



**EQVEGAN**  
**European Qualifications & Competences for the Vegan Food Industry**  
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**Deliverable 4.4**

**Delivered EQF 6 training for the vegan food industry**

**Workpackage 4** Implementation of trainings, its quality assurance, certification and recognition

**Task 4.4** Delivered EQF 6 trainings for the vegan food industry

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## Foreword

The work described in this report was developed under the project EQVEGAN: European Qualifications & Competences for the Vegan Food Industry (621581-EPP-1-2020-1-PT-EPPKA2-SS). If you wish any other information related to this report or the EQVEGAN project please visit the project web-site ([www.eqvegan.eu](http://www.eqvegan.eu)) or contact:

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## **Summary**

This report aims to document the EQF6 trainings delivered, taking into consideration the professional data, such as qualifications, professional experience, current occupational profiles, and performance assessments during the training sessions.

This report will also assess the overall satisfaction of trainees and the feedback collected from trainers, with the objective of enhancing the quality of future training sessions.

All data collected and reported will respect the privacy of the individual, as per GDPR directives.

## Table of Contents

<b>Foreword</b> .....	<b>I</b>
<b>Summary</b> .....	<b>II</b>
<b>Table of Contents</b> .....	<b>III</b>
<b>1. Introduction</b> .....	<b>1</b>
<b>2. Vocational Education and Training Overview</b> .....	<b>2</b>
<b>3. Internal Proposal and Approval of the EQVEGAN Course</b> .....	<b>8</b>
<b>4. Course Dissemination</b> .....	<b>10</b>
<b>5. Course Admission</b> .....	<b>12</b>
<b>6. Trainees Background</b> .....	<b>15</b>
<b>7. Trainees Evaluation</b> .....	<b>18</b>
<b>8. Lecturers' Evaluation</b> .....	<b>21</b>
<b>9. Conclusion</b> .....	<b>23</b>

## 1. Introduction

The EQVEGAN courses at EQF Level 6 were delivered by six partners. The partners involved are four educational institutions being the Faculty of Food Technology and Biotechnology within the University of Zagreb (FFTB), the Poznan University of Life Sciences (PULS), the Polytechnic of Combria (IPC) and Seinäjoki University of Applied Science (SeAMK). Along with these educational institutions, the Turkish Ministry of Food, Agriculture and Livestock (TAGEM) collaborated closely with Ankara University to also offer the delivery of EQVEGAN units in Turkey.

EQF Level 6 represents one of the four levels at which the EQVEGAN units will be delivered as part of the EQVEGAN ERASMUS+ project. Apart from EQF6, the units were also being delivered in levels from EQF4, EQF5 and EQF 7. All of the levels are being reported in separate deliverables.

This report will focus on the delivery of the units at EQF Level 6, highlighting the main aspects of the delivery and these units. FFTB and SeAMK were involved in the delivery of all units independently, namely Digitisation and Automation, Green Skills, Plant-Based Technology and Soft Skills. PULS delivered Digitisation and Automation, Green Skills and Plant-Based Technology. IPC delivered all three units, with soft skills being embedded between these three units. TAGEM and AU took a different approach whereby all 4 units were delivered as part of the same course.

Following each run of the delivery the partners were asked to collect a series of data points covering both the delivery from the point of view of the students and the lecturers. The main findings from this data are represented below.

Presented as Annexes to the report, available to EACEA, is the raw data as submitted by the partners. This data involves:

1. The companies/area from which the students originated
2. The results of the evaluation by the students
3. The results of the evaluation by the lecturers
4. Scheme of Work
5. Record of Work
6. Photos/videos taken during the delivery of the units
7. Attendance records

## 2. Vocational Education and Training Overview

As part of this project, a concise VET analysis was carried out to better understand the needs of the labour market, and to evaluate the existing delivery mechanisms in the country of each participating partners delivering units at EQF Level 6. This allowed the partners to gain invaluable insights on several criteria.

An analysis of the labour market, the educational institutions could identify the skills and competencies in demand. This ensures that the new EQVEGAN course aligns with the current and future needs of employers, enhancing the employability of the students. Moreover, understanding the dynamics of the labour market helps in designing a curriculum that is relevant, up-to-date, and reflective of industry trends. This ensures that students are equipped with skills that directly apply to the workforce, fostering a seamless transition from education to employment. The analysis of VET and the labour market also allowed for the identification of existing skill gaps. The new EQVEGAN course specifically targets these gaps and helps bridge them, contributing to a more skilled and competitive workforce. Additionally, understanding how VET is currently delivered helps in optimizing the delivery mechanisms for the new EQVEGAN course. It allows the partners to incorporate effective teaching methods, modern technologies, and industry partnerships that enhance the overall learning experience.

Involving stakeholders such as employers, industry experts, and educational institutions in the analysis fosters collaboration. This ensures that the new course is developed with input from key players, increasing the likelihood of success and acceptance in the labour market. This also assists in efficient resource allocation where institutions can identify areas where additional resources or improvements are needed, ensuring that the introduction of the new course is supported by the necessary infrastructure and personnel. In conclusion, such an exercise enhances productivity, innovation, and competitiveness, positively impacting the overall economic landscape of the course.

