



**IO4: CONTENT ANALYSIS OF THE OCCUPATIONAL SPECIALTIES TO BE
HOSTED IN THE NATIONAL CAREER HUBS**

<i>Project title:</i>	Apprenticeship Inter-Network: Bringing together VET institutions and enterprises through a Network of Career Hubs
<i>Project acronym:</i>	AppInterN
<i>Project No:</i>	2020-1-EL01-KA202-079076
<i>Intellectual Output:</i>	IO4: Content Analysis of the Occupational Specialties to be hosted in the national Career Hubs
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1. INTRODUCTION

The **ERASMUS+ KA2 project** titled: "**Apprenticeship Inter-network: Bringing together VET institutions and enterprises through a Network of Career Hubs (AppInternN)**" aims to strengthen the links between Apprenticeship, VET and corporate responsibility, inviting employers to offer apprenticeships and jobs to VET students and graduates, as well as share information about the national and international labour markets' state-of-play, current skill requirements and occupational/sectoral developments (including such key issues as reskilling and upskilling). Employers can thus play an active role in the preparation of students and graduates for their future careers.

More specifically, the project is focused on the creation of an online platform titled "**Apprenticeship Inter-Network**", which hosts three national Career Hubs (Greek, Italian, and Spanish). Each Career Hub (CH) facilitates the students' and graduates' search for apprenticeships, internships or jobs through relevant databases, enhances their competences and skills by offering guidance and organizing or announcing special events (seminars, webinars, information events, study visits, presentations, job fairs, etc.), supports their contact and collaboration with employers and other labour market stakeholders, ensures their familiarization with important occupational/sectoral issues, etc.

In summary, within the context of the project, VET-related institutions and associations, social partner institutes, Municipalities, and Chambers will contribute to the efficiency of Career Hubs by inviting local businesses, employers and employer associations to join the CH databases in order to be directly networked with students/apprentices, graduates and future employees.

Importantly, AppInterN's 3 National Career Hubs host a specific session including brief and comprehensive information on 10 selected and representative Occupational Specialties from each participating country aiming to present current skill requirements and occupational/sectoral developments so that existing and potential apprentices/VET students can:

- be informed and familiarized with the selected occupational specialties
- facilitate their successful integration into the labour market
- choose the occupational specialty that is most appropriate to them.

Based on the above, Intellectual Output 4: "Content analysis of the Occupational Specialties to be hosted in the national Career Hubs", which was elaborated with the support of all partner organizations, includes:

- The methodology implemented in each country for the selection of the more representative occupational specialties.
- The list of the selected occupational specialties per participating country.
- The information content for each selected Occupational Specialty.

2. IMPLEMENTATION METHODOLOGY

The following methodology and division of works and tasks among partners has been applied for the elaboration of current Intellectual Output 4 titled: “Content analysis of the Occupational Specialties to be hosted in the national Career Hubs”:

2.1. TASK 1: Selection of the specialties offered by Apprenticeship/VET Schools in each participating country.

In the framework of this task the responsible partners from Greece (DYPA & IME GSEVEE), Spain (PIMEC) and Italy (UNITELMA SAPIENZA & ROMA CAPITALE) developed a specific methodology for the selection of the 10 most representative Occupational Specialties offered by Apprenticeship/VET Schools in each participating country, taking into consideration:

- the specific characteristics and trends of each national labour market;
- the specific Apprenticeship/VET context in each country;
- the available information data sources in each country;
- the role of each involved partner in the Apprenticeship/VET system of each country,

as described below:

Greece

At the beginning of IO4’s elaboration, IME GSEVEE, as lead partner, developed the following 5 criteria and rating system for the selection of the 10 most representative of the Occupational Specialties offered by Apprenticeship/VET Schools in each participating country:

1. Demand trend per each specialty provided by apprenticeship/VET schools, based on the number of students per course. Rating: 20 Increased, 15 Stabilised, 10 Decreased. Gravity: 20%.
2. Average share of demand per each specialty provided by Apprenticeship/VET schools, based on the number of students per course. Rating: 20 High, 15 Medium, 10 Low. Gravity: 20%.
3. Level of green skills integrated into each specialty, based on the relevant curriculum. Rating: 20 High, 15 Medium, 10 Low. Gravity: 20%.
4. Level of digital skills integrated into each specialty, based on the relevant curriculum. Rating: 20 High, 15 Medium, 10 Low. Gravity: 20%.

5. Level of harmonization of each specialty with Smart Specialisation Strategies, compared with the approved Smart Specialisation Strategy of each country/region (<https://s3platform.jrc.ec.europa.eu/eu-members>). Rating: 20 High, 15 Medium, 10 Low. Gravity: 20%.

During AppInterN's 1st Annual Managerial Meeting (21/07/2021), all the project partners agreed with the aforementioned selection criteria and rating system.

Moreover, a national Workshop was held online on 4 October 2021 aiming to present the content and selection methodology of the 10 Occupational Specialties in Greece. More specifically, the main topics discussed were the following:

- Main aim and Objectives of IO4
- Advantages for Apprentices/VET students
- Occupation Monograph and information about each occupational specialty/occupation
- Analysis of the criteria for the selection of the Occupational Specialties
- National/Regional S3 Priorities objectives and description

At the end of the workshop, all the attendees, representatives from Chambers, Social Partners, Professional Associations, and academic institutions, agreed with the proposed content and selection methodology and expressed their strong interest to support this very important initiative for the further improvement of apprenticeship and VET in Greece.

Finally, based on the feedback of the above-mentioned workshop, IME GSEVEE and DYPA proceeded to the relevant rating the courses offered by DYPA's Apprenticeship and VET schools and the selection of the 10 Occupational Specialties with the higher rating.

Spain

For the development of this Intellectual Output, 10 Occupational Specialties were selected through the combination of these three different tools:

1. the Smart Specialization Platform of the European Commission;
2. the Report on Prospecting and Detection of Training Needs 2020 prepared by the Occupations Observatory of the Public State of Employment Service in Spain;
3. the assistance of AppInterN's associated partner, the Municipality of L'Hospitalet de Llobregat, regarding the selected occupational specialties.

The selection criteria started from the review of the Report on Prospecting and Detection of Training Needs 2020. This is based on the identification of occupations with good prospects in the labour market, both in Spain as a whole and in the autonomous communities and provinces. In this sense, it describes those occupations with the best

employment results and the diagnosis of their current training needs. Additionally, it provides a description of the trends and projections that enable the identification of the objectives to be prioritized in the programming of the training offer.

The results of this report are intended to serve as a reference in the programming of the training offer and to mitigate the existing mismatch between the labour skills demanded by businesses and those offered by workers.

Once the selection was made, considering as key indicator the demand trend and the level of green and digital skills, results were checked to ensure consistency with the most demanded professional profiles based on regional priorities (consulted in S3 platform from European Commission) linked to the use of the European Regional and Development Fund (ERDF). This Platform created by the Commission aims to boost growth and jobs in Europe, by enabling each region to identify its competitive advantages. It allows the user to know which areas could be enhanced given their potential for improvement.

Lastly, to ensure that the specialties chosen matched the labour market's real needs, AppInterN's associated partner, the Municipality of L'Hospitalet de Llobregat, verified whether the selection meets the needs and relevant studies about their territory, and was then extrapolated to the entire country, too.

This process has considered the needs the country has in terms of infrastructures, territorial job vacancies, labour market demand, training needs, labor market composition, and driving sectors of the economy.

Italy

The methodology adopted by UNITELMA SAPIENZA and ROMA CAPITALE for the selection of the ten Italian Occupational Specialties has been defined by adapting the criteria proposed by IME GSEVEE in the methodological guidelines in a workshop context, with the objective of involving a relevant number of project stakeholders. The five criteria proposed by IME GSEVEE (Demand Trend; Average Share of Demand per specialty; Level of Green Skills; Level of Digital Skills; Harmonization with Smart Specialization Strategies) have been reviewed together within the context of two separate meetings: the AppInterN Event, which took place on December 3, 2021, and a following online meeting between the Italian partners, which took place on December 15, 2021.

During the first meeting, UNITELMA moderated a conference between a various set of project stakeholders, coming from the world of VET and entrepreneurship; after presenting the project methodology and discussing the potential impact of AppInterN on the quality of apprenticeship at regional and national level, two separate discussion sessions took place:

DISCUSSION SESSION N° 1 (MODERATED BY UNITELMA) Apprenticeship as a tool for matching acquisition of both technical-professional and transversal competences and skills.

The coordinating organization asked participants the following questions:

- What could be the strategy to increase effectiveness of apprenticeship in our region/country?
- From the point of view of the participants, what are the main problems that companies face when they have to valorize the contribution of apprentices?
- From the point of view of the participants, what are the main problems that companies face when they have to valorize the contribution of apprentices?
- What could be the most relevant occupational specialties to be included in our project?

DISCUSSION SESSION N° 2 (MODERATED BY UNITELMA) How to build the Italian Career Hub: Discussing a pathway for the CH implementation.

The coordinating organization asked participants the following questions:

- What should be the structure of a national Career Hub?
- How could a national network improve the effectiveness of apprenticeship and support the dissemination of good practices?
- What could be the strategy for guaranteeing exploitation of the methodology at national level?

All the feedback from participants was collected by the moderators and used as input for the selection of the Italian occupational specialties. The ROMA CAPITALE and UNITELMA coordinators have reviewed the results of the proposal of each participant in a following separate online meeting that took place on December 15, 2021, defining the ten occupational specialties, which were later proposed to the AppInterN consortium and elaborated according to the indications provided by IME GSEVEE.

2.2. TASK 2: Specification of the appropriate information content

IME GSEVEE proposed the appropriate information content in the form of an **Occupation Monograph**, for the selected occupational specialties offered by Apprenticeship/VET Schools in each participating country.

More specifically, the following minimum information for each occupational specialty/occupation was presented in the above-mentioned Occupation Monograph (not exceeding 2 pages):

- Title & Description (job description, needed skills, working conditions).
- Necessary training and employment licenses
- Labour market's state-of-play & future prospects
- List of Apprenticeship/VET Schools which provide education and/or training

- News and announcements about the developments
- EQF Level

All partners agreed on the proposed information content during the 1st Managerial Meeting. Moreover, the participants in the National Workshop in Greece agreed, too.

Task 3: Production of the information content per specialty.

After the finalisation of the procedures for the selection of the 10 Occupational Specialties per participating country, the involved partners developed the relevant information content per each specialty, as agreed in the previous task, in English and their native language in order to be hosted in the National Career Hubs. See: <https://www.appintern.eu>

Task 4: Uploading of relevant news and announcements.

Finally, the partners responsible for the operation of the National Career Hubs will upload news and announcements relating to the selected Occupation Specialties and the Apprenticeship/VET system in each participating country, <https://www.appintern.eu>

3. SELECTED OCCUPATIONAL SPECIALTIES

Based on the methodologies implemented by each participating country, the following 10 Occupational Specialties are selected per country for the writing of the Occupation Monographs:

Greece

- HAIRDRESSING TECHNICIAN (EPAS)
- CULINARY ART TECHNICIAN (EPAS)
- ELECTRICAL WORKS TECHNICIAN (EPAS)
- PRE-SCHOOL CHILDCARE ASSISTANT (EPAS)
- REFRIGERATION AND AIR-CONDITIONING SYSTEM INSTALLER (EPAS)
- THERMAL AND HYDRAULIC INSTALLATION TECHNICIAN (EPAS)
- HOTEL RECEPTIONIST (PEPAS)
- IT APPLICATIONS TECHNICIAN – MULTIMEDIA (IEK)
- NETWORK AND TELECOMMUNICATION TECHNICIAN (IEK)
- MECHATRONICS TECHNICIAN (IEK)

EPAS = Apprenticeship Vocational School

PEPAS = Experimental Apprenticeship Vocational School

IEK = Vocational Training Institute

Spain

- ROOM STAFF
- COOKS
- ADMINISTRATIVE STAFF WITH KNOWLEDGE OF LANGUAGES
- COMMERCE/TRADE TECHNICIAN
- NURSE ASSISTANT
- HEALTH EMERGENCY TECHNICIAN/ FIRST AID TECHNICIAN
- RENEWABLE ENERGY TECHNICIAN
- INDUSTRIAL MAINTANCE TECHNICIAN
- COMPUTER SCIENTIST/SPECIALIST
- ELECTROMECHANICAL TECHNICIAN

Italy

- BANQUETING/BAR ROOM SERVICES' EXPERT
- TOURISM MARKETING TECHNICIAN
- MULTIMEDIA GRAPHIC DESIGNER
- CYBER SECURITY EXPERT
- LOGISTICS AND TRANSPORT TECHNICIAN
- PAYROLL OFFICER
- SALES TECHNICIAN
- ENERGY SYSTEMS TECHNICIAN FOR THE CONSTRUCTION SECTOR
- PROJECT MANAGEMENT TECHNICIAN
- EDUCATION OPERATOR

4. CONTENT OF THE MONOGRAPHS

4.1. GREECE

1. HAIRDRESSING TECHNICIAN

A Hairdressing Technician is a person who dresses or arranges people's hair, providing various types of hairdressing to men, women and children.

