

1. Introduction and context

The design of the EMJM Food-H has deeply taken into account the importance of involving a wide range of stakeholders, among which employers and students are certainly key actors, in order to effectively co-develop a master's programme. Put simply, an MS programme cannot be designed without considering and being supported by the labour market.

These principles have also been very recently emphasized at the European Degree Forum organised by the European Commission at the end of November 2025 (<https://education.ec.europa.eu/event/european-degree-forum-2025>). The European Degree Label is one of the goals that Food-H aims to achieve. In this regard, Food-H has been developed in compliance with the criteria required to obtain the label and is currently involved in a proposal under development by ARQUS, to be submitted within the European Commission call for the European Degree Label Exploratory Actions.

The outcomes of the European Degree Forum underline how employers and industry can support programme design by validating skills needs and by offering structured opportunities for internships, project work, and employment pathways. They can also contribute to the recognition, visibility, and value of the joint European degree label by promoting its understanding within the labour market.

On the other hand, promoting student participation in programme design and giving voice to student needs—especially with regard to affordability, mobility, visas, disability support, and well-being—are key actions for developing successful programmes that fully align with the joint European degree label.

Moreover, expert teams involving academics, students, and non-academic stakeholders play a major role in evaluating the ongoing design of the programme by providing relevant suggestions aimed at its continuous improvement.

Hence, the design of the MS Food-H has followed a structured methodology, articulated in several steps, which have been repeated multiple times to allow for convergence and optimisation.

2. Methodology

In what follows, the steps of the implemented methodology are described with respect to the stakeholders involved, namely students, employers, and expert teams. A mix of tools was used, including surveys, personal meetings, and digital tools; overall, these tools fostered fruitful discussion. Ultimately, some iterative processes paved the way to optimising the final structure of the new programme, also informed by a risk assessment exercise

2.1 Students

The involvement of students was developed through two surveys and an iterative online process (via Codigital Ltd). The questionnaires aimed to collect opinions, preferences, and attitudes regarding the course name, educational objectives and offer, career opportunities, professional profiles, strengths and weaknesses, as well as additional initiatives to be implemented for the improvement of the MS programme.

- A first survey was administered to 26 students enrolled in the MS in Food and Health to gain insight into possible improvements to the programme; the survey results were subsequently discussed with students during a dedicated meeting.
- A second questionnaire was then developed and administered to 11 students enrolled in bachelor's programmes in the field of food and nutrition, with the aim of explicitly gathering their opinions on the development of the new MS Food-H (detailed results are reported in Section 3.1).

- Thirdly, students from a variety of bachelor's and master's programmes were involved in an iterative online process via Codigital Ltd. Codigital is an online external crowdsourcing intermediary that provided an independent platform for users to openly record, edit and vote on each other's ideas allowing for the most prominent ideas to emerge naturally. This participatory approach was aimed at identifying key priorities in sustainable food production education. In particular, students were asked to develop ideas and define priorities on the following questions: *What are the highest priorities in sustainable food production education? What does sustainability in food production mainly refer to? What should research focus on? What should policymakers prioritise?* The results of this activity are reported in Section 3.2.

2.2 Employers

A similar mix of tools to those used for student involvement was applied, namely surveys (with a structure similar to the student questionnaires) and a Codigital participatory process. However, unlike the student case, the second round of surveys was informed by the outcomes of the first round, which underwent an assessment process carried out by an expert team.

- A first round of questionnaires was administered to 28 industries and companies (results are reported in Section 3.3).
- An assessment exercise was carried out by an expert team with expertise in higher education.
- A second round of surveys was conducted to extend the number of participating companies to 34. Several of the interviewed organisations are international, including key players such as EFSA, WHO, EIT Food, and Ferrero (results are reported in Section 3.3).

A Codigital participatory approach with employers was organised to investigate the key professional skills required of graduates in the fields of food, nutrition, and health. The results of this activity are reported in Section 3.4.

2.3 Expert team

The newly designed educational pathway underwent a structured process of consultation, interaction, and revision involving two institutional bodies, with the aim of ensuring the coherence, quality, and feasibility of the proposed educational offer.

First, the programme was discussed with the Student–Faculty Joint Committee, which represents both the student body and the academic staff. The consultation process included one in-person meeting followed by two subsequent rounds of revision. This stage of the process allowed for the collection of feedback from both perspectives, fostering a constructive dialogue between students and faculty members. In particular, the committee contributed to identifying potential areas for improvement, highlighting aspects related to students' learning experience, the overall coherence of the curriculum, and the clarity of the proposed training objectives.

In addition, the educational pathway was evaluated by a Teaching Commission composed of professors from different academic departments who were not directly involved in the design of the programme. This independent perspective played an important role in ensuring an objective assessment of the proposal. The consultation involved one in-person meeting and three rounds of revisions, during which the commission carefully examined the structure, content, and organization of the programme. Their feedback contributed to

strengthening the academic rigor of the pathway and ensuring its alignment with the broader educational framework of the institution.

Overall, the meetings and iterative revision processes carried out with both bodies proved to be essential for the refinement of the proposed educational pathway. Through this collaborative process, several educational gaps were identified and addressed, the structure and content of the programme were further improved, and the overall educational offer was refined. Moreover, the discussions helped clarify a number of administrative and organizational aspects related to the implementation of the programme, ensuring that the proposal would be both academically sound and administratively feasible.

This iterative process of consultation and revision ultimately contributed to enhancing the quality, clarity, and effectiveness of the educational pathway.

2.4 Re-design

The outcomes of the above processes, which were often iterative and consistently benefited from structured discussion, proved to be highly fruitful and were therefore used to develop and achieve an optimised structure for the new Food-H programme. In addition, a comprehensive risk assessment was carried out, based on specific input provided by the aforementioned stakeholders, particularly with regard to identified strengths and weaknesses.