Vocational schools in Croatia are a part of the (upper) secondary education where programs can last two, three (industry and crafts professions), four (providing access to higher education; technical and similar programs), exceptionally five (general care nurse, also providing access to higher education) years. The Education Ministry defines the criteria and elements for enrolment into upper secondary education. To complete the programme, a student is required to develop and present a final practical assignment. Upon completion, students acquire a secondary school qualification which is proven by a public document prescribed by the same ministry.

The national Agency for Vocational Education and Training<sup>1</sup> promotes vocational education and training by organizing competitions and student fairs on a national level. VET development is in

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<sup>1</sup> <https://www.asoo.hr/en/>

accordance with the tools and procedures defined by the Croatian Qualifications Framework Act and is offered on levels 2 to 5 of the framework.

The Croatian Ministry of Labour, Pension System, Family and Social Policy maintains a list<sup>2</sup> of regulated professions in the Republic of Croatia. Professions related to food industry that are a part of that list include: Cook, Butcher, Miller, Dairyman, Baker/Pastry Maker, Confectioner (all of them EQF level 4). Other professions related to the food industry that are listed in the Croatian Qualifications Framework<sup>3</sup> are Food Technician, Nutrition Technician (EQF levels 4) and Assistant Baker (EQF level 3).

Croatia has a binary higher education system<sup>4</sup>, meaning that prospective students can choose between two types of higher education studies:

1. University studies consisting of academic programmes that are conducted solely at universities and allow students to work in science and higher education, private and public sectors, as well as in wider society. These studies can be attended in three cycles: undergraduate (3-4 years, 180-240 ECTS), graduate (1-2 years, 60-120 ECTS), and postgraduate specialist (1-2 years) or doctoral (3 years) studies. In certain cases, study programmes may integrate undergraduate and graduate studies.
2. Professional studies equip students with the skills necessary for their immediate inclusion in the labour market. They are provided by colleges, polytechnics, and universities. Professional studies include the short-cycle professional undergraduate programme (2-2,5 years, 120-150 ECTS) and undergraduate (3-4 years, 180-240 ECTS) and specialist graduate (1-2 years, 60-120 ECTS) professional studies.

Examples of university studies related to food industry in Croatia listed in the Croatian Qualifications Framework are: Specialist cook for people with medical indications (EQF level 5), Specialist Chocolatier (EQF level 5).

Turkey has a well-established VET system governed by the Ministry of National Education. VET is offered at both secondary and post-secondary levels, with various types of schools and institutions providing vocational programs. VET programs in Turkey cover a wide range of sectors, including technology, agriculture, health, and services, with programs typically including a combination of theoretical education and practical training to prepare students for specific professions.

Vocational Education and Training in Turkey is delivered through various vocational training centers across the country. These centers offer practical, hands-on training to equip individuals

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<sup>2</sup> <https://mrosp.gov.hr/arhiva-3104-10582/popis-reguliranih-profesija-u-republici-hrvatskoj-11534/11534>

<sup>3</sup> <https://hko.srce.hr/registar/standard-kvalifikacije>

<sup>4</sup> <https://www.studyincroatia.hr/study-in-croatia/higher-education-system/>

with the necessary skills for the food industry. In addition, Vocational High Schools in Turkey play an important role in preparing students for careers in various industries, including the food sector. These schools offer specialized curricula that focus on practical skills and theoretical knowledge relevant to the food industry. Within the framework of VHS, there are specific programs dedicated to food-related disciplines. These programs provide students with a comprehensive understanding of food processing, safety, hygiene, quality control, and other essential aspects of the industry.

Collaboration between VET institutions and the private sector in Turkey is emphasized to ensure the relevance of education to industry needs. Apprenticeship programs and partnerships with businesses play a role in providing students with real-world experience. The curriculum of VET programs is designed to align with the demands of the labour market, and students can specialize in a particular field, gaining expertise that enhances their employability. Quality assurance mechanisms are in place to monitor and evaluate the effectiveness of Turkish VET programs. Efforts are made to ensure that graduates are well-prepared for the workforce and possess the necessary skills.

Turkey has been working on implementing a National Qualifications Framework to standardize qualifications and facilitate mobility between different levels of education. VET programs in Turkey aim to enhance the employability of graduates by providing practical skills relevant to the job market. Monitoring outcomes, such as employment rates and career success, is part of assessing the effectiveness of the VET system.

The integration of technology in food production as well as processing is becoming increasingly important in Turkey. Labour market needs include VET professionals with digital literacy skills who can operate and manage technological systems in food manufacturing.

The VET system in Poland is organized and overseen by the Ministry of National Education, with VET being an integral part of the Polish education system, providing students with practical skills and knowledge for specific professions. VET programs in Poland are offered at both the lower secondary and upper secondary levels and the curriculum combines general education with vocational subjects, allowing students to gain practical skills in addition to theoretical knowledge. Students in the VET system can choose from various vocational paths, including technical, agricultural, commercial, and industrial specializations. There is an emphasis on flexibility to meet the diverse needs of students and the labour market. Collaboration between VET institutions and the business sector is encouraged to ensure that educational programs align with industry needs, leading to apprenticeships and internships being a common components of VET programs, providing students with hands-on experience.

Poland has been developing a dual education model, combining classroom instruction with practical on-the-job training. This model aims to better prepare students for the realities of the



workplace and improve their employability. Poland aligns its qualifications with the European Qualifications Framework to facilitate recognition and mobility within the European Union.