Description of the occupation

Following the guidelines and working under the supervision of a hairdresser, the Hairdressing Technician's occupation is to care for people's hair. The task s/he most commonly accomplishes include hair washing, drying and dressing. Moreover, when a client wishes to change the colour of his/her hair, the Hairdressing Technician takes care of their hair colouring; but s/he is also responsible for various other tasks, such as hair straightening, perms etc.

As a final daily duty, the Hairdressing Technician also takes care of the cleanliness and general tidying of the hair salon, its equipment and materials.

Personal traits and competences

Carrying out subtle and carefully coordinated movements, paying close attention to detail, being dexterous, imaginative and stylish are amongst the main qualities of a Hairdressing Technician. S/he must also be healthy, eager, very sociable and appearance-conscious.

Technical knowledge and skills

Qualified Hairdressing Technicians are able to:

- provide services of hair washing and care
- name and describe the various hair styles
- create simple or artistic hair styles
- recognize and distinguish between the various skin and hair types
- apply treatments in appropriate cases
- select appropriate materials for total or partial hair colouring, hair bleaching or highlighting, identifying any problems that may arise during hair dying or bleaching
- apply hair extensions
- specialize in permanent wave (perm) and straightening techniques
- use simple techniques of facial cosmetics and make-up

- effectively and safely use the tools and devices required in their occupation

Employment prospects

Hairdressing technicians can be employed in:

- large businesses (hair salons, personal care and beauty stores)
- large hotels, clinics/hospitals and cruise ships with hairdressing facilities for their clients, patients or staff
- theatres, film/TV studios, fashion houses etc.
- hair product sales (visits, commercial representations, product use consulting)
- hair product manufacturers/companies
- freelancing (managing his/her own company, i.e. a hair salon, or working as a technical consultant/trainer)

Working conditions

Constantly standing, working with many people in relatively small and noisy spaces creates unfavorable working conditions, which, particularly for those engaging in hair dyeing, might occasionally prove to be harmful.

A Hairdressing Technician's working hours are the same as the opening hours for shops, yet they usually exceed the latter due to heavy workload; moreover, they may sometimes be disrupted since they depend on the appointments made with clients.

2. CULINARY ART TECHNICIAN

The Culinary Art Technician is responsible for the preparation of food and dishes in the various types of catering establishments/restaurants.

Description of the occupation

S/he is the immediate co-worker of the cook and mainly engages in the preparation of dishes in food industry businesses. S/he prepares dishes of various kinds using all types of animal and plant products (meat, legumes, vegetables, etc.). S/he also takes care of the overall organisation of the kitchen and helps check the goods delivered.

S/he makes sure the overall area is tidy and clean and, together with the cook, is responsible for the overall performance of the kitchen.

His/her key duty is quality control, proper maintenance and effective utilization of foods.

Personal traits and competences

S/he has to be creative and imaginative so that s/he can create new recipes. She also needs to have dexterity.

Furthermore, s/he needs to be co-operative, polite and willing, and also have team spirit and organisational skills. It is important that s/he has good taste, so that s/he can distinguish what is tasty and what is not. S/he should also be able to distinguish and detect differences in taste and smell.

Finally, s/he should be particularly cautious with the ingredients used and meticulously follow personal and food hygiene rules.

Technical knowledge and skills

Upon graduating, Culinary Art Technicians are able to:

- perform quality controls and care for the maintenance and utilization of raw materials
- prepare various types of dishes
- create food combinations and present new and original dishes
- organise the kitchen and segregate the various relevant tasks
- apply costing principles, choose dishes and create the menu
- undertake –according to the applicable market regulations– food portioning
- have good knowledge of serving methods
- respond satisfactorily to the orders’ serving time requirements
- understand basic terms of Mathematics and Chemistry
- understand special terms in topics relating to goods, menus, and business letters
- use a personal computer
- use the English language at a satisfactory level.

Employment prospects

Culinary Art Technicians can work:

- as freelancers
- in catering establishments / restaurants in the private and public sector, including:
 - restaurants with Greek or international cuisine
 - hotel restaurants
 - institutions, hospitals, modern catering businesses, cruise ships or other types of ships
- in educational institutions of the private and public sector

Working conditions

S/he works in the food preparation area of a business. His/her work is considered to be rather tiring since it involves standing and supervising the food preparation throughout his/her work shift.

Due to the fact that s/he is constantly in the kitchen area, s/he has to work in high temperatures, facing rather difficult working conditions, which, however, can significantly improve provided that health and safety regulations are observed.

The cleaner and more spacious the workspace is, the better the working conditions.

3. ELECTRICAL WORKS AND LIFT TECHNICIAN

An Electrical Works and Lift Technician is a person whose occupation is to study, supervise, wire, maintain and repair low-voltage electrical installations and weak electrical currents in residential, commercial and industrial buildings in collaboration with an installation electrician.

Description of the occupation

Installing electrical wiring in buildings, according to the electrical engineer's plans, also forms part of an Electrical Works and Lift Technician's duties.

Moreover, an Electrical Works and Lift Technician assembles, installs and repairs lights and commercial and household electrical appliances, and also installs power distribution panels, switches, sockets, etc.

Personal traits and competences

An Electrical Works and Lift Technician should have a strong sense of responsibility and work carefully and methodically, applying the electrical engineer's plans with great precision.

S/he should avoid distractions and should also be calm and focused on his tasks. Due to his/her everyday interaction with clients, s/he should be sociable and patient. S/he also have good eyesight, inventiveness, consistency, dexterity and good health.

S/he should really enjoy the work of repairing electrical and electronic devices, reading and comprehending electrical and electronic plans. Finally, s/he must have very good organisational skills.

Technical knowledge and skills

Qualified "Electrical Works and Lift Technicians" are able to:

- know the main elements and operation principles of the electrical devices used in buildings

- comprehend the operation principles of electrical devices and identify their main components
- describe power management systems in buildings
- choose the appropriate tools and materials to perform their work according to the regulations in force
- use the electrical plan to analyse the operation of circuits and components
- build electrical installations (lighting, movement, automation, structured wiring and weak electrical currents) based on instructions, specifications and plans
- maintain, locate, repair and replace damaged materials and components

Employment prospects

Electrical Works and Lift Technicians can be employed in:

- various private or public bodies and organisations, local government organisations, legal persons governed by public or private law, security forces (i.e. Hellenic Coast Guard, Fire Department, etc.)
- various technical companies and industrial businesses (as employees)
- hotels/holiday complexes, factories, elevator and electric crane companies, etc.
- businesses dealing in electrical equipment and related items (as salespersons)

Finally, they can also work as freelancers in construction or own an electrical goods store.

Working conditions

During work, an Electrical Works and Lift Technician usually stands or is on top of a ladder or even in a bent position, using various tools and electrical measurement instruments. S/he should be particularly careful when using electrical current, so that accidents can be effectively prevented.

S/he may work in difficult weather conditions, a common characteristic of all occupations in the construction sector. As part of his job, s/he may also have to drill walls to open channels.

4. PRE-SCHOOL CHILDCARE ASSISTANT

The Pre-school Childcare Assistant is concerned with providing care for infants and toddlers until they reach primary-school age.

Description of the occupation

A Pre-school Childcare Assistant's primary duty is looking after infants and toddlers and taking care of their diet and safety. S/he ensures that the infants/toddlers follow a proper diet, keeps them clean and helps them improve their walking, kinetic and speech skills.

S/he protects young children from accidents or other hazards in the day nursery/childcare centre area. S/he is responsible for the children's physical and mental health, as well as for their smooth development.

Additionally, under the guidance of and in collaboration with the pre-school/nursery teacher in charge, s/he offers parents advice and guidelines about the proper development and upbringing of their children.

Personal traits and competences

The occupation of a Pre-school Childcare Assistant is demanding and requires responsible, attentive and meticulous professionals, especially when working with children with special needs.

The main personal traits needed are love for children, patience, responsibility, consistency, creativity and imaginativeness, as well as composure and ability to follow rules and instructions.

Technical knowledge and skills

Upon graduating, Pre-school Childcare Assistants are able to:

- apply childcare and pedagogy principles regarding the promotion of physical and mental health and development of infants and toddlers, as well as their education and socialisation
- participate in providing full care for infants and toddlers in terms of body hygiene and proper diet, and encouraging them to become self-sufficient
- participate in the daily pedagogical programme, which is aimed at the full development of infants and toddlers (physical, mental, emotional and social)
- ensure that all the children they look after participate in the relevant activities, and create a climate of affection, acceptance, safety and joy
- observe the children's reactions, notice possible changes or pathological symptoms and inform the pre-school/nursery teacher in charge accordingly
- adopt all the necessary hygiene and safety measures
- draft reports for their supervisors and update the children's files
- cooperate with the cleaning and auxiliary staff in keeping the nursery areas clean
- prevent accidents in the areas where pre-school children are hosted
- offer first aid and manage emergencies
- substitute for the nursery/ pre-school teacher in his/ her absence.

Employment prospects

The Pre-school Childcare Assistant can be employed in:

- public and private day nurseries
- maternity wards (newborns department)
- summer camps
- family planning centres
- reception and accommodation centres for infants and toddlers (Mitera Infants' Centre, SOS villages, etc.)
- creative occupation centres
- playgrounds
- private companies providing pre-school childcare facilities for their employees' children
- freelancing (providing care and education for infants and young children at their own house).

Working conditions

They work in day nurseries/pre-school childcare centres, where the overall environment is very pleasant, and are in constant contact with the children they look after. Contracting viruses and diseases from young children is a very common phenomenon among Pre-school Childcare Assistants. Pre-school Childcare Assistants work individually but also in groups when collaborating with other professionals working in the same place.

5. REFRIGERATION AND AIR-CONDITIONING SYSTEM TECHNICIAN

The Refrigeration and Air-Conditioning System Technician is a person whose occupation involves the installation, maintenance, check, and repair of refrigeration/ventilation/air-conditioning systems and devices in private and public spaces.

Description of the occupation

His/her job may also involve the installation, maintenance and repair of household or commercial refrigerators, cooling and air-conditioning systems. When installing them, s/he needs to follow the manufacturer's detailed instructions, appropriately assembling the relevant motors, compressors and other system components. Subsequently, s/he has to make the necessary connections, fill the unit with the appropriate refrigerant/coolant and check the systems installed for possible leakages.

S/he is responsible for the operation, supervision, and inspection of cooling and air-conditioning devices in the private, professional, building and industrial sector, as well as in the transport sector.

Personal traits and competences

S/he must be consistent, active, initiative-taking, resourceful and inventive. S/he also has to be healthy and in good shape, strong and dexterous, and possess mechanical competence. Finally, s/he must also be particularly well-focused while working.