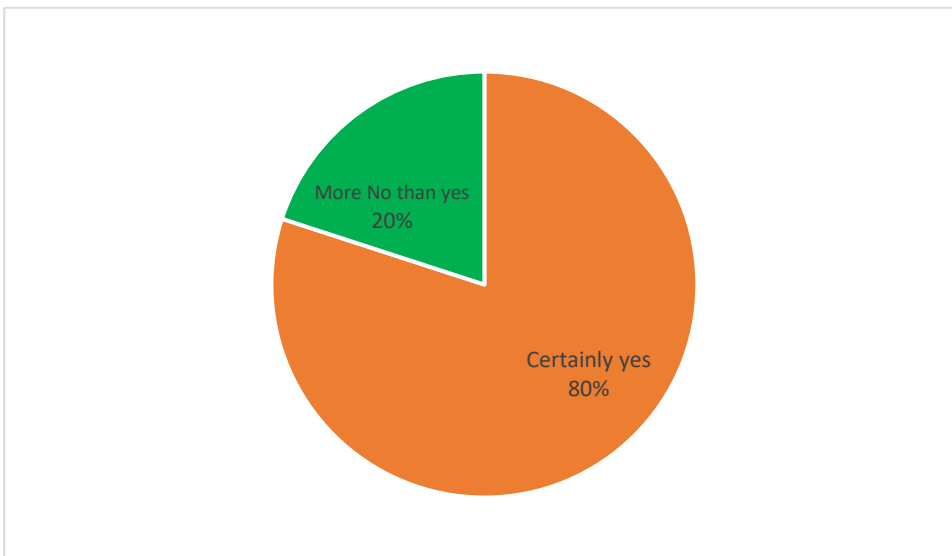
3 Some results

Here below some of the results and outputs of the activity carried out with different stakeholders.

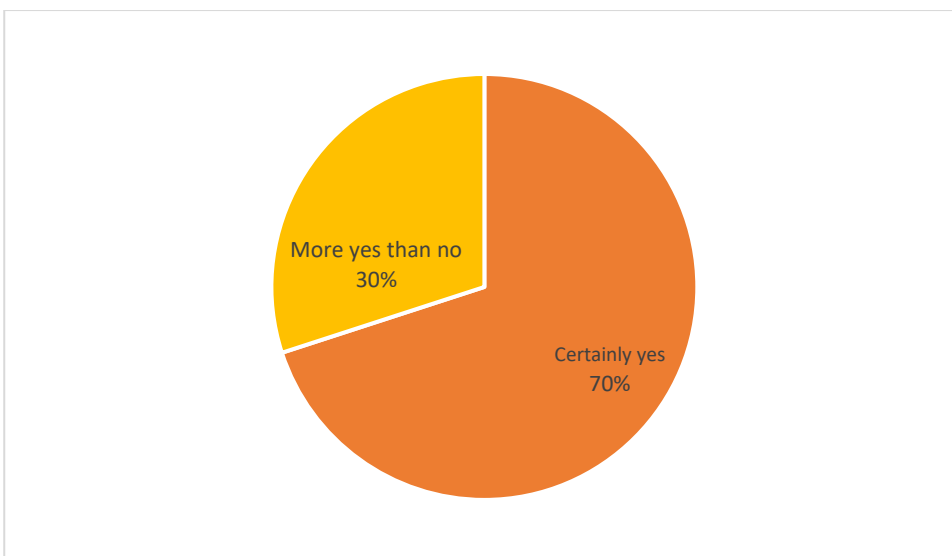
3.1 Results of consultation with students