Portugal, like many other countries, has been working to address the gap between the skills possessed by the workforce and the skills demanded by employers, and VET programs play a crucial role in bridging this gap by providing practical, job-oriented training. VET programs in Portugal have been adapting to meet the needs of emerging industries, such as technology, renewable energy, digital services and food technologies. These sectors often require specialized skills, and VET can be instrumental in preparing the workforce for these evolving demands. Portugal has placed an emphasis on fostering entrepreneurship and innovation through VET programs. Encouraging individuals to develop entrepreneurial skills in order contribute to economic growth and job creation.

Portugal has recently experienced fluctuations in unemployment rates and VET programs have been identified as being crucial in equipping individuals with skills that enhance their employability and contribute to reducing unemployment. The labour market in Portugal, like globally, has been impacted by digital transformation. Digital skills have become increasingly important across various industries, and VET programs have started to align with this trend. In fact even in EQVEGAN, one of the units is dedicated to Digitisation and Automation.

There is a growing awareness in Portugal of the importance of sustainability, and green jobs have been gaining prominence, with VET initiatives incorporating training for environmentally friendly occupations and industries. VET is also being utilised in order to facilitate the upskilling and reskilling of older workers to ensure their continued participation in the job market.

According to a report by the European Centre for the Development of Vocational Training (CEDEFOP)<sup>5</sup>, the current VET system in Portugal is the result of a large-scale reform in 2007, which reorganized VET into a single system (Sistema Nacional de Qualificações, SNQ). The main objectives of the SNQ are to ensure that VET qualifications better match labour market needs, promote the competitiveness of enterprises, and reinforce the recognition, validation, and certification of competences (RVCC).

The VET system in Portugal is designed to provide a wide range of programs accessible to young people and adults, link VET provision with labour market needs, and offer flexibility in the type and duration of programs for adults. The VET programs in Portugal are divided into four components: general, scientific, technological training, and work-based learning (WBL). The main VET program types are education and training programs for young people, professional programs, specialized artistic programs, and apprenticeship programs.

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<sup>5</sup> [Spotlight on VET – 2020 compilation: vocational education and training systems in Europe \(europa.eu\)](https://europa.eu)

Approximately 40% of upper secondary education learners attend VET programs that grant double certification: education and professional certification. The VET programs at the upper secondary level are three-year professional programs, and approximately 33% of learners attend such programs. WBL is provided in the form of a traineeship carried out in an enterprise or a public organization.

At the post-secondary level, technological specialization programs last from one to one-and-a-half years, leading to a technological specialization diploma. At the tertiary level, two-year short-cycle high professional technical programs are offered by polytechnics. Adult learning includes education and training programs for adults, which target learners who want to complete lower or upper secondary education and/or obtain a professional qualification.

Finally, Portugal published the 2030 National Strategy for VET that list the following objectives:

- Focus on combatting school dropout, promoting skills relevant to the current society
- Ensure equal educational opportunities, including new models of teaching with technology
- Align youth qualifications with economic specializations, particularly digital skills
- Increase the number of graduates in vocational programs to meet economic needs

Vocational Education and Training (VET) assumes a pivotal role within the Finnish education system, serving as a popular choice for individuals completing their compulsory education. Approximately 40 percent of such individuals opt for vocational upper secondary education and training, while slightly over half pursue general upper secondary education. VET qualifications not only render eligibility for tertiary studies but are also integral components of lifelong learning trajectories. The target demographic for VET is diverse, encompassing not just young individuals, but also adults, employed individuals seeking upskilling or reskilling, and the unemployed.

The spectrum of qualifications includes vocational upper secondary qualifications (ISCED 3), further vocational qualifications (ISCED 3), and specialist vocational qualifications (ISCED 4). No age restrictions or specific admission criteria based on work experience or prior qualifications exist, although eligibility for vocational upper secondary qualifications necessitates the completion of compulsory education.

Finnish VET commands a highly favourable public perception, distinguishing itself from many European counterparts with its widespread popularity and esteemed reputation. VET qualifications are recognized for offering promising career prospects, aligning effectively with labour market demands, and contributing significantly to unemployment reduction. The global interest in Finnish VET has led to its designation as an export item to various countries. Institutional settings cater to approximately 80 percent of VET students, while apprenticeships accommodate the remaining 20 percent. The highest enrolment in VET programs occurs in the field of engineering, manufacturing, and construction. Successful qualification completion stands at an impressive 90 percent, with a 10 percent dropout rate. One-year post-graduation,

the employment rate in Finland stands at around 70 percent, with women exhibiting a slightly higher employment rate than men. Employment rates peak in health and welfare, services, and business and administration sectors. VET actively fosters internationalization, with up to 80 percent of students studying at least two languages in addition to their mother tongue. Notably, around 13 percent of Finnish VET students partake in mobility periods abroad annually. The Finnish Ministry of Education conducts forecasts of national labour force needs. A mechanism for guidance is the allocation of funding for vocational education. In addition, the Food Industry Federation conducts its own assessment of educational needs from the perspective of the business sector. The latest report about the educational needs of food industry was completed in the summer of 2023. Additionally, the Finnish Ministry of Economic Affairs and Employment conducts sector-specific regional barometers on labour force needs. The latest round on food industry was in the fall of 2023.

Before entering VET, students benefit from various support mechanisms, including preparatory courses for vocational training, as well as preparatory education for working life and independent living. Throughout their VET studies, students have access to special needs education.