Technical knowledge and skills

Qualified Refrigerator and Air-Conditioning System Technicians are able to:

- understand installation plans, machine specifications and related instructions
- select device locations effectively, connect them with the piping, test and check the installation's watertightness and, generally, good performance
- properly maintain the devices installed and repair them when necessary
- perform their tasks with dexterity and hand stability
- keep regularly informed about the new systems available in the market and the technological developments in the field of cooling/refrigeration systems and devices

Employment prospects

Refrigeration and Air-Conditioning System Technicians can work:

- as freelancers, starting their own business
- as maintenance providers in small or large businesses constructing and repairing refrigeration systems and devices
- as maintenance technicians in public bodies
- as employees in technical companies, technical offices or shops constructing refrigeration/air-conditioning systems and other related devices
- as employees in businesses providing services to buildings and industrial facilities
- as employees in companies dealing in air-conditioners or in shops repairing and maintaining air-conditioners

Working conditions

The Refrigeration and Air-conditioning System Technicians may work in closed, poorly ventilated spaces, but also in open spaces, thus being exposed to all possible weather conditions. S/he may sometimes work at great heights, depending on the type of device and system to be installed. S/he has to work in a bending position for several hours and use simple or sophisticated tools requiring his/her full attention. His/her working hours are rather irregular, and s/he has to travel very often to serve his/her customers.

6. THERMAL AND HYDRAULIC FACILITIES / INSTALLATIONS TECHNICIAN

A Thermal and Hydraulic Facilities Technician installs, maintains and repairs heating, ventilation and air-conditioning systems and devices in houses, offices, factories, hospitals, and other public buildings.

Description of the occupation

His/her occupation is to install, maintain and repair hydraulic and heating systems operating with steam or hot water in houses, factories and businesses. Before starting each installation work, s/he studies the mechanical engineer's plans, the system/device specifications and relevant instructions.

S/he also installs cold or hot water supply pipes, as well as water pipes for heating and air conditioning systems, sewers, swimming pools, irrigation-drainage works, firefighting networks and geothermal facilities.

Personal traits and competences

S/he needs to be skillful, methodical, careful, and resourceful. S/he must possess dexterity and hand stability, flexibility, physical strength, stamina and good health. S/he also needs to be good at operating machines and have spatial awareness, technical understanding and keen observational skills. Diligence and willingness to serve customers are also highly desirable traits.

Technical knowledge and skills

Qualified Thermal and Hydraulic Facilities Technicians are able to:

- understand basic concepts in their area of work (such as thermal loss, thermal insulation, heat transfer through water, steam and air) as well as the relevant devices (heat exchangers, etc.)
- explain the advantages and disadvantages of central heating and the usefulness and operation of independent central heating systems
- identify plumbing materials and general/special tools, and observe tool safety rules
- prioritise the different phases of their work
- install thermohydraulic systems based on the technical manager's plans and instructions
- identify, locate and repair damages and malfunctions of thermohydraulic systems, and maintain, convert and improve various thermohydraulic systems using the appropriate devices, tools and instruments

Employment prospects

Thermal and Hydraulic Facilities Technicians can work:

- in construction and technical companies or ones dealing in heating products

- in factories and private companies installing and maintaining thermohydraulic systems, in cooperation with building contractors and civil engineers
- in public services, public utility companies and local government organisations
- in businesses dealing in thermohydraulic system tools, materials and devices
- as freelancers, whose occupation is to install thermal systems

Working conditions

A Thermal and Hydraulic Facilities Technician does manual work, which is characterised by high complexity. S/he usually works with other technicians or assistants in installing devices and pipes. In his/her line of work, s/he uses numerous tools, either simple or sophisticated, which require particularly careful handling.

As a freelancer, s/he may work in both indoor and outdoor spaces. His/her working conditions vary greatly and depend on the specific area where s/he works, as well as on weather conditions. His/her working hours also depend on the specific area of work. Finally, s/he works much longer hours during the summer.

7. HOTEL RECEPTIONIST

A Hotel Receptionist carries out, in a proper and timely manner, all the tasks pertaining to customer service in the reception and main areas of a hotel.

Description of the occupation

A Hotel Receptionist carries out, in a proper and timely manner, all the tasks pertaining to customer service in the reception and main areas of a hotel.

A Hotel Receptionist is responsible for providing services to the guests of hotels or tourist accommodation establishments from their first arrival to their departure. More specifically, s/he sees to the needs of the guests and provides them with the necessary tourist, cultural and practical information, as well as information about recreational facilities and opportunities.

S/he is responsible for receiving the hotel guests, serving their needs, maintaining a high level of hospitality and appropriately organizing their departure. S/he takes measures to ensure the safety of the guests and their personal belongings.

S/he facilitates the guests' transactions in foreign currency and their access to the communication means available (telephone, post, email, etc.)

S/he manages the guests' files and updates the list of services offered for the purposes of invoicing. S/he ensures that the guests' bill is duly issued, namely according to the agreed terms and conditions.

S/he closely cooperates with the other departments of the hotel/tourist business and is responsible for the restocking and procurement of supplies of reception desk items, hospitality equipment, etc.

Personal traits and competences

A Hotel Receptionist should have good organisational and communication skills and should be polite and direct with the hotel guests. Importantly, s/he should also have a kind and pleasant demeanour towards the guests and be able to deal with difficult and unpredictable situations in a calm and effective way.

Technical knowledge and skills

Qualified Hotel Receptionists are able to:

- organise all the departments of a modern hotel
- participate in receiving and seeing off hotel guests
- record the guests' personal information in the appropriate forms of the Reception Department
- sort and file incoming and outgoing documents
- manage the procedure of issuing invoices and forwarding them to the Customer Accounts Department
- participate in external services and tasks of the hotel
- adopt the current promotional policy for tourist products and areas
- participate in serving customers in the hotel's Food and Beverage Department.

Employment prospects

A Hotel Receptionist can work:

- in tourist complexes
- in hotels
- on passenger liners
- in entertainment/recreation centres, tourism-related organisations and services, etc.
- in camps
- in summer camps for children
- in Tourist Offices
- in a sole proprietorship.

Working conditions

S/he works in hotels/tourist businesses and his/her working hours depend on the guests' arrival and departure times.

Due to his/her increased responsibilities in coping with emergencies or unpredictable events, s/he often faces circumstances that cause tension and stress.

During the tourist season, his/her work can be very tiring and demanding.

8. IT APPLICATIONS TECHNICIAN (MULTIMEDIA/ WEB DESIGNER-DEVELOPER/VIDEOGAMES)

An IT Applications Technician is a person who develops graphics for 3D environments. S/he creates, applies and uses interactive image/audio applications.

S/he is an expert user of digital programming languages and gaming/3D graphics creation tools.

Description of the occupation

An IT Applications Technician (Multimedia/Web designer-Developer/Videogames) utilizes modern technologies, particularly interactive applications and internet technologies, to install, regulate, check and use software applications for computers and networks.

S/he is concerned with the installation, configuration, control and use of computer and network software applications.

S/he services computer systems and networks, and checks entertainment software applications in terms of operation/implementation/ maintenance.

Personal traits and competences

An IT Applications Technician should be well-organized, methodical, creative and imaginative. S/he should also be practically-minded, systematic and good at planning.

S/he should be a proficient computer user with thorough knowledge of basic operating principles in terms of both hardware and software, as well as Information System terminals.

One of his/her main characteristics should be his/her keen interest in new IT developments.

Sound knowledge of English and flexibility in using all operating systems are considered essential assets for a successful career in this particular occupation.

Technical knowledge and skills

Graduates are able to:

- recognise internet architecture, protocols, and services by making use of the appropriate software

- properly configure software using the relevant internet protocols
- recognise web application markup and programming languages and understand their use
- use web applications and understand their operation
- develop and manage blogs, use hosting services and popular content delivery tools (e.g. FileZilla)
- install and use at least one open source software package for the development of websites (e.g. Joomla or WordPress)
- create websites using HTML and the corresponding website development environment, as well as tools for Dynamic HTML - JavaScript – CSS
- digitize and edit video and audio files by making use of appropriate software and hardware tools.

The “IT Applications Technician” occupational specialty is characterised by constant changes in the relevant levels of studies provided due to constant transformations in the IT services related to databases, programming languages, multimedia technologies for digital image/ audio applications.

Employment prospects

An IEK IT Applications Technician (Multimedia/ Web Designer – Developer/VideoGames) can work in:

- IT product development/ support companies
- e-commerce and IT service companies
- mobile telephony/internet providers and companies, entertainment application providers
- ICT hardware and software companies
- companies using the Internet for commercial purposes. IT departments of companies, organisations and public enterprises.

Working conditions

IT Applications Technicians’ work environment is pleasant and creative: they usually work as employees in company offices or as freelancers in their own private offices.

As employees they usually work for a standard number of hours but in exceptional circumstances they may work overtime to respond to emergencies.

The freelancers’ work schedule is defined by the clients’ needs. Prolonged work in front of a computer screen may cause eye sensitivity.

9. NETWORK AND TELECOMMUNICATION TECHNICIAN

A Network and Telecommunications Technician is a person specializing in the design, support, operation and maintenance of data transmission networks.

Description of the occupation

After graduating, Network and Telecommunications Technicians are generally oriented towards ICT occupations, as defined in relevant EU regulations, and take up jobs (either as employees or as freelancers) related to the design, support, operation and maintenance of data transmission networks in the public or private sector.

Network and Telecommunications Technicians perform technical tasks on data transmission networks, information systems or individual computers in an independent, timely and responsible manner, according to the general or specific instructions of the respective manufacturer. They develop data transmission networks (either on their own or in development teams) demonstrating full understanding of the functional requirements described in the relevant manuals (requirement analysis) or in the development manager's instructions.

Personal traits and competences

Network and Telecommunications Technicians are meticulous and highly specialized professionals. They should be well-organized and have keen observational skills, analytical and practical thinking. Moreover, they should work meticulously, systematically and methodically.

They should also be proficient in applying the principles of computer operation, managing telecommunication and data transmission networks via the operating system or any other management tools. Finally, they should be able to monitor, check and maintain all network facilities at a first level.

Technical knowledge and skills

An IEK Network and Telecommunications Technician has acquired the necessary knowledge and skills so that s/he can:

- operate computers and information system terminals
- effectively use and utilise the software they have been taught
- fully understand IT terminology (both hardware and software terminology)
- support and maintain Internet facilities and appropriately connect various devices and components (using connectors).

Furthermore, for the purposes of checking, repairing and maintaining/servicing telecommunication devices, they are also familiar with:

- the operating principles of telecommunication devices

- technical troubleshooting methods
- ways of checking the various tiers of communication devices and their components
- the various parts of communication devices, which require occasional servicing (routine servicing)
- the proper settings of active network devices, so that they can distribute the respective loads accordingly
- the appropriate measures taken for the physical and logical protection of data networks.

Employment prospects

IEK “Network and Telecommunication Technicians” can work in:

- companies, organisations, ministries, etc. using data transmission networks and IT services
- companies manufacturing or supporting data transmission network and IT products
- companies promoting/ dealing in network or IT products or services
- telecommunication products dealerships
- telecommunication component/system repair labs
- independent telecommunication facilities in buildings, industries, and small businesses (as freelancers).

Working conditions

Computer Network Technicians usually work in the IT and Network centres/departments of various institutions/companies or in their own private business (as freelancers). As employees, they usually work regular hours but, in exceptional circumstances, they may work overtime to respond to emergencies, either remotely or in the client’s business premises. In the latter case, the number of working hours is determined by the client’s business activities and needs.

If they work for a bank or an internet telecommunication company, they may have to work in shifts. In general, they work long hours in front of a computer screen or a network management terminal.

The variety of activities involved in the occupation (meeting with clients, conducting office or study work, working in labs or constructing) and the frequent movement to various workplaces and premises add interest and satisfaction to those working in this sector.