Course name and learning objectives

1. Do you think the course title clearly communicates the educational objectives?

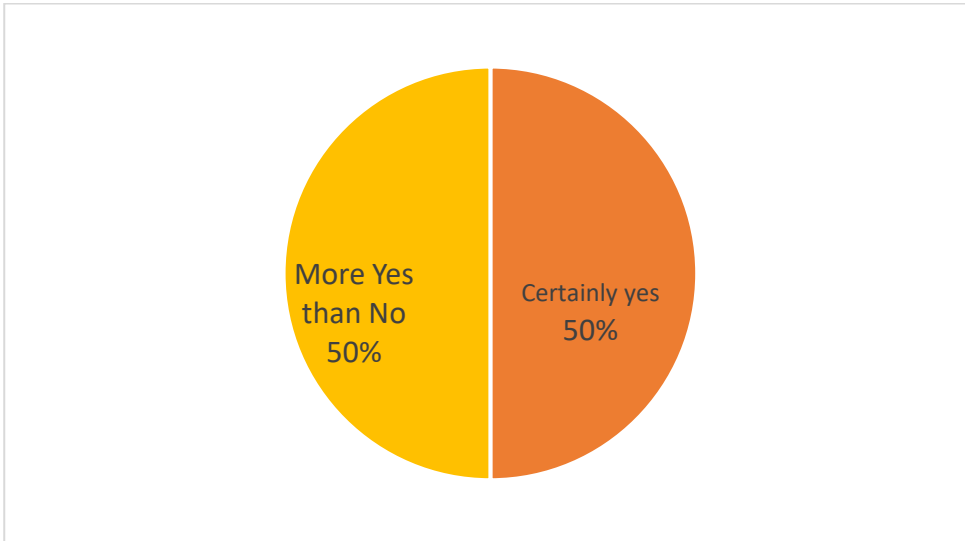


2. Do you think the educational objectives of the course of study are consistent with the needs of your sector?

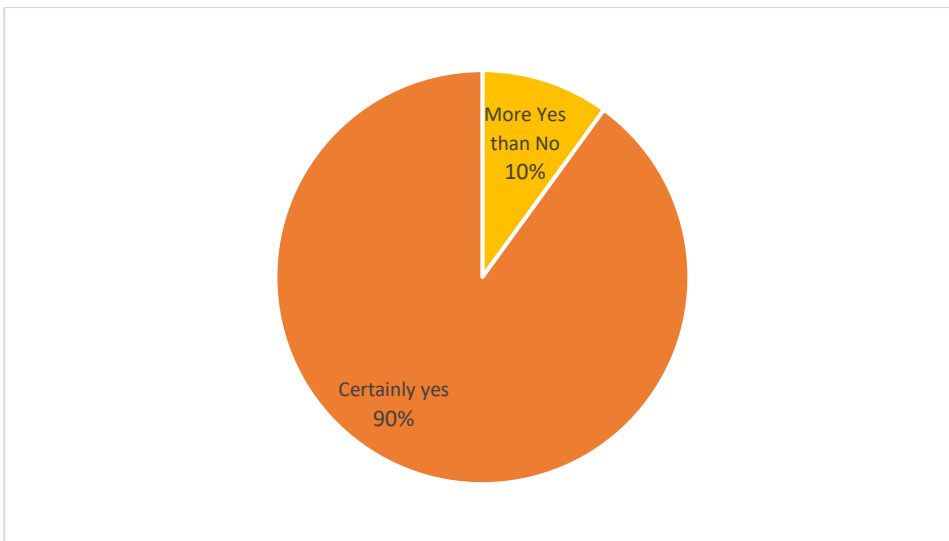


Professional profiles

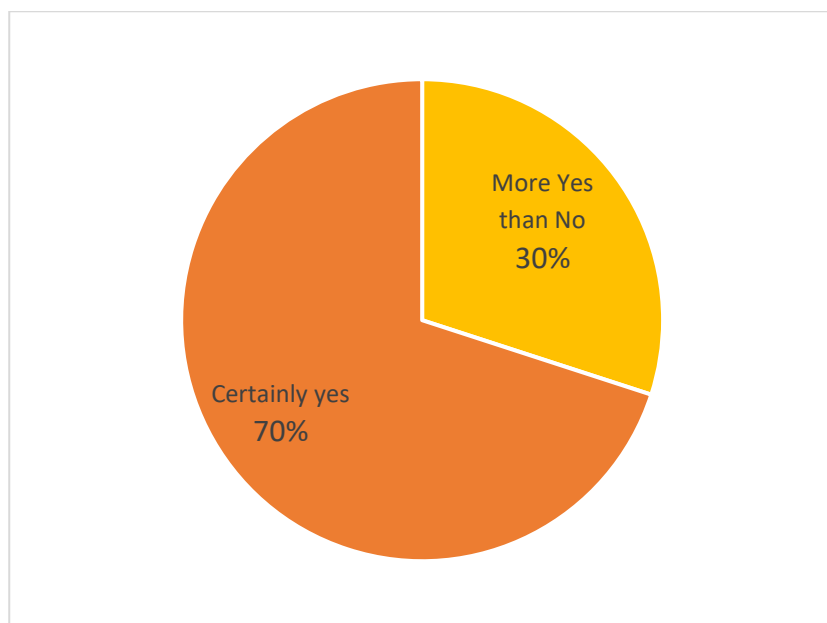
3. Do you think the career opportunities described for graduates are exhaustive?



4. Do you believe that the skills the graduate will acquire are consistent with the needs of his/her professional sector?



6. Do you believe that the set of courses provided in the study plan is adequate to achieve the educational objectives and skills indicated?



Strengths and weaknesses (some examples)

Strengths
laboratory activities and AI
opportunity to study abroad and compare yourself with other countries
internship abroad very important
international training
comparison with other university realities outside of the Italian ones
Joint degree from multiple foreign universities and the possibility of completing part of the course abroad
topicality of the topic and international path
opportunity to exchange methods and solutions in foreign university contexts
joint degree and joint international course

Weaknesses
international training could be fragmented
There is a lack of focus on production technologies, but I think this should be part of the three-year degree training.

3.2 Results of the Codigital approach with students

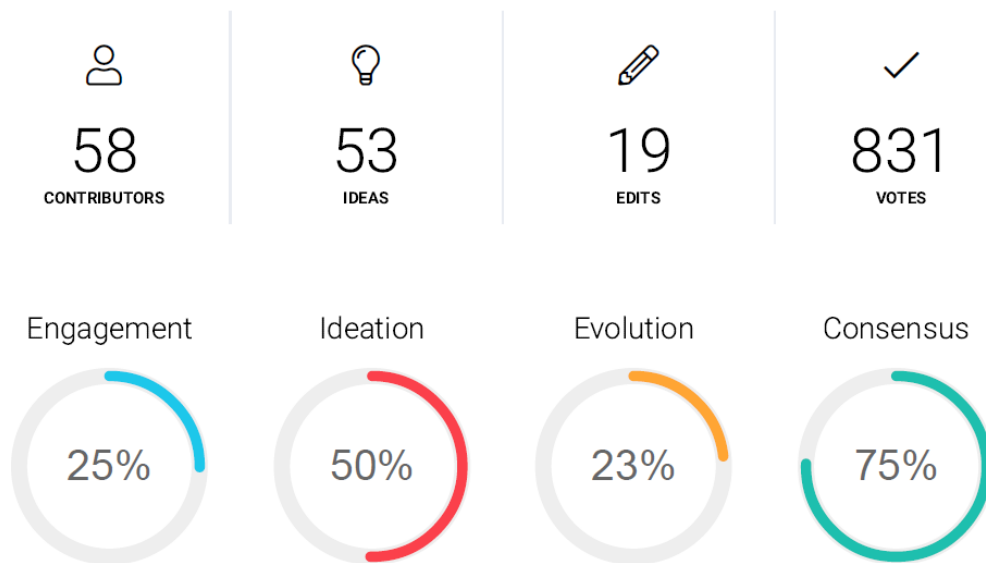
Co-Digital (www.codigital.com), an online collaboration platform, was used to develop and rank ideas, recommendations and needs in the context of sustainable food production education.

This online platform was selected since it allows for a large number of participants to propose edits and vote on them in real-time.

At the link below the online webpage used for the participatory approach activity:

<https://app.codigital.com/p/pr-c5cd06c3b77b03acb54aeb222b40ce50>

Here below an extract from the Codigital co-design report:





1 Researchers should focus on various topics:

1. Efficient production techniques and machinery to prevent food waste
2. Being able to calculate the impact of the production precisely
3. Reducing the existing waste
4. Reducing the existing impact (soil, water, pollution, energy consumption, carbon footprint)
5. Educate the public about waste occurs outside of production
6. Improve the harvesting, storage and transport conditions to avoid spoilage or damage