VET educators are highly educated, and the teaching profession remains sought after, with approximately one-third of applicants being admitted to teacher training programs annually, maintaining a balanced representation of men and women. A significant reform in 2018 transformed the Finnish VET system, unifying training principles for both adults and young people. The introduction of the personal competence development plan shifted VET provision towards supporting individualized study paths. Simultaneously, VET funding is increasingly tied to demonstrated performance by education providers.

### **3. Internal Proposal and Approval of the EQVEGAN Course**

Each institution participating in the delivery of the units, was tasked with proposing and approving the course according to the standard operating procedures of each institution.

#### **3.1 PULS**

At PULS, the process of internal proposal was initiated in January 2023. The PULS Training's Board (TB) was appointed to design, organize, and monitor the implementation of the training programs that included: elaboration of the learning outcomes, planning the lectures (only online) and practical classes (only in class) at both EQF6 and EQF7 levels. The programs were further approved by the vice-dean of the Faculty of Food Science and Nutrition at PULS. The agenda for trainings at EQF7 level is included with the annexes of this report.

At PULS, the following were possible candidates to the course:

- current students (as well as graduates) of all courses of study of PULS at the Faculty of Food Sciences and Nutrition. Currently both at 1st, 2nd and 3rd degree studies (PhD students) and English-language studies (EN)
- current students (and graduates) of fields related to food chemistry, food and nutrition, dietetics or similar, from other universities in the country or abroad
- employees in the food industry (in Poland and abroad)

All training was conducted in English. The expected topics and time scope of the trainings are presented in the annexes included with the report. The trainings were held in 2 rounds: 1st: April-May 2023, 2nd : June-July 2023 with only the completion of the full training entitling the participants to receive relevant certificates. As with other partners, the trainings were provided free of charge and students applied through an online form.

#### **3.2 TAGEM and AU**

The courses applied to the food industry professionals in Turkey is planned together with Ankara University and TGDF which are the other Turkish partners in the EQVEGAN project. The two partners opted to conduct 2 trainings: 1 in Ankara and 1 in Bursa. The training in Ankara was planned for EQF levels 6-7 and the training in Bursa was planned for EQF levels 4-5. The lecturers from TAGEM and Ankara University applied the trainings at TAGEM facilities in Ankara and at Bursa. All Turkish partners used their dissemination channels for the announcement of the trainings. The place and lecturers of the training and responsibilities of TAGEM were discussed with the General Director of TAGEM to get the required internal approval.

#### **3.3 FFTB**

As a working team of the EQVEGAN ERASMUS+ project, FFTB successfully held the education activities for EQF 6 and EQF 7 levels, at Faculty of Food Technology and

Biotechnology, University of Zagreb FFTB. The activities included education through the following units: 1. Plant Based Processing, 2. Green Skills, 3. Softs Skills and 4. Automation and Digitalization.

FTTB, through the EQVEGAN project, actively participated in the development of learning outcomes and materials for four modules, which are aligned with the qualification frameworks of educational levels EQF 4, EQF 5, EQF 6 and EQF 7, for future professions (food technician, food engineer, etc.). The University of Zagreb has approved 10 ECTS credits for University of Zagreb students who successfully complete the planned activities.

### **3.4 IPC**

The IPC team adhered to the guidelines outlined in WP2 for courses at EQF levels 5 and 6. Specifically, courses were developed on Plant-Based Processing, Green Skills, and Digitalization and Automation, with the inclusion of Soft Skills training. Subsequently, IPC strategized to impart the content of the four modules created in WP2 through three courses, as detailed in the provided Annex table.

For each course, a comprehensive curricular unit description was meticulously crafted and submitted for approval to the Technical-Scientific Councils of either the Coimbra Institute of Engineering or the Coimbra Agriculture School—both faculties of the Polytechnic Institute of Coimbra. Post-approval, the courses were ready for delivery, and each faculty possessed the capability to issue certificates, complete with ECTS credits, facilitating seamless recognition of the training.

Upon dissemination and promotion of the courses, insufficient registrations prompted a reassessment of the courses at IPC. Following valuable feedback, the decision was made to transition the courses exclusively to an online format, accompanied by a reduction in the duration from 6 ECTS to 3 ECTS. The necessary adjustments were made to learning outcomes, teaching methods, and assessment criteria, ensuring that all pertinent updates were seamlessly integrated into the course materials.

### **3.4 SEAMK**

At SEAMK, there was a desire to pilot the objectives and content of the EQVEGAN project with both students and lifelong learning students (open university). The pilot course was developed as a 5-credit implementation in the Agri-food Engineering degree program, in accordance with the curriculum's project studies. A system-compliant implementation plan was created for this, which the Head of Education approved to be undertaken. The course was made available to both students and the open university.

## 4. Course Dissemination

Dissemination of the newly developed courses involved reaching and engaging with the target audience effectively. The following are some strategies reported to have been used by the various partners to promote and disseminate the course.

A dedicated website was created having links to the trainings developed and further information about the sector skills alliance, to provide the required information to any interested parties. Social media platforms like Facebook, X (Twitter), Instagram, and LinkedIn were also leveraged to share course updates, testimonials, and engaging content. YouTube was also used to disseminate the promotional videos created with a wider audience. Email communication was also used to contact alumni and industry partners to elicit interest. Partnerships with specific industries such as the chamber of commerce were also used to reach a further section of the industry through cross-promotion. Webinars or virtual workshops were also hosted which were related to the vegan food industry and aimed to promote the course. This was carried out to attract participants and generate interest.