10. MECHATRONICS TECHNICIAN

The IEK “Mechatronics Technician” specialty aims at providing the mechanical engineering sector with proficiently trained technicians whose occupation is to design and construct modern industrial products, vehicles and motorcycles, fully corresponding to current consumer needs and requirements.

Description of the occupation

A Mechatronics Technician works in commercial establishments where the different parts and systems of cars are constructed, maintained, repaired and checked. S/he performs various technical tasks on the vehicle in compliance with the manufacturer’s general and specific guidelines.

S/he performs various technical tasks on the vehicle in compliance with the manufacturer’s general and specific guidelines. S/he checks, maintains and ensures the smooth operation of the vehicle’s electrical and electronic systems, automatic control systems, engine, powertrains etc. S/he analyses the behavior of the vehicle’s digital circuits, and programs its various devices and systems.

S/he calculates the cost of the work, materials and parts required to repair any kind of damage or malfunction in the car. S/he estimates the extent of the damage and decides whether the faulty part should be repaired or replaced. S/he measures the pollution caused by the vehicle’s exhaust fumes and estimates the vehicle’s overall capacity and performance. S/he takes all the necessary health and safety measures when carrying out his/her tasks.

S/he may also be involved in a variety of tasks in the different departments of the business s/he works for, including management tasks related to organization and operation.

Personal traits and competences

A Mechatronics Technician should be able to understand the necessity of constant training and adapt to his/her occupation’s changes and developments.

S/he should also possess good communication skills, an advanced sense of responsibility, as well as mechanical competence and dexterity.

Technical knowledge and skills

Fundamental knowledge includes all information relating to the organization, operation and safety of the Mechatronics Technician’s workplace and its surroundings, such as health and safety rules, the legal framework governing the protection of the natural environment from his/her technical activities, the materials to be recycled, fire protection measures, as well as knowledge of first aid in the event of workplace accidents.

S/he must also be aware of the forms and principles of business administration, as well as the procedures and public bodies responsible for inspecting the establishment s/he works for.

More specifically, a Mechatronics Technician should have good knowledge of:

- vehicle dynamics (e.g. the forces exerted or developed during vehicle motion)
- the electrical systems of automobiles and motorcycles
- the structure and function of computer units
- applied mechanical engineering (e.g. machine fundamentals)
- the operation, repair, and maintenance of automobiles and motorcycles (e.g. all the main tools of a machine-shop and electrics workshop, as well as their selection criteria)
- car operation systems (i.e. all the systems of the car, their parts and operation principles)
- engineering drawing

Employment prospects

Qualified IEK “Mechatronics Technicians can work in:

- car trade businesses, car dealerships, car factories
- car repair and maintenance businesses
- power production companies included in the Construction Experience Register
- vehicle inspection services and organizations; roadside assistance companies
- Vehicle Technical Control Centres (In Greek: KTEO)

Working conditions

More often than not, a Mechatronics Technician works in a car garage. Workplaces are usually rather large and appropriately arranged for checking and repairing vehicles. Mechatronics Technicians may often get dirty with grease, engine oils and other car liquids. Their workplace may be very noisy and have many strong smells.

A Mechatronics Technician’s work is tiresome, since s/he must carry out his tasks in various positions: standing, bending, even lying on his/her back. However, his/her working conditions may be greatly improved thanks to modern technological devices and tools.

4.2. SPAIN

1. ROOM STAFF

Title and description (job description, needed skills, working conditions):

The main function of this employment is to clean and arrange hotel rooms, including furniture, bedding, bathrooms, etc.

The necessary skills for developing these functions are good organizational capacity, good physical condition, and knowledge about cleaning products as well as how to use them correctly.

Normally, the common working conditions for room staff are predominantly part-time work and temporal, in some cases with the possibility of an indefinite-term contract. Time flexibility and the ability to deal with a high amount of work in a short time, are key competence for this job. It is useful to be capable of dealing with high levels of stress and to have a good working rhythm.

Necessary training and employment licenses:

There is no required training nor specific license to work as Room Staff but having previous experience in the sector is always appreciated. It is always valued to have studied the courses of Accommodation and Laundry or Accommodation Management.

Labour market's state-of-play and future prospects:

Nowadays, the state of this sector of the labor market is improving, considering the effects of the COVID-19 crisis in the hostelry sector. Approximately, 30% of employees who work in hotels and apartments are room Staff, so it is a representative occupation in the hostelry sector.

Looking ahead, the increment and growth of this occupation are expected, due to the re-rise of tourism and the return of all on-site labour activities. The reactivation of tourism after the pandemic causes huge labour mobility as well as an increase in hotel reservations. For this reason, next 2022, the salary is expected to have a 3% increase.

EQF level

Room Staff is under the EQF level 1 category.

List of Apprenticeship/VET Schools in Spain which provide education and/or training:

- Centro Integrado de Formación Profesional Compostela
- Instituto de Educación Secundaria Salvador Távora
Centro Integrado de Formación Profesional de Hostelería y Turismo de Gijón
- Instituto de Educación Secundaria La Malladeta
- Instituto de Educación Secundaria Blas Infante

News and announcements about the developments:

<https://www.hosteltur.com/127324-tecnologia-mejorar-condiciones-trabajo-camareras-piso.html>

2. COOKS

Title and description (job description, needed skills, working conditions):

The main function of this employment is to elaborate meals and dishes for the clients of restaurants and hotels.

The skills needed for this occupation are good organizational capacity combined with multitasking skills, the ability to work effectively in teams as well as the power to deal with stressful situations, and above all, to have culinary expertise and knowledge on how to combine ingredients.

Concerning the working conditions most of the cooks work full-time with an established schedule. The salary is directly connected to the prestige of the establishment and the cook's expertise. The contracts tend to be regular, it has a high rate of continuity, but in many cases they are seasonal.

Necessary training and employment licenses:

The employment licence needed to become a cook is the Food Hygiene Certificate, which you obtain after taking courses and programs about cooking. For this occupation, it is elementary to continuously improve your cuisine knowledge and obtain more experience through different courses.

There are other specific licences available, but they are not compulsory. Even so, it is highly recommended to acquire the driving license. Moreover, it is also recommended to course an education cycle in Hostelry, Gastronomy or Services in Restauration. Furthermore, there are specific courses such as international cooking, baking, fishes, meats, etc; that are always useful and taken into consideration.

Labour market's state-of-play and future prospects:

The actual state of this labour market is characterized by a high percentage of employability (mainly in restaurants, rather than in hotels). This sector is highly relevant from an economic point of view; thus employment is projected to increase further in the coming years. Regarding the salaries, they remain conditioned by the prestige of the restaurant or hotel and the level of studies of the cooks.

EQF level

Cook is under the EQF level 3 category.

List of Apprenticeship/VET Schools in Spain which provide education and/or training:

- Escuela Hostelería CETT
- Escuela Universitaria de Hostelería y Turismo de Sant Pol de Mar
- Jesuïtes Sarrià - Sant Ignasi
- Escuela de hostelería de Leioa

News and announcements about the developments:

<https://restauracionnews.com/el-salario-medio-de-la-hosteleria-subio-un-74-a-pesar-de-la-pandemia/>

3. ADMINISTRATIVE STAFF WITH KNOWLEDGE OF DIFFERENT LANGUAGES

Title and description (job description, needed skills, working conditions):

The functions of this employment are wide. The functions can go from working as an informant in a Tourist Information Centre or Tourist Concurrence Points (giving response to the needs and doubts of the tourists) to working as a receptionist in a hotel (giving response to needs and doubts of the tourists as well as administrative daily work).

The main required skills are to have the good communicative and sociable ability, a proper aptitude for administration as well as office automation, and finally a good domain of different languages.

Concerning the working conditions, the administrative staff normally work a full-time schedule and have temporary contracts. It is a seasonal market. Most job offers are concentrated on the coast and city capitals.

Necessary training and employment licenses:

The requested training for administrative staff is a university degree in Tourism or Hotel Management or an average degree in Administration and Finance. It is useful to have the

official certificates of the different languages (it is always better when the levels are high). Administrative staff job offers usually demand a minimum of experience in the sector. Even so, no specific licenses are needed to execute this job.

Labour market's state-of-play and future prospects:

The labor market state is still affected by the Covid crisis. Even so, the hiring rates of this occupation have been experiencing a significative increase during the last few years and the prediction is to continue doing so for the following years.

EQF level

Administrative staff with knowledge of different languages is under the EQF level 5 category.

List of Apprenticeship/VET Schools in Spain which provide education and/or training:

- Centro Público Integrado de Formación Profesional San Lorenzo
- Instituto de Educación Secundaria Almeraya
- MD Escuela de Hostelería y Turismo
- EU Mediterrani
- Escola d'Hosteleria i Turisme de Barcelona

News and announcements about the developments:

<https://www.e-unwto.org/doi/pdf/10.18111/9789284421213>

4. COMMERCE/TRADE TECHNICIAN

Title and description (job description, needed skills, working conditions):

The main function of this employment is to execute and develop commercial action plans to promote touristic products and services. In small organizations, this occupation may be helpful in the administration and management areas.

The needed skills for this employment are communicative and persuasive abilities. A good capacity for interaction with clients is also important. Knowledge of different languages is always useful and valued.

Regarding the working conditions, the salary normally increases after years of experience. In terms of working hours, almost all positions offer full-time work. Hiring tends to be indefinite, and in-house training is usually offered. The demand for this occupation is concentrated in the coastal zones and city capitals.

Necessary training and employment licenses:

One option regarding the required qualifications is a university degree in either Business Administration and Finance, Tourism, and Hospitality, or Sociology and Anthropology.

Another option is coursing a higher-level training cycle in Hospitality and Tourism, Commerce Technician, or Selling Management and Commercial Spaces. Some organizations also demand specialized postgraduate degree training.

There are no specific employment licenses required for this occupation although it is highly recommended to acquire a driving license.

Labour market's state-of-play and future prospects:

The labor market's state has been strongly affected by the Covid pandemic but in the last few months, it has experienced a notorious increase, given the reactivation of the commercial sector.

Furthermore, it is an occupation that has adapted easily to the new realities and advances of this time, and this has had a positive effect on the market's State. A remarkable prospect in this sector is related to the increase in employability due to the raise of tourism as a worldwide trend.

Nowadays, most hiring opportunities are concentrated in the coastal zones and city capitals.

EQF level

Commerce/trade technician is under the EQF level 4 category.

List of Apprenticeship/VET Schools in Spain which provide education and/or training:

- MEDAC Instituto Oficial de Formación Profesional
- INF Instituto Numancia Formación
- Salesians St. Vicenç dels Horts
- CEU- Instituto Superior de Estudios Profesionales de Madrid
- Centro Público Integrado de Formación Profesional Los Enlaces

News and announcements about the developments:

https://www.wto.org/spanish/news_s/pres21_s/pr876_s.htm

5. NURSE ASSISTANT

Title and description (job description, needed skills, working conditions):

The main function of this employment is to take care of and look after patients' health states.

Nursing assistants perform activities that facilitate the functions of the physician nurse in hospitals or similar establishments. Their responsibilities include preparing patients for examination, providing services to contribute to their well-being, performing simple or emergency care, assisting with oral and rectal medications, sterilizing surgical instruments, and any other related tasks.

The required skills for this job are good communication abilities and the capacity of empathising with others while trying not to engage too personally with patients. So, it is important to have the mental strength to separate personal and professional life.

The working conditions of this occupation are characterized by full time-work and intense schedules, increased by the Covid pandemic. Most job contracts tend to be temporary, with the possibility of being indefinite. It is quite common to work during the night and the weekend.

Necessary training and employment licenses:

This occupation is characterized and conditioned by the need to qualify, as it is a regulated profession. Thus, the required training for this occupation is to course an average degree in Auxiliary Nursing Care.

It is also valuable to have specific training in a particular field and to have training in occupational therapy

Labour market's state-of-play and future prospects:

It is a profession with a strong presence and future in the labor market. The employability rates in this sector have been and still are very high, especially after the Covid pandemic. It gives access to a very wide field of work. Specifically, it is possible to work in health centers, hospitals, and private clinics, as well as in social and community work centers. Due to the pandemic, the workload has been extremely elevated, and normally, contracts after the Covid Crisis are full-time and have rotatory shifts.