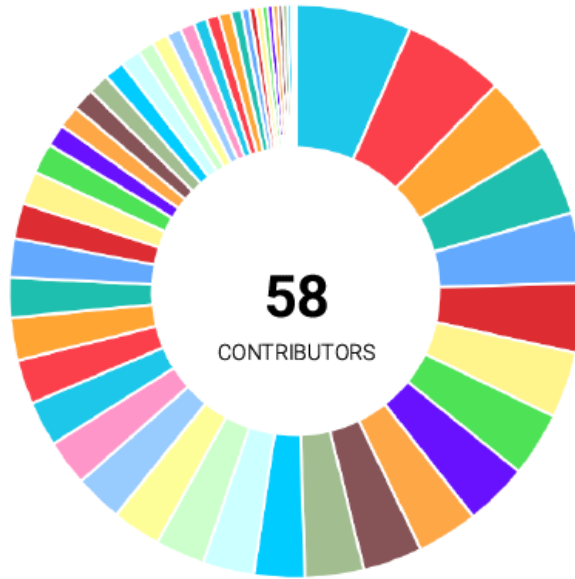


- 2** Food sustainability is the production of food that is sustainable for the environment while being socially and economically sustainable. Food sustainability takes in consideration the reduction of the carbon footprint of the food, the amount of water used for the production, and the pollution of water as well as the other pillar evocated. Research should focus on ideotypes and the development of ACS.



- 3** Sustainable agriculture and food means to produce enough food in terms of quality and quantity keeping in mind the food safety, food hygiene, according to increasing needs of continuously increasing population. It may also be perceived as increasing the overall food production without compromising the food quality. Sustainable agriculture also aims to sustain economic, environmental and social stability. And policy makers should be aware of farmers needs and preferences while setting policies





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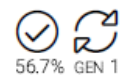
4 To increase food production with the minimum effect on environment and ecology. Increase organic techniques and use of those strategies for agriculture and food production and process to minimize food loss.



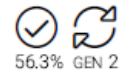
Policy should be to avoid excess usage of fertilizer and pesticides that's can harm environment and ecosystem.

Idea to get double yield of crops.

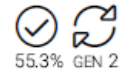
5 A production/processing way with the minimum energy resources consumed to produce more quantity. The intended process shall possess lasting and safe techniques/products for human consumption. Reserarchers may look into innovative food production techniques to implement this approach, whereas policy makers may encourage and aware the consumers to opt products manufactured through these techniques.



6 A sustainable food production should put together different aspect. Starting promoting a better information for everyone that lead to a more conscious food consumption. Try un avoid use of chemical in the agriculture, avoid the limitation of the biodiversity, creating entire lands with only one type of plant. Improving also the way in which food are store and harvest will help un have less waste and that lead to a better use of the resources.



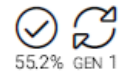
7 The highest priorities in sustainable food production are to produce food using more energy efficient resources, lessen the water impact, improve nutrient absorption of the plant, land use and find ways to promote biodiversity.



8 Sustainable food production shall ensure proportionate measures with the needs of the population as well as with the resources that the earth in able to provide in the long run. It shall also ensure constant research to provide techniques that are progressively less impacting and polluting for the environment













9 Sustainable food production means, individuals to be able to maintain their needs without disturbing the ability of future generations to maintain their needs.



But also not only about food and food products but also about the impacts of food production as well, environmental, social, economic impacts. Sustainable food production is to consider all these aspects and make the production process entirely to keep going and also not bothering aspects related to iy over generations.

10 The concept of Food sustainability is food that is grown, prepared and resourced in a way that is not wasteful and detrimental to natural resources and that can be maintained on the long term in the future without negatively impacting our natural resources taking into account the social, economical and health aspects as well.



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- 11** Sustainability in food production's priorities focus on the efficiency of the resources used and their impact on the environment and the animals and humans health. Researches should target new eco-friendly solutions.  
54.6% GEN 1
-
- 12** Sustainability in food production is an important issue that should aim to reduce as more as possible the environmental, social and economic impact of food production. Researchers should focus on finding new low impact strategies to produce food, such as vertical farming, harmless pesticides. What policy makers should focus on is encourage population in getting informed about these topics.  
54.4% GEN 1
-
- 13** Research should target to lower as much as possible the waste in food production and in food consumption. Also it should focus on improving the efficiency in the production. Another thing could be referred as how the population is educated about food and its impact, research should target to get to a point where people make the better choice for their life and also for the environment. But the consumers are not the only ones involved also companies and nations should be educated.  
53.8% GEN 1
-
- 14** To have healthy nutritious food while thinking about the future generations . This is done by reducing food waste, the carbon emission, the land use, the water and reducing biodiversity loss. Research should focus more on finding practical solutions to use resources efficiently.  
53.5% GEN 1
-
- 15** Sustainability in food production means reach an equilibrium, reducing waste and increase more efficient sources and uses. Research should target in more efficient technologies  
52.7% GEN 1

3.3 Consultation with employers: industries, companies and institutions

DATE OF CONSULTATION: between May and September 2025

List of participants consulted:

Organization	Objective	Role of the participant
Gxxxxca	Agri-food products cooperative society	Formulation Office
MxxxxSrl	Company entirely dedicated to the fourth range of fruit (among the first in Italy)	R&D Manager
MxxxxSpa	Food production industry	International Sales Director
Rxxxxn	European consulting company to foster agri-food sustainability	Innovation Manager
Fxxxxni	Distribution of frozen fruit for the processing industry	Production Manager
TxxxxPLC	Leading global provider of food and beverage ingredients and solutions.	Ethics & Compliance Manager
Mxxxxn	Business consulting in innovation and corporate development for organic food products, pet food, and novel foods.	CEO
Cxxxxa	Trade association	Land manager, PSR technician and credit
Axxxxa	Farm management services and development of agricultural supply chain relationships	Director
CxxxxK	Organization for people who need gluten-free food	Head of Food Policy (responsible for food legislation at national, European and international (Codex) levels)
Fxxxxy	Marketing Consulting	Consultant and Reader in Innovation and Marketing
Gxxxxs	Distribution of ingredients for the cosmetic, food, nutraceutical, and pharmaceutical industries	Head of R&D
AxxxxSRL	Agricultural production	Administrator
MxxxxR	Market research consumer and food	Associate Director Sensory Qual
WxxxxLtd.	Consulting in food product development, innovation, strategy	Founder
Pxxxxo	Beverage production	R&D Director
Bxxxxs	Company growing, processing and packing a range of semi-exotic vegetables at farms and facilities around the world.	Head of Retail Sales & Development
VxxxxLtd	Company driving dairy innovation for over a century. Pioneering lactose free solutions.	Senior Scientist
Cxxxxs	Research in food	Researcher
Hxxxxy	Halal certification body in Italy	Quality assurance assistance
Pxxxxy	Food and pharmaceutical products	Pharmacy assistant
Cxxxxe	Research in food	Research fellow