FTTB opted for kickstarting the promotion of the educational activities by using posts on the web, specifically LinkedIn<sup>6</sup> as well as their own website<sup>7</sup>. Students, employees in the industry, and those interested in the subject could register for this activity. The lectures that were developed through the project were placed on the Merlin platform, and participants registered and could access the materials at any time.

PULS disseminated the required information via the PULS website (online), social media (Facebook) and published on the posters displayed at the PULS area, as well as submitted to the stakeholders. The recruitment procedure was launched on February 15th that lasted until March 15th, 2023. The admission criteria for EQF6 were a BS student or have completed BS level before or be an employee of Food industry with a diploma. For EQF7 a candidate must have been at least MS student of food science and nutrition or other relevant disciplines or an employee of Food industry with a diploma.

The courses applied to the food industry professionals in Turkey is planned together with Ankara University and TGDF which are the other Turkish partners in the EQVEGAN project. The dissemination of the course was performed by the 3 Turkish partners by using their own contacts. Social media accounts, webpages and e-mail lists were used for the announcement of the trainings.

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<sup>6</sup> [https://www.linkedin.com/posts/faculty-of-food-technology-and-biotechnology\\_eqvegan-summer-school-odr%C5%BEivost-activity-7048563510942834688-quDk/?originalSubdomain=ba](https://www.linkedin.com/posts/faculty-of-food-technology-and-biotechnology_eqvegan-summer-school-odr%C5%BEivost-activity-7048563510942834688-quDk/?originalSubdomain=ba)

<sup>7</sup> [http://www.pbf.unizg.hr/studiji/ljetna\\_skola\\_na\\_pbf\\_u/ljetna\\_skola\\_na\\_pbf\\_u](http://www.pbf.unizg.hr/studiji/ljetna_skola_na_pbf_u/ljetna_skola_na_pbf_u)

IPC have, until February 2023, been building a database with containing over 200 companies and entities which was used, in the following two months to send promotional emails for the courses. Personal phone calls were also carried out by the IPC staff, both administrative and teachers. Simultaneously, the communication office of the School of Agriculture in Coimbra, belonging to the Polytechnic Institute of Coimbra, promoted the courses on social media<sup>8</sup> and through email to external entities, the school community, and former students. The links to this outreach are also available in the Annexes. The information about the courses was also made available for participants in FIGMA<sup>9</sup>. IPC set an initial deadline to register online by the end of March 2023, but it was postponed to the end of April 2023.

At SEAMK, a representative presented the course and its module in two national seminars. In addition, the course was also disseminated to the Agri-food Engineering students. The course module was also publicised with the open university studies of Seinäjoki University of Applied Sciences

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<sup>8</sup> Facebook: <https://www.facebook.com/ESAC.IPC/posts/604776355023934>

Instagram: <https://www.instagram.com/p/CrQwtWFKXbK/>

LinkedIn: [https://www.linkedin.com/posts/esac-ipc\\_alimentar-tecnologiaalimentar-digitalizacao-activity-7054825986772582401-n7ye?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/esac-ipc_alimentar-tecnologiaalimentar-digitalizacao-activity-7054825986772582401-n7ye?utm_source=share&utm_medium=member_desktop)

<sup>9</sup> <https://www.figma.com/proto/esguMm3irAeM2uVmTG6QgC/Eqvegan?page-id=8%3A124&node-id=16-161&viewport=20%2C160%2C0.04&scaling=min-zoom&starting-point-node-id=16%3A161>

## 5. Course Admission

Each partner in the EQVEGAN project participating in the delivery of the courses was given the facility to follow their own admission procedures. In all cases course admissions took place through the usual structured and transparent process followed by each partner to all of their other students in order to ensure fairness and equality. The specific steps varied depending on the educational institution, but the overarching guidelines for all were in common.

The criteria for admissions, including academic qualifications, work experience (if applicable), and any other relevant factors were clearly defined. It is crucial that the criteria are fair, objective, and related to the skills and knowledge required for success in the course. The application process followed the same user-friendly and accessible application process, which in all cases included an online application form. This part of the process clearly communicated all the required documents, such as transcripts and evidence of work experience. In this case, no standardized tests or interviews were used by the partners as part of the admission process.

Once the application period was over, each partner made use of its own admission committee or registrar to review applications. This process was a systematic and thorough one, considering all relevant information provided by applicants. All admissions were based on merit, considering academic achievements, relevant skills, and other specified criteria. At this stage it is important that all partners avoided all discriminatory practices and ensured equal opportunities for all applicants. The EQVEGAN partners, recognise the value of a diverse student body and as a natural consequence, diversity and inclusion in the admissions process were actively promoted.

Following the review period all admission decisions were communicated decisions to the applicants in a timely manner, providing clear instructions on the next steps for admitted students. All partners have implemented a fair and transparent appeal process for applicants who wish to challenge admission decisions, however in this case this process was not required. In all cases the admission process complied with all relevant laws and regulations of the governing education in the country of each partner. The admission processes did vary across institutions and programs, so it was important to tailor the general guidelines to the specific needs and requirements of each educational institution.

