of activities that involve analysis, hypothesis, identifying errors and adapting.

Do you find the design of the programming notebook useful? Why?

Yes it was really helpful because it actually helped me to acquire critical thinking and to prefer using my mind instead searching online.

ABOUT YOUR EVALUATION

Evaluate your experience during your work:

The first week was quite challenging for me beacause I was not used to wake up early in the morning but I managed to come by. After that it was really good and interesting I learned a lot of new things, I acquired working experience because it was my first time working for a company. I practiced my knowledge on website development and learned a lot about 3D printers. All of my colleagues were really kind and willing to help me. All in all I was really glad to participate in this mobility.
Evaluation

4.5 to 5

★★★★★

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[IX] European Commission, Directorate-General for Education, Youth, Sport and Culture. Erasmus+ in Italy in 2021. Statistics on mobility, cooperation and other data.

AUTHORS

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Luis Gómez Estrada, was born in Valencia in 1980, with a Bachelor's degree in Industrial Design by "Universidad Politécnica de Valencia", experienced in the research field at the "Instituto de Biomecánica de Valencia" (UPV). Actually is CEO of Ikasia technologies and has experience as head of the 3D department in an engineering services companies. He has a broad experience in European and international project's management and coordination.

José Luis Gómez Ribelles – Ikasia Technologies SL

José Luis Gómez Ribelles is a full professor at the Universitat Politècnica de València, carrying out his research work at the Centre for Biomaterials and Tissue Engineering, CBIT, of that university. He is currently the principal investigator of one of the research units of the CIBER-BBN of the Instituto de Salud Carlos III. His current line of research focuses on the development of biomaterials for tissue engineering and regenerative medicine.

Laura Gómez Estrada – Ikasia Technologies SL

Qualified as a VET Technician, Laura has been incorporated in Ikasia in 2018 in the scientific and educational project development team. Having exhibited organization and managing skills, has since been responsible for projects coordinated by Ikasia included in the Erasmus + Programme in the field of professional education. Laura is a easygoing, and hardworking person. Her diverse professional parkours led to the development of a broad range of skills, from organization to and interpersonal skills, which she transposes to her professional everyday life.

Luis Amaro Ribeiro Martins – Ikasia Technologies SL

Luis Martins is a Phd student at the Universitat Politècnica de València. After graduating applied biology from the Universidad e do Minho took a master in Biophysics and Bionanosystems on the same university. Additionally, has pedagogic competences and advanced english from Cambridge University and competences aided design, 3D printing and basic programming. Luis has experience in tutoring, orienting students projects or laboratorial internships.

Raquel Navarro Cerveró - Redtree Making Projects

Raquel Navarro Cerveró is a social worker, an equality agent and has a Master Degree in Labour Risk Prevention, and she have worked with the association movements in Valencia for more than 15 years. Through her professional and associative career, Raquel has fulfilled responsibilities that have allowed her to develop a broad experience as Social Worker and Projects Technician, creating and managing associative and social economy projects to promote equality and social justice.

Ricardo Sixto Iglesias - Redtree Making Projects

Ricardo Sixto Iglesias was born in Valencia in 1967. He graduated in Geography and History from University of Valencia in 1990. Medievalist, specialized in archives, library science, and documentation. He has devoted a good part of his experience to public work in various institutions such as the city councils of Burjassot and Valencia, the Valencia Provincial Council, and the Spanish Congress of Deputies.

Carlo Zoli - Smallcodes

Electronic Engineer; CEO of Smallcodes Ltd. Founder of Smallcodes Ltd as a social and technological company focused on education and linguistic technologies, with a special interest in minority languages and cultures, dialectology studies and historical linguistics.

Silvia Randaccio - Smallcodes

Silvia Randaccio has a degree in European and Extra-European languages, with a thesis in computational linguistics for the Arabic language. She currently follows numerous projects for the development of linguistic software, teaching materials, e-learning platforms and digital archives, for minority languages but also for other product sectors. She also manages digital marketing, SEO and web graphics.
 She has also undertaken several external collaborations as a consultant, teacher and project partner for various entities that have allowed her to learn about new realities and work sectors.

Luca Pietra - Smallcodes

Engineer and new member of SMALLCODES through ScarabLab. He is currently involved in deepening his knowledge of the various programming languages and supporting senior programmers in the implementation of software for health informatics.

Jivago Nunes - Somatica, Materials & Solutions

Jivago Nunes have a degree on Optoelectronics and Lasers, and a Master in Materials Engineering, and worked as a scientific researcher during 5 years. After that, he has been the CTO of the company Somatica, Materials and Solutions, Lda. for the last 10 years and, as an entrepreneur, he have created 5 companies during the last 7 years.

Panagiotis Karampelas - 1st Epalgematiko Lykeio Kato Achaias

He works as a teacher in secondary technical education with specialization in computers and design implementation circuits and also the design and development of algorithmic structures. Now days is the Headmaster in VET Secondary School. He has 2 Masters, Ecomomics in Education and In School Managment.
 Also, Manage and Organize Erasmus Plus Projects (KA1-KA2) and E-Twinning.

Dimitrios Fligos- 1st Epalgematiko Lykeio Kato Achaias

Dimitrios Fligkos has studied IT in Athens University of Economics. He started his teaching career at 1st Epagelmatiko Lykeio Kato Achaias in 2002. He teaches IT and technology. Since 2002 he has taken part in many national and EU projects. He is responsible to organise students and teachers mobilities as well for the projects documentation. He has worked a lot to integrate ECVET system in the mobilities. He is also responsible to organise training activities for foreign students in the area. He has a key role to apply the mobility charter for vet high quality standards in projects planning and implementation.

Juan Tormos Capilla - IES Enrique Tierno Galván

VET teacher by the specialty of Electrotechnical Facilities since 1991.Tiene the linguistic training in foreign languages. He has participated as coordinator in three transnational projects, as well as in national innovation projects, linguistic immersion by the University of Paris, in the promotion of curricular enrichment and attention to students. He has held the position of deputy director of the IES, Head of Department, coordinator / tutor of FCT and member of several School Councils.

Miltiadis Liamis - Ergastiriako Kentro Kastorias

Teacher Mechanical Engineer with a master's degree in Educational Sciences: Organization and Management of Education - Educational Leadership.

Maria Georgiou - Ergastiriako Kentro Kastorias

Graduate of the department of Applied Informatics, University of Macedonia in Thessaloniki. She specialized in Computer Science and Technology: problem solving using computers, software development databases, web applications e.t.c. She also has a master's degree in Graphic Arts – Multimedia. She works as an IT teacher in Secondary Education, with exprerience in VET Education. As a Director of Ergastiriako Kentro, She also organizes and implements Erasmus+ Projects.

José Juan Seijo Solaz - IES Enrique Tierno Galván

Industrial engineer. Teacher of Vocational Training in the branch of electricity. A sports and nature enthusiast, I am also passionate about new technologies.