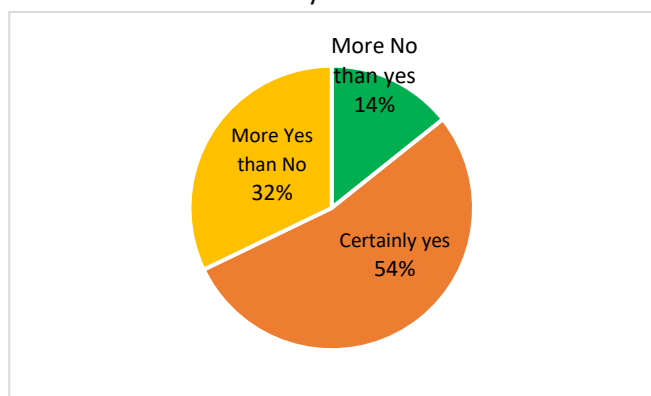
FxxxxS	Promotion of the brand and support for the fair-trade market	Executive Director
Nxxxxsrl	Production of cricket and other insect flours	President of the Board of Directors
Fxxxxo	Multinational confectionery company	Director for EU institutional relations on global nutritional public policies
Cxxxxco	Business consultancy on public affairs	Senior Associate
FxxxxS	Osteoporosis and third sector nutrition	President
Bxxxxl	International Organization for Agri-Food and Biodiversity	Scientist
BxxxxG	Distribution of food ingredients	Account Manager
Exxxxd	EU body promoting innovation and entrepreneurship in the agri-food sector.	Product development and business strategy
ExxA	EU Food Safety Agency	Engagement and external relations associated
Bxxxxe	Farm and food business	Co-founder and manager
Cxxxxo	Large Farm Trade Association	President
WxxO	World Health Organization	Former Director of the Department of Nutrition for Health and Development

Results

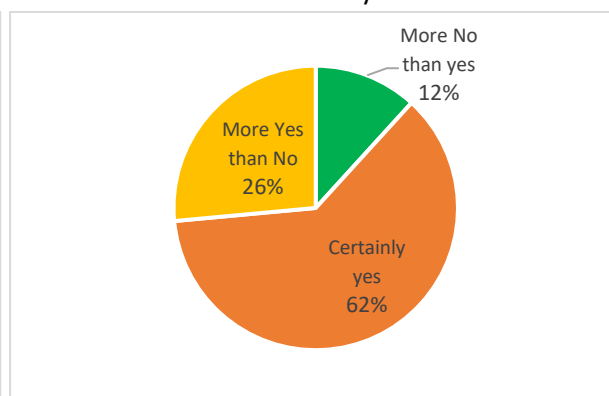
Course name and learning objectives

1. Do you think the educational objectives of the program are consistent with the needs of your sector?

First round survey



Second round survey

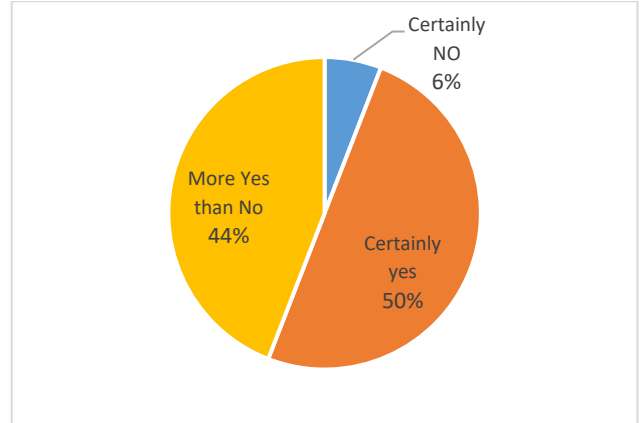
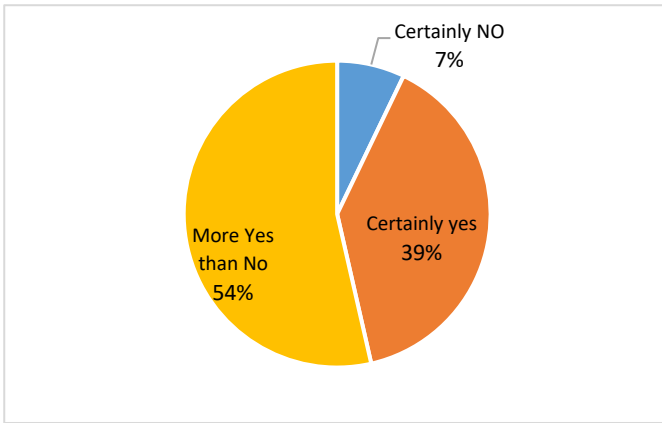


Career opportunities

2. Considering the job market in your sector, do you think the professional roles identified by the program meet the needs?