In Turkey, the target group of the trainings were the food industry professionals. The information regarding the content, lecturers, place, and date of the trainings announced by Turkish partners in the project. It was indicated that applicants need to register by e-mail to join the trainings and get the approval message. In the approval of trainers to the trainings, the suitability of their background and the company they were working were taken into consideration. The trainers were determined before the trainings.

At PULS, the admission of the candidates for the trainings was done by checking the list of applications, checking candidates' current education status, assuring the diversity of candidates



from schools and stakeholders, and fair access to the trainings. After completion of the final list of candidates for EQF6 and EQF7, all the candidates were individually informed about the nomination for relevant courses, received an access to the teaching programs and materials made available on the PULS MST platform.

At FFTB, ten learners complete the final assessment. All were students already enrolled in degrees at FFTB. After attending the lectures and independent studying (using online materials developed through the EQVEGAN project), the participants took the final assessment (exam) from each unit.

At SEAMK, students registered through the university's student management system. Those who registered for the open university filled out a standard form. All who registered were accepted into the pilot course.

At IPC, students' admission took place after their registration for the course. To do so, students enrolled in an online questionnaire designed for this purpose. The registration was open to all 6 courses, 3 for each EQF level 5 and 6. Since the number of students was not very high, there was no need to exclude any of the interested participants, however the low number of participants forced the IPC to deliver only the EQF level 6 courses. After gathering the information, an email was sent to each registrant informing them of the acceptance of their registration. Subsequently, the course schedule and other relevant information about the course's operation were provided by email to each participant.

The table below provides a brief overview of the feedback supplied by the lecturers who have delivered EQVEGAN units at Level 6.

Partner	Unit	Level	Number of Students	Success Rate	Retention Rate
FFTB	Digitisation & Automation	6	10	100%	100%
FFTB	Green Skills	6	10	100%	100%
FFTB	Plant Based Technology	6	10	100%	100%
FFTB	Soft Skills	6	10	100%	100%
PULS	Green Skills	6	15	100%	95%
PULS	Digitisation & Automation	6	15	100%	95%
PULS	Plant Based Technology	6	15	100%	90%
TAGEM / AU	All	6	30	n/a	n/a

<b>Partner</b>	<b>Unit</b>	<b>Level</b>	<b>Number of Students</b>	<b>Success Rate</b>	<b>Retention Rate</b>
IPC	Green Skills	6	4	n/a	n/a
IPC	Digitisation & Automation	6	2	n/a	n/a
IPC	Plant Based Technology	6	12	n/a	n/a
SeAMK	All	6	35	97%	100%

## 6. Trainees Background

Students enrolled in EQVEGAN courses may currently be employed in a relevant field, be part of a stakeholder or be current students of the project partner responsible for delivering the course.

This is in fact true for all the partners who delivered EQF Level 6 material, who had students enrolled who either came from the industry, who were current students or who formed part of a stakeholder. The annexes provided give a detailed description of the students' background.

According to the data gathered from the students, their background is very diverse. Some students were involved in research and development, others were founders, co-founders and CEO's of food related companies as well as PhD candidates. Most participants mentioned work experience connected to the field of study (R&D department, business development manager, regulatory specialist in the food industry, regulatory specialist in a pharmaceutical company, chef, a dietitian in dietary catering for vegans, a dietitian in hospital) which often was accompanied with the education related to the dietetics and food science. Others mentioned having a Food Science and Nutrition Background (bachelor's or master's degree, PhD studies) as the qualifications with some practical experience gained during the education track.

Further examples are provided by IPC where students following the course worked in diverse sectors such as chocolate producer, dried food producer, microalgae producer and apple producer. Most of the students hailed from Coimbra itself, however there were also participants from Oliveira do Bairro, Sátão, Vila Nova de Poiares and Olhão. One of the students was from a Portuguese speaking country from Africa, Cape Verde.

At SeAMK, one of the students was from a private food industry and the remaining 34 students were bachelor's level students attending the international Agri-food Engineering degree program.

With regards to qualifications, some students were biologists, others food engineers, product developers, food safety and quite a few had qualifications stemming from their original country of residence.

The vast majority of the students declared an age between 22 and 30. The 19 to 21, 31 to 40 and the 41 to 50 brackets were then equally represented between themselves. The course being predominantly followed by individuals aged 22-30 indicates a specific trend or preference among that age group. While individual choices certainly vary widely, certain patterns do emerge when considering the educational interests and needs of young adults in this age range. Many individuals in the 22-30 age group are likely to be in the early stages of their careers or considering further education for career advancement. A course popular in this age range may align with professional development and skill enhancement relevant to their chosen fields.

Given that this age group has grown up in a digital era, this indicates that the course does pique their interest as an area where they could specialise in the future. This could also be as an entrepreneurial endeavour. Whilst individual choices within this age group can vary based on personal and career goals, interests, and socioeconomic factors, the popularity of this course among 22–30-year-olds can provide insights into the current trends and priorities within the broader demographic.