EQF level

Nurse assistant is under the EQF level 4 category.

List of Apprenticeship/VET Schools in Spain which provide education and/or training:

- Instituto de Educacion Secundaria Antonio Machado
- IFP- Innovación en Formación Profesional
- Jesuites Bellvitge- Centre d'Estudis Joan XXIII
- Instituto de Educación Secundaria Cantabria
- Institut d'Educació Secundaria Eugeni d'Ors

News and announcements about the developments:

https://repositorio.uam.es/bitstream/handle/10486/675355/pozo_sanz_claudia%20deltfg.pdf?sequence=1

6. HEALTH EMERGENCY TECHNICIAN/FIRST AID TECHNICIAN

Title and description (job description, needed skills, working conditions):

A First Aid technician is responsible for the first and most immediate assistance of a patient before the patient is attended to in a Health center or with other health professionals. The main tasks a First Aid technician has to develop are: protection of the patient and the patient's surroundings, alerting the health emergency

The required skills for this employment are fast thinking and the ability to find quick solutions during situations of emergency, the capacity to maintain calmness in situations of stress and risk, and last but not least, the ability to empathize without engaging personally with the patients.

Concerning the working conditions, the employment is normally full-time, and the salary can vary depending on the convention of the contract, the position, and the responsibilities of the working staff.

Necessary training/employment licenses:

There are no specific required training or employment licenses for this occupation, with a medium-level training program you can enter the labor market or keep studying and specialising in a specific health area (baccalaureate of the advanced-level training program).

Labour market's state-of-play and prospects:

This job has a good prospect thanks to the -growing- importance of the "care economy" and the shift towards the prevention of medical pathologies instead of following the usual path of the medicine academy, which tends to focus more on treating a problem when it already exists.

EQF level

Health emergency technician/first aid technician is under the EQF level 4 category.

List of VET schools in Spain which provide education:

- Institut La Guineueta, Barcelona, CAT (CFGM d'Emergències sanitàries o bé, CFGM de Cures auxiliars d'infermeria)
- JOVIAT FPI, Manresa, CAT (Cicle Formatiu Grau Mitjà Emergències Sanitàries) *Formato online y a distancia*
- Institut d'Educació Secundària (IES) de Vic (FP Emergències Sanitàries)
- Institut d'Educació Secundària (IES) Francesc Ferrer i Guàrdia (FP Emergències Sanitàries)

News and announcements about developments:

<https://blogs.iadb.org/salud/es/desafios-personal-salud-coronavirus/>

7. RENEWABLE ENERGY TECHNICIAN

Title and description (job description, needed skills, working conditions):

The main tasks a renewable energy technician must develop are maintenance of the renewable energy parks, management of their operating systems, and analysis of the work infrastructure to propose improvements that relate to the obtention of renewable energy.

The required skills to work as a renewable energy technician are previous knowledge and abilities in mechanics, organizational capacity, and a good understanding of renewable energy-obtaining processes.

Concerning the working conditions, most jobs are full-time and tend to require a high mobility rate (to the emplacement of renewable energy parks). The salary depends on different factors such as the position or the company. However, job prospects are very good.

Necessary training/employment licenses:

The required training to become a Renewable Energy Technician is an average or higher degree in Renewable Energy, Mechanic Engineering, Electric Engineering, Energy, or Ambiental Engineering. After this elementary training, it is useful to course postgraduate studies and specialize in a specific area of renewable energies.

Labour market's state-of-play and prospects:

Even though it is a dynamic market, employability is high, especially in the sectors of photovoltaic solar energy, wind parks, and hydroelectric energy. However, it normally depends on the type of energy developed in the specific territory. The prospects keep up the increase of investment (especially due to the growing interest in green and clean energies) so it is expected to maintain and even rise the employability rates of this sector. Employment in the renewable energy sector has grown globally despite the pandemic and will continue to do so.

EQF level

Renewable energy technician is under the EQF level 5 category.

List of VET schools in Spain which provide education:

- Escola Professional Salesiana
- Escola del Treball de Lleida
- Centro integrado de F.P Aguas Nuevas
- Instituto de educación secundaria Consaburum

News and announcements about developments:

<https://www.cambioenergetico.com/blog/mercado-laboral-renovables/>

8. INDUSTRIAL MAINTENANCE TECHNICIAN

Title and description (job description, needed skills, working conditions):

The main function of this employment is to maintain and verify the correct functioning of the industrial machinery as well as to monitor the processes developed in the execution of industrial activities. An industrial maintenance technician is expected to reduce and take care of possible breakdowns and increase the functioning time and reliability of the industrial machinery.

The required skills are good practical abilities, the domain of manual work, and knowledge of fixing industrial machinery. It is also important to be observative to identify and predict the possible problems of industrial machinery.

Concerning the working conditions, most job offers have long schedules that have rotatory shifts, and it is normal to work during the weekend. It is a sector with high continuity rates regarding contracts. Due to the unpredictability of industrial machinery issues, work schedules tend to be flexible. Another condition for this job is the high labour risk.

Necessary training/employment licenses:

The necessary training is a higher degree in Industrial Equipment Maintaining or a university degree in Industrial Engineering (and optionally specializing in a concrete area by coursing postgraduate studies). In general terms, there are no specific licenses needed to work as an industrial maintenance technician, although there may be concrete specializations or machine usage that can require a specific license.

Labour market's state-of-play and prospects:

The rate of employability in this market is high. It is one of the most demanded occupations in the last few years, in Spain. Due to the importance of the industrial sector in the market as well as the continuous maintenance that industrial processes require, the prospects for this employment are elevated.

But as time advances, the requirements in terms of qualifications and experience will change because of the constant changes and innovation of the sector. Even so, the automatization of maintenance processes is a threat to the future of this occupation, but an advance for working conditions and security.

EQF level

Industrial maintenance technician is under the EQF level 4 category.

List of VET schools in Spain which provide education:

- Instituto de Formación Profesional Mendizábal
- Institut d'Educació Secundaria (IES) Anna Gironella de Mundet
- Institut d'Educació Secundaria (IES) Milà i Fontanals
- Instituto de Educación Secundaria (IES) Politécnico

News and announcements about developments:

<https://www.interempresas.net/Mantenimiento/Articulos/231058-tecnologia-aplicada-mantenimiento-mejora-competitividad-rentabilidad-sector-industrial.html>

9. COMPUTER SCIENTIST/SPECIALIST

Title and description (job description, needed skills, working conditions):

A computer scientist has the function of solving informatic problems and mismatches as well as adapting them to new advances by applying innovative technological systems.

The required skills are a good knowledge of software licenses, a proper domain of programming as well as knowing how to work correctly with different operative systems. It is also valued to speak languages, especially English. And finally, the qualities of logical thinking, patience, and confidence are a plus in this sector.

Concerning the working conditions, this sector tends to have full-time schedules, even though the workload is not very intense. Most jobs in this sector are externalized by the company, so they work through subcontracting agreements.

Necessary training/employment licenses:

The required training to become a computer scientist is an average or higher degree in Computer Science. Another option is to take specialized courses on Micro informatic Systems and Net technicians, Artificial Intelligence and Bid Data technicians, etc. Finally, another possibility is to course a university degree in Computer Science and Engineering.

In general terms, there is no specific license needed to work as a computer scientist although there are specific licenses that are required depending on the informatic programs and software needed for a specific job.

Labour market's state-of-play and prospects:

It is one of the professions with the highest employment rate. This sector of the market has been increasing throughout the last few years at a very high rate. The prospection is to keep growing and rise even more the employability rates. Even though there are many labor opportunities in this sector, there is still a remarkable lack of ICT experts.

EQF level

Computer scientist/specialist is under the EQF level 5 category.

List of VET schools in Spain which provide education:

- Escuela Politécnica Giner
- Instituto de Educación Secundaria Isabel de Villena
- Escola del Treball de Barcelona
- IFP-Innovació en Formació Professional

News and announcements about developments:

<https://elpais.com/sociedad/futuros-educacion/2021-10-08/los-grados-mas-innovadores-para-formarse-en-las-profesiones-mas-demandas.html>

10. ELECTROMECHANICAL TECHNICIAN

Title and description (job description, needed skills, working conditions):

The main functions of this occupation are the installation and repair of industrial electronic equipment, including variable speed drives, PLC equipment, process control systems, and a wide variety of automated control systems ranging from simple on-off control to robotics.

The required skills for this occupation are to be analytical and hold critical thinking, and problem-solving abilities, a good communicational capacity, and the engagement to work with a team. Finally, good knowledge of mechanics and the ability to understand complex diagrams and schematics are always useful and valued.

Concerning the working conditions, most job offers have full-time schedules, often more than 40 hours a week. Regarding contracts, they are mostly temporal with the possibility of continuing.

Necessary training/employment licenses:

There are no specific qualifications required for this employment but any kind of course (average degree, higher degree, university degree, etc) related to mechanics, automobile vehicles, electromechanics, machine electromechanics, etc, is useful.

Labour market's state-of-play and prospects:

It is a changing market, with the advent of new technologies such as electric cars. There is a lack of professionals in the sector and so there are many job opportunities due to the geographical transfer of working centers and the upcoming retirements.

EQF level

Electromechanical technician is under the EQF level 4 category.

List of VET schools in Spain which provide education:

- IES Pere Martell
- Centro de FP Juan XXIII
- La Salle Barceloneta
- IES Mare de Déu de la Mercè

News and announcements about developments:

<https://job-outlook.careerplanner.com/Electro-mechanical-Technicians.cfm>

4.3. ITALY

1. BANQUETING/BAR ROOM SERVICES' EXPERT

EQF - 5

Description of the Occupation

The banqueting/barroom services expert is able to manage the distribution of meals and drinks, to design events by choosing the appropriate service delivery methods, providing for the layout and setting of the spaces, carrying out customer care and satisfaction monitoring activities.

Personal Traits and Competences

The banqueting/barroom services expert is able to plan autonomously a banqueting event, to set up the configuration of spaces, to provide customer care and customer satisfaction services, and understand the inefficiencies and shortcomings of the distribution service provided in relation to the identified customer expectations identified. Main personal traits should hence be strong interpersonal skills, good problem-solving abilities, good communication skills, patience, courtesy and politeness.

Technical Knowledge and Skills

Upon graduating, the Expert will be able to:

- define a schedule of times, activities and roles useful for the optimal realization of the event
- examine the overall costs of the event - food-cost, beverage, equipment, human resources
- choose the methods of delivery of the banqueting service based on the event to be carried out
- evaluate the type of menu, the beverage and the wine offer according to the event to be prepared
- adopt styles, techniques and materials for the set-up and decorations of the chosen spaces
- prefigure the use and organization of spaces in line with the chosen location
- choose furnishings and accessories in relation to the different image and setting needs of the spaces

- choose the “mise en place” of tables and banquets diversified by type of service and event
- grasp and interpret culinary preferences and customer requests
- recommend combinations of taste between the dishes, as well as between them and the range of wines offered
- define adequate procedures for acquiring and recording reservations
- find out the degree of customer satisfaction and identify optimal solutions for the provision of the service
- understand the inefficiencies and shortcomings of the distribution service provided in relation to the customer expectations identified
- define the tasks and operating procedures of those involved in the distribution of meals and beverages
- identify priorities for intervention in relation to customer requests and / or service needs
- intervene in the dynamics of reception / transmission of orders in order to remove any critical issues

Employment Prospects

The banqueting/barroom services expert can work:

- as a conference and event organiser
- as a food and beverage expert
- as a (head) waiter or steward
- as a barman
- as a maître d’hotel
- as a freelancer in the hospitality sector

Working Conditions

The banqueting/barroom services expert works closely in contact with customers. S/he tends to work indoors. Many positions for the occupational profile in question can be physically demanding. Working during weekends, at night, and more generally outside regular office hours is common.