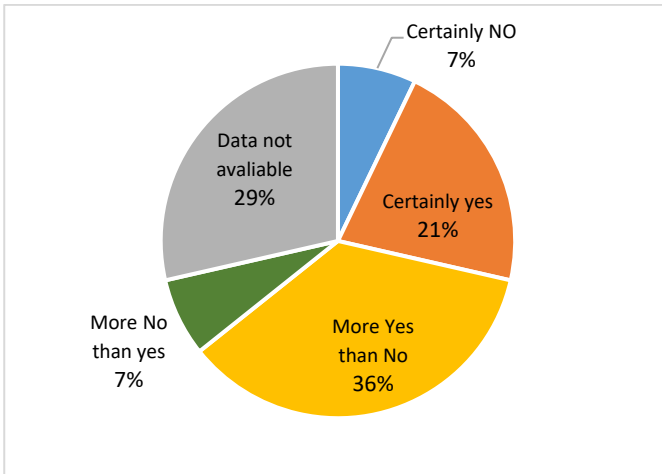
First round survey

Second round survey

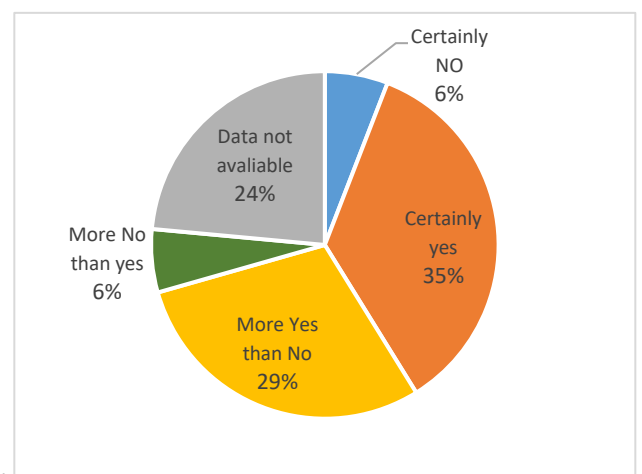


3. Thinking about your organization, do you think the professional figures that the course aims to train meet its needs?

First round survey



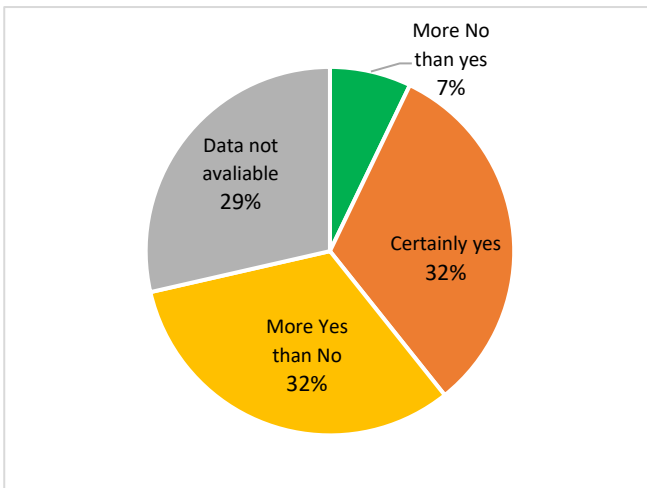
Second round survey



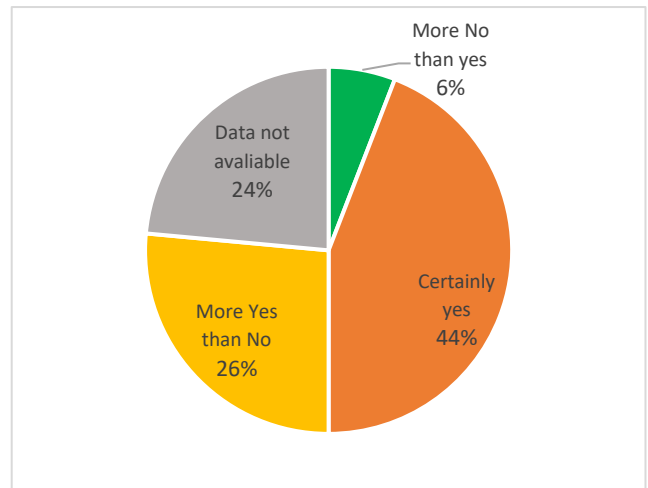
Professional profiles

4. Do you think career opportunities described for graduates are exhaustive?

First round survey

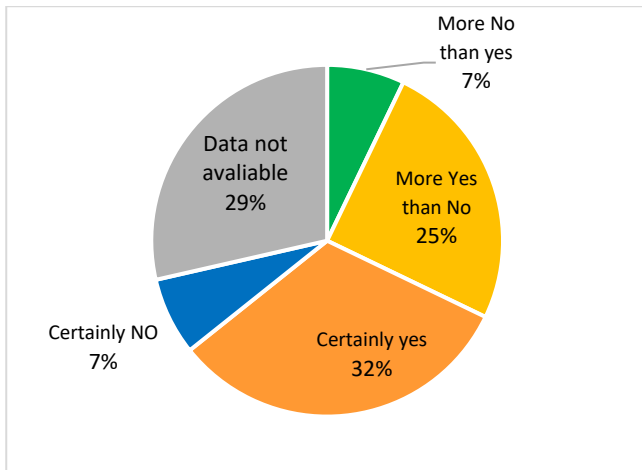


Second round survey

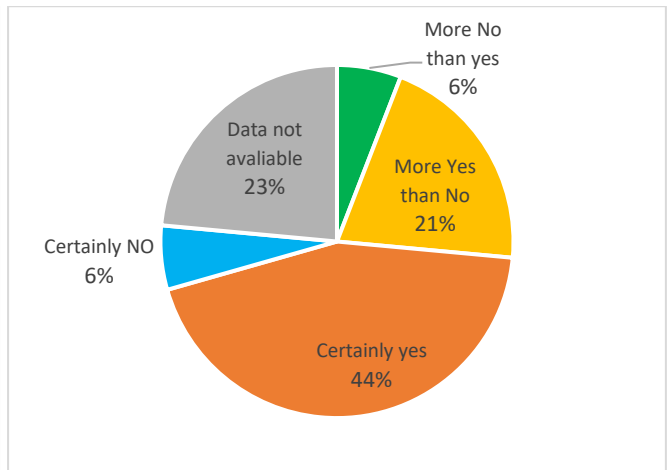


5. Do you believe that the skills the graduate will acquire are consistent with the needs of the profession?

First round survey



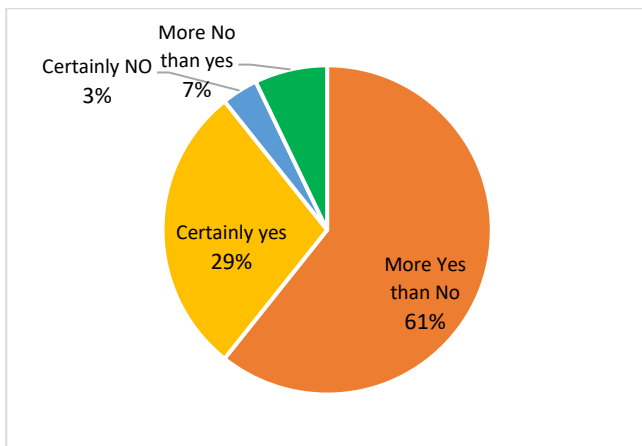
Second round survey



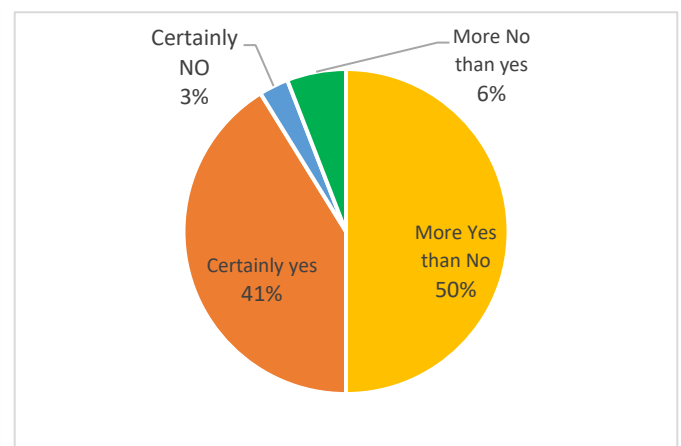
Training plan

6. Do you believe that the set of courses provided in the study plan is adequate to achieve the educational objectives and skills indicated?

First round survey



Second round survey



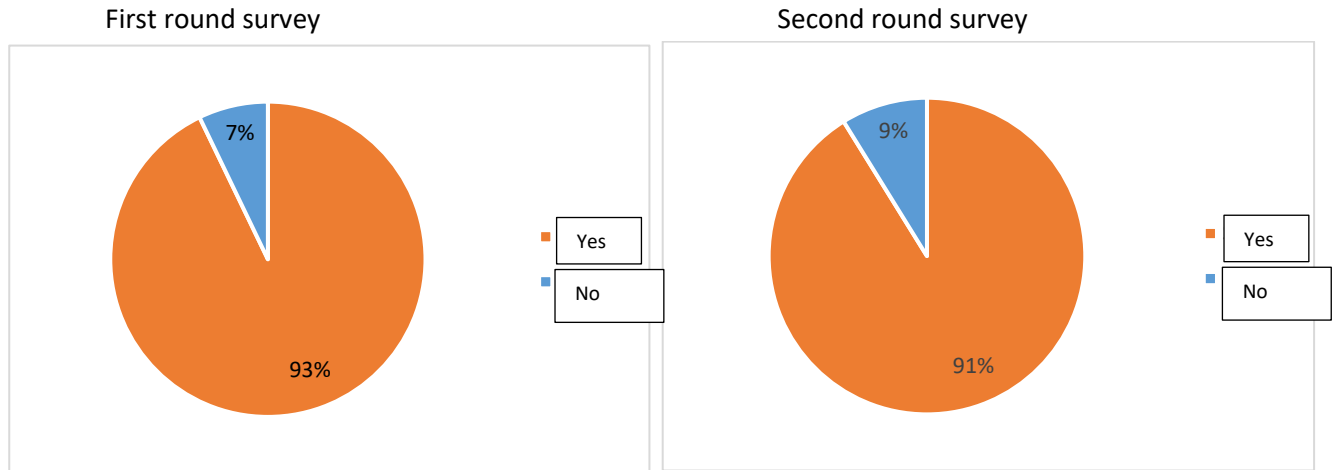
Strengths and weaknesses (some examples)

Strengths	
Organization	Observations
Gxxxxa	It covers various disciplines
MxxxSpa	Specific technical knowledge on food
Rxxxn	Collaboration with industry is a strong point
TxxxPLC	The variety of modules that will give graduates greater career opportunities
Cxxxna	Experience abroad. Comparison with other universities. Knowledge of English. Experience with foreign professors.
CxxxK	Collaboration between several universities in different countries; a vision of the need for professionals with solid scientific training in both the agri-food and nutrition sectors. I envision a focus on the practical, not just the theoretical, aspects.