At IPC the trainees had the following background:

<b>Company</b>	<b>Company Sector</b>
Sociedade Agrícola Quinta De Vilar	Apple Producer
Cacao Di Vine, Lda.	Chocolate Producer
Calcob	Agricultural Cooperative
Necton	Microalgae Producer
Escola Superior Agrária De Coimbra	Higher Education (Student)
Natural Sustainability, Lda	Consulting On Agroforestry Resources Management
Entidade Reguladora Independente Da Saúde	Regulatory Entity Of Cape Verde (Africa)
Escola Superior Agrária De Coimbra	Higher Education (Student)
Frueat - Produtos Alimentares Lda	Dried Fruits Producer
Allmicroalgae Natural Products SA	Microalgae Producer
Sumol+Compal	Juices And Vegetable Drinks

At PULS all the students came from the Poznan University of Life Sciences (PULS). At SEAMK one of the students was from a private food industry. 34 students were bachelor's level students in the international Agri-food Engineering degree program.

At TAGEM and AU the students hailed from the following organisations:

- Ahi Evran Üniversitesi
- IFTECH
- ETİ GIDA
- Sevgi Fırını
- JUNK VEGAN
- Doğadan A.Ş.
- NFS Global

- Hacettepe Üniversitesi
- Osmaniye Korkut Ata Üniversitesi
- Kybele's Garden
- BKSOFT A.Ş.
- TGDF/TMSD
- SETBİR
- SIMPLEX
- DİMES GIDA A.Ş.
- Orta Doğu Teknik Üniversitesi

## 7. Trainees Evaluation

Feedback from students was also elicited once a unit was delivered. This was carried out as part of the quality assurance framework of the project. Collecting feedback from students after the delivery of a unit is vital for demonstrates a commitment to student input and engagement. Students are more likely to feel valued and connected to their education when they have a voice in the learning process. This can contribute to increased motivation and active participation in future courses. Moreover, a positive and constructive feedback loop fosters a supportive learning environment. When students feel that their opinions are heard and valued, it contributes to a positive culture and promotes open communication.

The feedback was also elicited in order to further develop and refine the curriculum, as such feedback helps the partners to ensure that the content is relevant, up-to-date, and aligned with the intended learning outcomes. Such feedback also serves to identify relevant strengths and areas for improvement. Acknowledging strengths reinforces effective teaching practices, while addressing weaknesses supports continuous professional development.

Finally gathering such feedback contributed to the accountability of the partners as it allows for the assessment of the overall quality of education provided, informing decisions related to curriculum development, performance, and institutional improvement. This includes gauging the students' satisfaction levels as satisfied students are more likely to remain engaged, complete their courses, and contribute positively to the course's reputation.

Depending on the version of the questionnaire used, the students were asked around 22 questions used to evaluate the course quality by the learners who completed the various units delivered at EQF L6. The questions cover various aspects of the course, such as material, lectures, assignments, assessment, and learning outcomes.

With a sample size of over 200 responses, the results indicate a very positive reception of the units at this level, with high levels of agreement in most areas suggesting effective delivery and content adequacy. However, there are small percentages of neutrality in some areas, indicating room for minor improvements.

In Automation and Digitisation all participants found the unit material adequate, with 52% strongly agreeing and 42% agreeing and 6% disagreeing with the comment. Nearly the same percentages were analysed when the students were asked if the unit content managed to arouse their curiosity and motivated them to want to know more. Timetabling wise, the majority of students (88%) agreed (50%) or strongly agreed (38%) that the timetable was evenly distributed, with only 8% neither agreeing nor disagreeing and a further 8% feeling that the unit was rushed through, since there were new concepts which the students were not familiar with. However, the great majority agreed that the lectures were beneficial, insightful, helpful, and useful.

Students felt that the lecturers actively sought their participation in lectures, as indicated by 92% of the students (46% strongly agreeing, 46% agreeing), with a small proportion of students (8%) being neutral. This feedback continued to the support provided where the large majority of students (84%) felt supported when encountering difficulties (46% strongly agreeing, 38% agreeing), while 15% of students were neutral.

The delivery of lectures was well-received, with 92% of students finding them clear, helpful, stimulating, and easy to follow (46% strongly agreeing, 46% agreeing). Only 8% of the students remained neutral or did not agree. Similarly, the students were positively impressed by the reading materials and notes provided and with the assignment briefs being clearly presented and explained. This was a trend noticed for all units. Also, the time allotted for assignments was deemed reasonable by all students, with 62% agreeing and 38% strongly agreeing.

The number of study hours self-reported by the students was between 0 and 60 hours, with an average of 15 hours spent on self-study. When asked if they would recommend this course, many students (89%) would recommend this unit to others, with 61% agreeing and 28% strongly agreeing. A small minority (11%) neither agreed nor disagreed.

The feedback gathered following the delivery of the Green Skills unit was also favourable. All respondents agreed that the unit material was adequate, with 46% strongly agreeing and 54% agreeing. This suggests that the course content was well-received and considered sufficient. Moreover, a total of 77% of students agreed (46%) or strongly agreed (31%) that the unit aroused their curiosity and motivated them to learn more. However, 23% neither agreed nor disagreed, indicating some level of ambivalence.

A trend seen amongst all the units, is that all respondents found the lectures beneficial, insightful, helpful, and useful, with an even when in this case they were split of 46% strongly agreeing and 46% agreeing, with only the remaining 8% being neutral or disagreeing. Also, the majority of students felt encouraged to participate in lectures and felt that the number of lectures provided was sufficient.