Professional Licence – Not required.

BANQUETING/BAR ROOM SERVICES’ EXPERT – VET INSTITUTES AND CENTERS

FORMA-TEC – ROMA (RM) <https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10347>

PER-FORMARE – ROMA (RM)

<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/8938>

IPSEOA GIOBERTI – ROMA (RM) <https://www.alberghierotrastevere.edu.it/>

IPSEOA VESPUCCI – ROMA (RM) <https://www.amerigovespucci.edu.it/>

2. TOURISM MARKETING TECHNICIAN

EQF - 5

Description of the Occupation

The tourism marketing technician is able to analyze the tourism market, design services based on the assessment of the identified demand, developing promotional strategies and preparing communication and marketing plans.

Personal Traits and Competences

The ideal traits of the TMT are; well-developed communication skills, good self-organization and attention to detail; strong focus on sales; high interest in different cultures and specialised knowledge of the main touristic destinations. TMT is competent in: Basic elements of tourist geography; Basic elements of statistics and economics; The tourism market and its trends; The rules of national, community and regional tourism law; Tourism policies and strategies: new trends; Market analysis and research techniques: variables to be surveyed, sources, tools, etc.; Methodologies and techniques for processing the collected data; How to define a target user Uses and customs of potential reference targets; The levers of the marketing mix (brand management, pricing policies and revenue management, distribution and communication); Tourism marketing methodologies and tools; Rules and provisions to protect the safety of the working environment; Marketing techniques; Techniques for designing and implementing work plans and programmes; Operation of the main online booking tools; Search engines; Social networks; The rules of e-commerce; Relational communication techniques; SEO (Search Engine Optimization); Tools and languages of web communication and web marketing; Advertising communication techniques; Web marketing applied to the tourism sector

Technical Knowledge and Skills

Upon graduating, the TMT is able to:

- Analyze the tourist offer through: documentary research, site visits, analysis of the structure's resources and market surveys

- Identify strengths, penalties, opportunities and risks of the tourist facility/service
- Identify the characteristics of the competitor market and the potential one
- Evaluate the constraints and opportunities of existing legislation in the tourism sector
- Define the user target you want to attract, in line with the existing tourist infrastructure
- Identify the characteristic and relevant elements of the tourist demand in order to obtain qualitative and quantitative information on the affluence
- Predict the purchasing and consumption behavior of the tourist
- Recognize the factors that influence the choice of structures by customers: components, characteristics, taxonomy of purchases, etc.
- Define tourism marketing plans: offers, products, projects, actions, strategies
- Identify primary and complementary services to integrate and complete the tourist offer
- Identify cost indicators for the realization of the tourist service
- Interpret the needs expressed by the demand and translate them into real offers
- Establish image and tourist product to be conveyed externally in relation to the identified target user

Employment Prospects

The tourism industry is rapidly growing and jobs in tourism management are becoming highly sought after. Working in this sector will offer a huge range of interesting roles, such as meeting new people and the opportunity to travel. As a qualified tourism technician, you can work in a variety of jobs that are related to the tourist industry. Some of these are: Front desk clerk/receptionist; Hotel or resort manager; Housekeeper; Tour operator; Tourism marketing manager; Travel agency manager; Tourist Information Centre manager; Accountant or sales manager; Guest relations manager

Working Conditions

The tourism marketing technician needs to have solid analytical and practical skills in order to understand the needs, strengths, and weaknesses of the local tourism sector. S/he may need to analyse the local tourism industry through desk, market, and observational research as well as gathering and analysing relevant data. Positions related to this occupational profile are likely to require flexibility to adapt quickly to new circumstances.

Professional Licence – Not required.

TOURISM MARKETING TECHNICIAN – VET SCHOOLS AND CENTERS

ENTE DI FORMAZIONE FOREST – SORA (FR) <http://forest-formazione.net/tecnico-turistico>

CONSORZIO PLATONE – ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9748>

PER-FORMARE – ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/8936>

FONDAZIONE ITS TURISMO – ROMA (RM) <https://www.itsturismoroma.it/corso-marketing-turistico>

ISTITUTO TECNICO PER IL TURISMO COLOMBO – ROMA (RM) -
<https://www.itcolombo.edu.it/contatti/>

IISS DARWIN – ROMA (RM)
https://isisdarwin.edu.it/index.php?option=com_content&view=article&id=16&Itemid=46

3. MULTIMEDIA GRAPHIC DESIGNER (ICT SERVICES)

EQF - 5

Description of the Occupation

The Multimedia Graphic Designer is able to design and develop graphic solutions for multimedia products, maintaining and constantly updating their contents.

Personal Traits and Competences

Graphic designers need to be creative thinkers. They have to creatively convey ideas through text and images. They have to generate solutions for their clients through creative means. Among the other traits, we could mention: Consistency · Problem solving · Always learning · Able to take criticism · Patience. The MGD is competent in: Principles of multimedia communication; Characteristics and functionality of services and web based applications; Basic concepts of traditional graphics and visual arts; Features and specifications of computer graphics and animation software; Image processing techniques and digital photographs; The hypertext language and its evolutions; Basic characteristics and functions of internet connections (ADSL, dial up, etc.); Functionality of the most popular browsers: access to search engines, playback of audio and video files, file transfer, etc.; Logical structuring techniques of web page contents (headers, menus, footers, etc.); Main issues related to the publication, management and updating of websites; Technical English for the sector; Rules and provisions to protect the safety of the working environment.

Technical Knowledge and Skills

Upon graduating, the MGD is able to:

- Identify technical-graphic solutions to improve site performance (harmony, pleasantness, etc.)
- Translating the customer's needs and requirements into graphic-communicative characteristics of the multimedia product to be developed
- Evaluate the expressive and communicative potential of the different versions of the graphic and structural layout
- Evaluate harmony of the assumed graphic architecture with the clients traditional colours, logo and graphics
- Define the graphic realization plan of the multimedia product in terms of resources used and processing times
- Defining ways of integrating the different types of visual communication (static images, texts, videos, etc.)
- Identify environments and applications suitable for the realization of the hypothesized graphic solution
- Identify procedures and operating instructions for updating and maintaining the graphic materials developed
- Adopt techniques for the acquisition and layout of graphic, textual, video and audio contributions
- Translate static graphic solutions into dynamic graphic elements
- Use the main application software for graphic development
- Use tools for the dimensional optimization of graphic components in web pages
- Identify anomalies in the performance levels of the developed graphic solutions
- Recognize compliance of the graphic layout with the specifications of the technical project
- Evaluate corrections and changes to the graphic layout to restore fairness in the relationship between communication effectiveness and functionality
- Evaluate the effectiveness of developed graphic elements (fonts, colors, images) in terms of accessibility and usability of the multimedia product

Employment Prospects

Employment of graphic designers is projected to grow constantly in the next decade. In general, **graphic designers** have three **work possibilities** when **it** comes to employment: freelance, In-house or agency.

Working Conditions

The multimedia graphic designer tends to work indoors in a studio where s/he has access to computers and relevant software. Some multimedia graphic designers work independently, whereas others work within a design team. Positions related to this

occupation profile require important team working skills, as collaborations with colleagues and clients is often necessary. Multimedia graphic designers work normally on projects, which means that their schedules depend on project-specific deadlines and workloads.

Professional Licence – Not required.

MULTIMEDIA GRAPHIC DESIGNER – VET SCHOOLS AND CENTERS

CEFI – ROMA (RM) - <https://www.cefii.it/formazione/grareg.htm>

ISTITUTO EUROPEO DI INFORMATICA – ROMA (RM) - <https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10487>

ABSONANT – ROMA (RM) - <https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10492>

ARCHIBIT – ROMA (RM) <https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9548>

IIS WOOLF – ROMA (RM) <https://www.iisgiorgiwoolf.edu.it/grafica-e-comunicazione/>

4. IT SECURITY EXPERT

EQF - 6

Description of the Occupation

The IT security expert works independently, with direct responsibility, in order to ensure the protection of the systems against possible threats and operational criticalities. As such, it tests the security of systems against intrusions, viruses and intentional or environmental threats, the recoverability of data and operations following accidents or malfunctions and the correct encryption and decryption function; he/she tests and corrects bugs and flaws, developing adequate preventive measures; he/she designs and supervises training for system users on good practices for information security.

Personal Traits and Competences

The IT security expert has the following competences: Hardware and software architecture of digital systems; Methods of analyzing security risks and identifying vulnerabilities for the security of computer systems; Methods of analysis of strengths and weaknesses in relation to security and data protection needs; Theoretical foundations of information systems security; Methods for evaluating the security risks related to the hardware and software components of the system; Evaluation methods of security risks

related to the components of the information system dedicated to networking (protocols, connections, network equipment

Despite being very technical, this field of employment still values a series of transversal personality traits, such as: curiosity, desire to learn, empathy, personal ethic and moral code.

Technical Knowledge and Skills –

Upon graduating, the ITSE is able to:

- Prepare and maintain asset inventory
- Analyze the requirements required of the information system by the current regulatory provisions on privacy and IT security
- Analyze the architecture of the information system, to identify possible points of attack on the system or on the information it contains
- Develop information system security risk assessment documents, containing the analysis of threats and vulnerabilities identified and possible countermeasures
- Identify the vulnerabilities of the architecture, hardware equipment, software and information system management processes
- Interacting with the heads of the various decision-making levels, directing and supporting the strategic choices regarding the security of information systems
- Define authentication credentials, for the identification of users authorized to access the information system, providing for the use of the most appropriate techniques (user-id, password, smart card, biometric systems, etc.)
- Define selective access profiles, individual or for homogeneous groups (IAM configuration), based on actual operational needs or on previously approved authorizations
- Install and configure proxies and firewalls, to ensure the security, confidentiality and integrity of connections between clients and servers
- Adopt the appropriate countermeasures in the event of an attack on the security of the information system (hardware and software)
- Check compliance with the planned safety measures
- Manage firewall rules
- Find and eliminate malware (spyware, backdoors, trojans, etc.)
- Monitor and interpret logs (servers, network devices, applications, etc.)
- Monitor and block internal and external traffic that poses a potential threat to the security of the information system
- Recognize and block denial of service attacks
- Restore integrity, functioning and level of security, following an attempted or successful breach of the security of the information system
- Test the functioning of business continuity and disaster recovery plans

- Use identity management systems (IMS)
- Use Security Information Event Management (SIEM) systems
- Use encryption and encryption techniques and systems
- Define the tools, organization, roles and responsibilities to ensure correct management of information system security
- Develop Disaster Recovery and Business Continuity plans which, in the event of a serious accident or interruption due to uncontrollable causes, allow for the correct functionality of the information system to be maintained or restored in the shortest possible time
- Organize the procedures for the control of logs, accesses and traffic towards the outside, of the information system
- Organize effective emergency management, with a clear definition of roles and procedures and a correct attribution of responsibilities, in the event of an accident or cyber attack
- Guide and support the process of adapting IT security skills and behaviors of all members of the organization
- Program an audit plan and security controls, to verify the effective level of protection of the information system

Employment Prospects - Employment of information security analysts is projected to grow 35 percent from 2021 to 2031, much faster than the average for all. The IT security expert can work:

- as a consultant in the IT sector
- as an expert in a computer company
- as an expert in a business company
- as an expert in a financial company
- as a freelancer

Working Conditions

The IT security expert tends to work indoors with a computer, either individually or as a part of a broader IT team. Positions related to this occupational profile have more and more commonly the possibility to work remotely. If working in a company, IT security experts tend to work mainly in regular office hours but may need to be available in case of an emergency also outside of regular office hours.

Professional Licence – Not required.