Frxxxxy	I think combining food and technology is a strong point.
Gxxxxs	International network.
AxxxRL	Internationality and multidisciplinary
MxxxR	Growing area, interesting, important for moving forward, would give the candidate a whole understanding of the field
Wxxxtd.	Something with a different focus
Pxxxo	The collaboration between universities
Bxxxxs	Further in-depth knowledge of nutrition and dietetics
Vxxxtd	Provides a wide range of skills
Cxxxxs	Interdisciplinary (it can prepare you for different fields)
Pxxxxxy	Well-structured program
FxxxxS	The relationship between supply chain and global sustainability
NxxxI	<ul style="list-style-type: none"> - Interdisciplinary approach between health, nutrition and sustainability. - Strong internationalization thanks to the involvement of universities foreign. - High professional employability in the agri-food, healthcare and of research. - Practical and updated training with the involvement of stakeholders.
Fxxxo	New professional figures with transversal skills and who are also trained in policy approaches, transdisciplinarity, and internationalization.
FxxxS	Environmental sustainability, internationalization, public health
BxxxA	training opportunities in foreign countries
Exxxd	I wish I had this course degree in my education: good list of courses, good internationalization, good fourth semester!
ExxA	It is a Joint program, thereby delivering a joint degree
BxxxxE	Knowledge of economics and market/marketing
Cxxxo	Training on: i) identification of increasingly complex sustainability standards; ii) labelling of non-food products.
WxO	Integration, multidisciplinary, international horizon not only European (Canada partner)