The majority of students who attended for the Plant-Based Processing module reported that they agreed or strongly agreed that the unit material was adequate (82%), with the remaining 18% being either neutral or disagreeing with the statement. However, the percentage of students who were intrigued by the unit and were adamant to study further increased to 92%. The lectures were seen as beneficial, insightful, helpful, and useful by 77% of the students, although a notable 23% neither agreed nor disagreed. Furthermore, most students (84%) felt encouraged to participate in lectures, with a small percentage (8%) disagreeing or being neutral. The number of lectures were deemed sufficient by 92% of the students, suggesting adequacy in course content delivery. Only 8% were negative or neutral about this statement.

A total of 85% of students found the lecture delivery to be clear, helpful, stimulating, and easy to follow. The rest remained neutral or negative about this statement. The provision of reading material and notes was well-received, with 83% of students agreeing or strongly agreeing on their adequacy, nevertheless 17% of the students were neutral and or disagreed. Assignments briefs were clearly presented and explained, as agreed by 87% of the students. Importantly, a high number of students (93%) would recommend this unit to other students, indicating a positive overall experience. The number of study hours was diversified. The average time spent on self-study for this unit was 16 hours.

The students had several suggestions for the future of the units. Increasing the number of hours in the lab was the top priority. Students were also worried that the AI related subject was hard for beginners with no IT background. Students also highlighted that the course was motivating and interesting with applications in professional work and daily life.

In summary, the survey results reflect a largely positive response from the students regarding the various aspects of the course, such as engagement, course content, lecture quality, support, and assessment fairness. The high percentages of agreement suggest that the course was well-received and effective in its delivery and structure.

It is important to note that the assessment related questions do not apply for IPC since the students were not interested in certification and no assessments were held. The detailed version of the data collected from the students is also available in the annexes provided with this report.



## 8. Lecturers' Evaluation

As part of the project's quality assurance framework, feedback was collected from the lecturers who have delivered the units pertaining to the EQVEGAN course. This feedback provided the project partners with valuable insights into the effectiveness of instructional methods, materials, and delivery. It also allowed lecturers to identify areas for improvement and refine their teaching strategies to enhance the overall learning experience.

Lecturers are the best positioned to gather an understanding of how students are responding to their teaching methods. This insight enables the project partners to tailor their approach to meet the diverse needs of students, fostering a more student-centric learning environment. Gathering feedback serves as a quality assurance mechanism for educational institutions. It helps ensure that the content delivered meets the standards of the curriculum and the institution, contributing to the overall quality of education provided. Moreover, constructive feedback offers lecturers an opportunity for professional growth and can boost lecturers' morale and motivation. Recognizing their effective teaching practices can encourage the lecturers to continue delivering high-quality education.

More importantly this feedback helps the partners to align the teaching methods and material with the intended learning objectives of the course. This alignment is crucial for ensuring that students are acquiring the knowledge and skills intended by the curriculum. Gathering feedback from lecturers' post-unit delivery is a crucial component of a continuous improvement cycle of the project. It supports the growth of educators, enhances the quality of teaching, and ultimately contributes to a more effective and student-focused learning environment.

The feedback for EQF Level 6 was collected from 34 different lecturers from different institutions and covers various aspects of the unit, such as content, assessment, resources, and outcomes.

Most of the lecturers agreed or strongly agreed that the unit content was up-to-date, relevant, and met the learning outcomes and assessment criteria. They also reported that the internal verification and QA processes were followed and that sufficient resources were available. The success and retention rates of the course were also very high, according to the lecturers.

None of the lecturers suggested any changes to the unit content or the assessment criteria. They also did not provide any other comments, except for one who mentioned the time constraints and the lack of assessment and verification due to the industry preferences.

The only aspect that received negative feedback was the lack of consistent attendance by the students' certain units and the reduction in number from those people who registered for the course, who ended up not attending any sessions.

As per the students' feedback, the lecturer feedback related to assessment does not apply to IPC. Similarly, the whole training program delivered by TAGEM/AU was conducted over two

days, since industry professionals preferred not to attend more than two days. Therefore, the course was not assessed. The feedback from the lecturers indicates that the implementation of the course was successful considering the allocated time.

## 9. Conclusion

The engagement of 240 students in the delivery of the EQVGEAN units at EQF Level 6 signifies a commendable achievement. The collected feedback from both lecturers and students reflects a substantial degree of contentment with the experience.

This suggests that the development of units that garner significant participation and approval is indicative of successful engagement and fulfilment of participant expectations. It also implies that the content of the units is likely well-organized, pertinent, and conveyed in a manner that is meaningful to the participants. Moreover, the instructional methodologies utilized have proven to be effective in maintaining active involvement and interest among the participants.

Students have expressed that they perceive the units as valuable, meeting their educational goals and expectations, and that the units were imparted within a constructive and supportive learning atmosphere. It is crucial to emphasize that the content of the units is in close alignment with the students' requirements, whether for personal growth, professional progression, or the acquisition of specific competencies. The affirmative feedback received suggests that the units have been instrumental in cultivating a sense of community among the participants, thereby establishing a conducive network, which is exemplary for an ERASMUS+ initiative of this nature.

It is pertinent to acknowledge that while high levels of participation and satisfaction are favourable indicators, they do not inherently assure the efficacy of the course in realizing enduring educational outcomes or the transference of knowledge and skills. Indeed, the delivery encompasses assessment, feedback, and evaluation processes, which are essential to verify that the units are achieving their designated objectives and imparting enduring benefits to the students.