CYBER SECURITY EXPERT – VET SCHOOLS AND CENTERS

FATA INFORMATICA .- ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10081>

ASS. COMPAGNIA DEL SAPERE - APRILIA (LT)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9138>

ACCADEMICA DI CYBERSICUREZZA LAZIO – ROMA (RM) <https://wegil.it/campus-lo-spazio-di-formazione-della-regione-lazio/>

ITS ROSSELLINI – ROMA (RM) <https://www.ticonsiglio.com/roma-corso-esperto-cybersecurity/>

ITIS GALILEI – ROMA (RM) <https://lnx.itisgalilei.edu.it/it/home-ita/chi-siamo/triennio-i-t-i-s/logistica-trasporti.html>

5. LOGISTICS AND TRANSPORTATION TECHNICIAN (SHIPPING AND LOGISTICS)

EQF - 5

Description of the Occupation

The shipping and transport technician is able to plan, implement and monitor the transport and shipment of goods with unimodal / intermodal systems, on national and international territory, identifying suitable carriers, managing the related document and information flows and the obligations. He is able to offer advice on international transport and customs' area management.

Personal Traits and Competences

Traffic technicians tend to be predominantly realistic individuals, which means that they often enjoy working outdoors or applying themselves to a hands-on project. They also tend to be investigative, which means that they are quite inquisitive and curious people that often like to spend time alone with their thoughts. The technician has the following competences: Characteristics and specificity of unimodal/intermodal transport systems and related carriers; Logistics cycle of unimodal/intermodal transport; Elements of international trade; Fundamentals of business organization: structure, functions, work processes; Management functions for the drafting of load plans and goods shipments; Rules and provisions to protect the safety of the working environment; Rules on the transport and storage of specific types of goods (dangerous goods, foodstuffs, etc.); Types and characteristics of storage, transport and shipping contracts; Conventions for international transport: CMR, Warsaw Convention, Hamburg Convention, Montreal Convention, etc.; Notions relating to customs formalities and functionality of the related telematic systems; Main national and international regulations and conventions on transport and shipping.

Technical Knowledge and Skills

Upon graduating, the LTT is able to

- Processing of load plans and related units
- Formulation of estimates for transport and shipping services, also with an intermodal system
- Arranging carriers, equipment and related transportation activities
- Preparation of national and international, unimodal/intermodal freight transport contracts
- Drafting of the shipping, collection, warehouse and distribution program, even on single units
- Identify and prepare the transport and shipping documentation, with respect to the type of carrier, the goods transported and the country of origin and destination
- Identify and adopt procedures for the composition of transport and shipping practices in compliance with current standards and conventions
- Identify and apply customs procedures and formalities for the import and export of goods (Intrasat fulfilments, intra-EU tax fulfilments, customs fulfilments and procedures relating to non-EU countries)
- Prepare and draw up travel documents and unimodal/intermodal transport
- Prepare the insurance procedures for import-export transport and shipment, identifying clauses and conditions
- Use computer information systems to monitor compliance with customs procedures
- Use computer information systems to monitor the goods in transit and the execution of the delivery to the consignee
- Evaluate the terms and conditions of transport and shipment, identifying any anomalies with respect to the national and international standards and conventions in force
- Adopt billing techniques for national and international transport and shipping services
- Adopt techniques for carrying out documentary credit operations in national and international commercial transactions
- Decode requirements for the fulfillment of national and international tax obligations
- Identify irregularities and critical issues relating to payments, tax and customs aspects, evaluating interventions to remove them

Employment Prospects

Overall employment in transportation and material moving occupations is projected to grow 6 percent from 2021 to 2031, and nearly every industry needs professionals with

technical skills in logistics and transportation. The logistics and transport technician can work:

- as a logistics technician
- as a transportation technician
- as a field inspector
- as an assistant inspector
- as a maintenance staff
- as a laboratory materials tester

Working Conditions

The logistics and transport technician tend to work outdoors—in a variety of settings—in a fast-paced and stressful environment. Sometimes s/he can also work in an office with a computer. Some positions related to this occupational profile have regular office hours, others instead may work at evenings, nights, and weekends. Some logistics and transport technicians may travel to visit suppliers.

Professional Licence – Not required.

LOGISTICS AND TRANSPORT TECHNICIAN – List of VET SCHOOLS AND CENTERS

ISTITUTO TECNICO TRASPORTI E LOGISTICA DE PINEDO – ROMA (RM) -
<https://www.depinedo.edu.it/>

ITIS GALILEI – ROMA (RM) <https://inx.itisgalilei.edu.it/it/home-ita/chi-siamo/triennio-i-t-i-s/logistica-trasporti.html>

B&C CONSULTING – ROMA (RM) <https://portafuturo lazio.it/cittadini/imprese/scheda-impresa.aspx?UID=67c41288-67c1-41f6-8a4c-fcf400b3b718>

6. PAYROLL OFFICER

EQF - 4

Description of the Occupation

The Payroll and Contribution Officer deals with the management of contributory, insurance and tax aspects, related to staff remuneration, during all phases of the employment relationship between the company and the individual, from hiring to termination. It typically carries out data processing activities relating to attendance and absences; operational management of all phases of the employment relationship; drafting and keeping of compulsory books, calculation of remuneration, social security and tax base, care of legal obligations, independently using specific IT tools.

Personal Traits and Competences

The payroll officer must be trustworthy, confidential, honest, approachable, responsive, helpful and communicative. The officer has the following competences: Elements of labor law applied to personnel administration; Contract types (permanent work, fixed-term work, apprenticeship.); Reasons for suspension and interruption of the employment relationship; Elements of social legislation applied to personnel administration; IT applications for drafting employment contracts; Nature, function and characteristics of mandatory communications; Social security and insurance obligations and reference bodies; telematic administrative procedures; Legislation on the protection of privacy applied to employment relationships; Notes on labor disputes; IT applications for personnel tax management; Notes on tax litigation; Payroll structure; Techniques and operations of payroll calculation; Structure of tax returns and related drafting procedures.

Technical Knowledge and Skills

Upon graduating, the PO is able to:

- Provide support in the event of labor disputes
- Interact, as required by one's role, with subjects external to the company (social security and insurance bodies, consultants,)
- Interact, as required by one's role, with individuals within the company, with expertise in the field of legal management of employment relationships
- Prepare and execute, on the basis of the identification of the CCNL and the applicable legislation, the procedures for the management of the mandatory obligations in the insurance field
- Prepare and execute, on the basis of the identification of the CCNL and the applicable legislation, the procedures for the management of hiring and termination of employment relationships
- Support the drafting of letters of employment, contracts and communications to workers
- Independently carry out the electronic administrative procedures relating to the legal management of employment relationships
- Use, independently, the main IT tools for personal productivity
- Take care of the drafting of tax returns related to personnel administration
- Provide support in the event of a tax dispute
- Interact, as required by one's role, with subjects external to the company (Revenue Agency,)
- Interact, as required by one's role, with individuals within the company, with expertise in the field of tax management of employment relationships

- Prepare and execute, on the basis of the identification of the CCNL and the applicable legislation, the procedures for the management of the mandatory obligations in tax matters
- Carry out the tax obligations connected to the employment relationship, applying the taxation of employment income, tax adjustments and liquidation, and drafting the related forms
- Independently carry out the electronic administrative procedures relating to the fiscal management of employment relationships
- Independently use the main IT tools for personal productivity

Employment Prospects

Payroll administrators work in collaboration with the HR and Finance departments within every organisation. A payroll officer's primary role ensures the timely payment of wages, salaries, superannuation and compensation to every employee. They ensure that all employees get paid the correct entitlements from their employer. Starting a career in payroll and accelerating a career path in payroll administration has overlapped with other accounting and bookkeeping skills. In recent years, more organisations are now employing specialist payroll staff.

Working Conditions

The Payroll Officer is responsible for the management of the contribution, insurance and tax aspects, related to the remuneration of staff, during all phases of the employment relationship between the company and the individual, from recruitment to termination. S/He typically carries out her/his activities in the office, using specific IT tools. The efficiency of the IT tools available and an effective organization in the management of practices among colleagues contribute to improving working conditions.

Professional Licence

Not required

PAYROLL OFFICER – VET SCHOOLS AND CENTERS

POLISTUDIO – FROSINONE (FR) -
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9084>

CNA SOSTENIBILE – VITERBO (VT)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10095>

ASSOCIAZIONE MINERVA FORMAZIONE – ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10235>

7. SALES TECHNICIAN

EQF - 5

Description of the Occupation

The Sales Technician is able to create action plans - sales oriented to result objectives and performance standards, as well as to manage and conclude commercial negotiations in compliance with both the strategic conditions and the maximum satisfaction and consequent loyalty of the customer, also providing to the operations of collection and control of the relative payments.

Personal Traits and Competences

The personality of a sales technician does matter, but not necessarily in the way most people would assume. According to Sales Hacker, the top traits of most successful sales people actually include an upbeat personality, passion, creativity, and empathy. The sales technician has the following competences: Types, segmentations and market dynamics and product distribution channels; Methods and tools for planning and organizing work; Company forms and application software in use, for the preparation of administrative and reporting documents; Technical English for the sector; Rules and provisions to protect the safety of the working environment; Techniques of interpretation and analysis of risk and growth factors, current trends, logics of change in the reference market; Basic elements of operational marketing: promotional and advertising activities, etc.; Sales techniques, communication and interview management, persuasive argumentation; Product display techniques (display) and sales surface organization (layout); Elements of labor contracts, social security and insurance; Customer care and satisfaction models and customer loyalty techniques; Elements of commercial law and tax legislation; Technical-functional characteristics and types of products/services, object of the commercial negotiation.

Technical Knowledge and Skills

Upon graduating, the ST is able to:

- Understanding the evolutionary dynamics of the reference market: product trends, logic of change, etc.
- Identify the strengths and weaknesses of your offer, compared to the reference market
- Interpret the scenario data acquired: competitors' offer system, end consumers' propensity to purchase, etc.
- Detect inputs functional to the identification of new potential customers: emerging needs-needs, etc.

- Evaluate the reliability/potential of existing customers, through the interpretation of synthetic and analytical sales data
- Define the structure of the work plans, according to: type of customer, turnover objectives, assortment needs, promotional needs, etc.
- Organize deliveries, identifying intervention priorities, in view of the greatest profit opportunities and distances in terms of geographical proximity
- Recognize the different commercial types of customers forming part of the assigned portfolio: final consumer, retailer, wholesaler, etc.
- Detect customer feedback in terms of product/service, translating it into technical and functional solutions
- Identify alternative sales proposals, using negotiation techniques, to adapt customer wishes to the pre-established price and technical-strategic constraints
- Interpret the interlocutor's needs/preferences, identifying persuasion tactics suitable for achieving sales objectives
- Provide for the logistical-organizational aspects of deliveries, arranging the assortments of goods
- Provide for the operations of collection and control of the related payments
- Choosing promotional actions, discount policies, gifts, to achieve the mutual optimal sales result
- Choosing and adopting ways of presenting the product/service offer, useful for maximizing its value
- Transmit orders to distribution companies, monitoring identified delivery times and methods

Employment Prospects

Initially you're expected to gain experience in your field, develop product or service knowledge and build your reputation in technical sales. Once established as a technical sales engineer you will have the option of: staying in the sales field, which may offer a high salary and attractive benefits package; moving into a managerial role and climbing the management ladder; moving into other related areas, such as technical marketing or product development and research; opting for self-employment, contracting to sell products or services for several different companies.

Working Conditions

The Sales Technician operates in the office environment. S/He intervenes with autonomy, within the established action framework and the assigned specifications, contributing to the supervision of the commercial distribution process through participation in the identification of resources, monitoring and evaluation of the result, the implementation of continuous improvement procedures, with responsibility for the supervision of

executive activities carried out by others. Working conditions depend on an effective planning of sales actions in terms of:

- definition of the structure of the work plans;
- organization of deliveries and identification of priorities for action in view of increased profit opportunities and distance travelled in terms of geographical proximity;
- recognition of the different types of business of the clients forming part of the assigned portfolio;
- detection of feedback in terms of product/service, from customers, to be translated into technical and functional solutions.

Professional Licence

Not required

SALES TECHNICIAN – VET CENTERS

TECHNICAL COMMERCIAL INSTITUTES ROMA - <https://www.comunicitta.it/scuole-superiori/istituti-tecnici-commerciali-10/comune-di-roma-58091>

8. ENERGY SYSTEMS TECHNICIAN FOR THE CONSTRUCTION SECTOR

EQF - 6

Description of the Occupation

The Technician is able to examine the energy and environmental characteristics of a building system in order to define its current level of performance and to identify possible improvement interventions, evaluating their technical and economic feasibility.

Personal Traits and Competences

The EST has the following competences: Fundamentals of energetics and applied climatology; Elements of chemistry and thermodynamics; Fundamentals of electrical engineering and automatic building control systems (BACS); Renewable and non-renewable energy sources: characteristics, use, impact; Main construction technologies and civil systems (air conditioning, hydraulics, lighting); Main passive technical construction solutions; Energy performance indicators of a building; Main energy evaluation and graphic processing software

Technical Knowledge and Skills

Upon graduating, the EST is able to:

- adopt the IT tools and techniques necessary to simulate the amount of savings in relation to the prefigured interventions and to provide an assessment of the investment prospects and payback times
- prefiguring possible intervention scenarios by evaluating the aspects of feasibility and technical and economic feasibility
- recognize the critical areas and weak points of the building-plant system on which it is possible to intervene and envisage opportunities for improvement
- evaluate, for each of the prefigured interventions, the amount of economic and energy savings in order to guide the choices towards the most convenient and functional intervention to the needs expressed by the client
- understand the essential elements of the energy improvement interventions to be implemented: type of intervention, characteristics, purpose, behavior over time and maintenance/management
- identify the main energy technologies/systems currently available on the renewable and assimilated energy market, with particular regard to the innovative solutions promoted by current legislation
- prefiguring the most suitable energy systems for the interventions to be carried out, evaluating the functional and applicative characteristics of the various technologies available
- evaluate the various opportunities for modification/integration of the envelope technologies and pre-existing plant components
- Adopt techniques and tools for the maintenance and management of technical systems by identifying the optimal combination of resources, tools, times and methods and define a hypothesis for an energy performance improvement plan in its essential aspects that takes into account the maintenance and management of interventions
- identify ways to optimize the contribution of environmental energy sources, satisfying the requirements of comfort and well-being through passive control of the microclimate of the building
- identify all possible sources of funding and incentive systems currently in place
- evaluate the functionality of the plan by prefiguring possible improvements, modifications or adaptations also according to the objectives set

Employment Prospects - With a bright future ahead, the renewables sector has no shortage of excellent pathways for jobseekers looking to enter the clean energy market.

Working Conditions

The Energy systems technician works both in the office and in the field with functional technical inspections to examine the energy and environmental characteristics of a system/building/plant. The use of software tools for the proper performance of the work,

and the adoption and compliance with health and safety standards during the necessary inspections contribute to the creation of effective and safe working conditions.

Professional Licence

Not required

ENERGY SYSTEMS TECHNICIAN FOR THE CONSTRUCTION SECTOR - VET SCHOOLS AND CENTERS

ASSOCIAZIONE CULTURA D'IMPRESA - ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9705>

POLISTUDIO - FROSINONE (FR)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9647>

LEGISLAZIONE TECNICA - ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9084>

IIS SILVESTRI - ROMA (RM) <https://www.iisviasilvestri301roma.edu.it/index.php/1-istituto/istituto-tecnico-commerciale-e-geometri/23-archivio-2017-18/170-itcg-costruzione-ambiente-e-territorio-ex-geometri>

9. PROJECT MANAGEMENT TECHNICIAN (TRANSVERSAL AREA)

EQF - 5

Description of the Occupation

The Project Management Technician - Project manager is able to develop, implement and manage projects, through the integration and coordination of professional resources, the supervision of relational networks and taking into account the context in which he is operating.

Personal Traits and Competences

The project manager has the following competences: Phases, development and project structure; Specific regulations for tenders and supplies; Main channels and sources of funding; Principles of project management; Scenario analysis techniques; Project budget; Calculation of job cash-flow; Project design and implementation methodologies; Estimate of financial needs; Structure of a project (building blocks); Elements of work organization and human resource management; Rules and provisions to protect the safety of the working environment; Main accounting and reporting tools and techniques; Project closure reporting; Application software for project management; Budget management

tools and techniques; Communication techniques: listening and feedback; Group management techniques; Techniques and methods of coordination of complex projects; Technical sector terminology in English; Cost Report: analysis of variances/variances; Application software for project monitoring; Progress estimates; Project monitoring techniques; Project impact assessment techniques; Techniques and methods of control of complex projects; Techniques for implementing a control system

Technical Knowledge and Skills

Upon graduating, the PMT is able to:

- Assume the characteristics of the context (economic, market, political and social) by identifying opportunities, constraints and funding channels
- Identify needs, elements of the scenario and trends present on the territory and in the reference context
- Prefigure an overall picture relating to the context, the type of intervention to be carried out and its purposes
- Evaluate the reliability and potential of any partners and structures involved/to be involved
- Define the constituent elements of the intervention (purposes, methodologies, tools, addressees/beneficiaries, technical resources, times and costs, etc.)
- Identify the criteria and tools needed to evaluate the effectiveness and impact of the intervention
- Identify the partners, interest groups and professional collaborators useful for the purposes of the prefigured intervention
- Translate the needs identified into project hypotheses taking into account the recipients and project partners
- Adjust the actions envisaged in relation to unforeseen and critical issues or needs reported by partners, recipients or collaborators
- Adopt behaviors and approaches that favor synergies between individuals and groups, even belonging to different organizations and realities
- Manage the closing phases of the project and the expected deliverables
- Identify the most effective communication channels with respect to the message and the recipients to be reached
- Identify the elements useful for ensuring the smooth running of the intervention with reference to quality and safety
- Analyze physical and financial monitoring data, in order to prepare any corrections/modifications to the initial design
- Define the criteria and indicators for evaluating the results and impacts of the intervention, with respect to the goals and objectives defined
- Define the monitoring and evaluation plan, identifying times, procedures and reports to be produced

- Identify physical and financial metrics for monitoring project activities

Employment Prospects

Depending on the needs of the employer, technical project managers can find themselves employed either for the duration of a specific project or in a full-time position for a company in regular need of a technical project manager. The specific tasks a technical project manager is expected to perform will vary depending on the needs of the employer and can include overseeing the development and implementation of new technological programs, facilitating communication between relevant departments and ensuring other project workers' adherence to guidelines

Working Conditions

A dynamic and collaborative environment, aimed at cooperation and efficient management of practices, contributes to improving working conditions. To this is also added the communicative and organizational capacity of the Project Manager who, also using effective software and other tools, must be able to organize independently and effectively the main activities, in particular:

- Networking, partnerships and communication channels;
- Coordination of partners and collaborators;
- Management of project activities, closure, and return activities.

Professional Licence

Not required

PROJECT MANAGEMENT TECHNICIAN – VET CENTERS

SPEHA FRESIA – ROMA (RM)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9889>

KAIROS – ROMA (RM) <https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/9932>

10. EDUCATION OPERATOR (SOCIAL HEALTH SERVICES)

EQF - 4

Description of the Occupation

The educational operator for autonomy and communication is a figure functional to the learning processes and the inclusion of the student with disabilities or in disadvantaged

conditions, who intervenes to strengthen their skills in areas such as autonomy and management of cognitive and relational aspects, from a non-welfare point of view with respect to the deficit, but aimed at the development of the recipient's skills and of all the actors in school processes for inclusion. The Operator integrates his own activity with that of other figures (curricular teachers, support teachers and staff), not overlapping tasks and functions, but enhancing the different areas of competence.

Personal Traits and Competences

The operator has the following competences: Fundamentals of psycho-pedagogy; Fundamentals of developmental psychology; Fundamentals of learning psychology; Fundamentals of special pedagogy; Elements of sociology; Principles and methods of peer mediated intervention; Types and characteristics of the different pathologies and disabilities: sensory, motor, functional, psychic deficits; Principles and techniques of communication (relationship and interaction; communication models.); Educational planning techniques (special individualized paths); Institutional and regulatory framework on disability and integration; Regulatory framework on primary and secondary education; Elements of anti-discrimination law and practice; Notions of anatomy; Principles of the clinic of pathologies; Types of life-saving drugs and notions of first aid; Methodologies and techniques of the helping relationship

Technical Knowledge and Skills

Upon graduating, the EO is able to:

- Apply methods for didactic and educational planning and evaluation, with attention to the acquisition of autonomy and socialization in learning contexts
- Collaborate in the drafting and updating of the Individualized Education Plan (P.E.I.) and in the Working Group on Disability (G.L.H.), according to the objectives of learning, integration, socialization and rehabilitation
- Understand the relevance of the gender factor in learning processes, recognizing, evaluating and preventing situations in which this factor could become an aggravating factor of the subject's conditions of discomfort
- Understand, through the relationship with the family, the teaching and non-teaching staff and the resources of the Working Group on Disability (G.L.H.), the life project and the needs of the pupil, in relation to the characteristics of the disability
- Identify and apply methods of information and communicative exchange between the school context (teacher, specialists,...) and the family
- Design interventions to support learning and inclusion, in an integrated way with the educational and didactic approach of the curricular and support teachers

- Detect the resources and potential that can be activated by the student and the class group, in order to translate them into concretely achievable educational goals
- Support the definition of school-work alternation projects and bridging projects for leaving school
- Develop observational and planning approaches, aimed at promoting inclusion among peers
- Adopt methods to convey the educational strategies, training courses and teaching tools proposed by the teaching staff
- Adopt techniques to stimulate the student's interests, in order to establish a motivational connection with the activities foreseen in the individualized path
- Recognizing and adopting the most appropriate methods of student participation in the various scholastic, recreational and training activities
- Recognize and use educational supports suitable for the special needs of the student, soliciting the different learning channels
- Support coordinated interventions between school services and health, social welfare, cultural, recreational and sports services
- Support the participation of the student with a disability or in a disadvantaged condition, in projects for inclusion based on small groups

Employment Prospects - Overall employment the sector is projected to grow 6 percent from 2021 to 2031

Working Conditions

The operator works mainly in schools to strengthen the autonomy of the student with disabilities or at a disadvantage, in daily work, in participation in educational activities within the school and in the enjoyment of the territory. To create excellent working conditions that have positive returns for both the operator and the assisted, it is necessary to know how to create an effective communication channel to the benefit of the disabled student between family, other students, teachers, school staff and school manager. The communication channel must be functional to the strengthening of the autonomy and the learning process of the assisted, but also to the supervision and compliance with health and safety standards for the benefit and protection not only of the student, but also of the operator himself.

Professional Licence

It is necessary to follow and complete an ad hoc training course, thanks to which the person concerned to work as an educational operator for autonomy and communication

can obtain a certificate of professional qualification, valid throughout the national territory.

EDUCATION OPERATOR – VET SCHOOLS AND CENTERS

ISTITUTO SOCIO SANITARIO PELLICO – ROMA
<https://www.istitutosilviopellico.it/indirizzi/istituto-socio-sanitario-a-roma/>

ISTITUTO CARTESIO – ROMA (RM) <https://istitutocartesioroma.com/istituto-professionale-socio-sanitario/>

ISTITUTO MANZONI – ROMA (RM) <https://www.manzonianac.it/istituto-professionale-servizi-socio-sanitari-diploma-un-anno/>

ASSOCIAZIONE MINERVA – FROSINONE (FR) -
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10471>

CENTRO STUDI ATENA – LATINA (LT)
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10430>

PAOLO SEGNERI SRL – NETTUNO (RM) -
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10661>

GF GIOVANNI FALCONE SRL – COLLEFERRO (RM) -
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10624>

CONSORZIO ROMA – MONTECOMPATRI (RM) -
<https://www.regione.lazio.it/cittadini/formazione/offerta-formativa/10635>