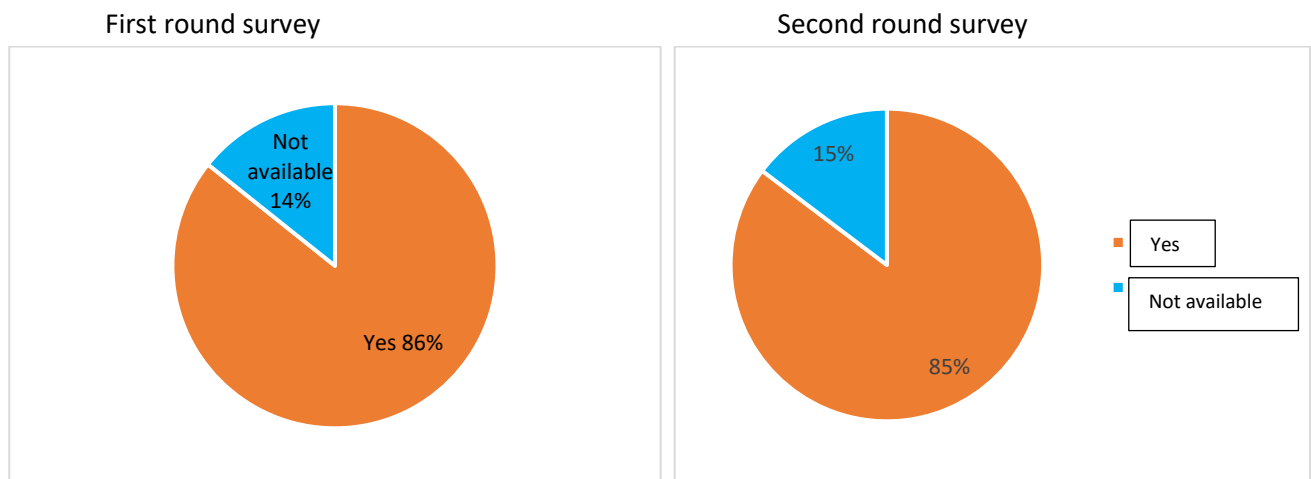
Weaknesses	
Organization	Observations
Gxxxxa	After graduation, it is necessary to specialize in a specific sector.
Mxxxxa	Using this knowledge in the pharmaceutical field, more specific training would probably be needed to find employment in this sector.
TxxxLC	No one in particular
Mxxxxn	Weakness: Dietetics and outreach. The needs of a food industry are completely different from those of a small artisanal laboratory or the HoReCa sector. Food technology graduates have typically never set foot in a factory and have no idea how to operationally translate the knowledge they've acquired into compensation. They have little regulatory education in a highly regulated sector, and they lack the legal foundation needed to learn vertical regulations (if they don't understand the hierarchy of sources, they confuse a ministerial circular with a regulation, have trouble understanding the succession of regulations over time, and don't understand the ratio legis).
Cxxxxa	Eventually the cost of the course could be an issue.
CxxxK	Clarify whether there are opportunities for internships. The use of technology in various areas of specialization (food science, sustainability, nutrition, etc.); understand who they would compete with in the job market.
Gxxxxs	Apparent imbalance towards the certification part compared to the objective knowledge of the context of the food and ingredients
AxxxxL	I don't see any
MxxxR	It sounds slightly more lab based by the title but the modules cover a wider variety than that
Wxxx.d.	There are a lot of nutrition based masters, and not enough jobs in that area
Bxxxxs	The cost of additional year of study. Practical experience is often more valuable to employers than more studying.
Vxxx.d	I'm wondering how in-depth the teaching is as the range of topics and areas included is wide
Cxxxxs	Since it is interdisciplinary, students have to make some extra effort in order to be fully prepared for further career (eg researcher, nutritionist)
Cxxx.e	The proposed career opportunities, such as public healthcare, are not directly accessible.
FxxxxS	Which professional association can a Food-H graduate access?
FxxxxO	Logistical difficulties likely for travel between university locations
Bxxxxl	Multiple and insufficiently in-depth teaching subjects
Exxx.d	old title was not good, this is much better
Exxx.A	Visa might be an issue

Availability for contacts and future collaborations (internships/traineeships, seminars, etc.) and specific initiatives that can be activated for the program.

7. Are you available to be contacted in the future to provide us with your suggestions and opinions regarding this program in future consultations?



8. Would you let us know in case of collaboration opportunities (seminars on your work, initiatives to enrich the student experience)?



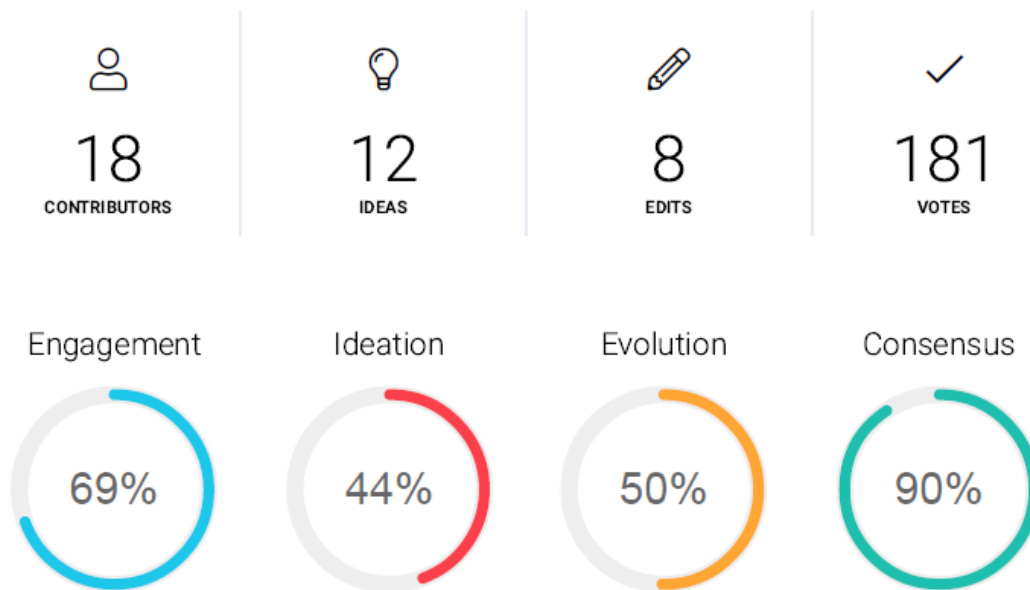
3.4 Results of the Codigital approach with employers

The Codigital (www.codigital.com) approach, was used also with employers, in order to develop and rank ideas, recommendations and needs in the context of skills expected when working in the food, nutrition and health (cross)fields.

At the link below the online webpage used for the participatory approach activity:

<https://app.codigital.com/p/pr-b59ba510577185c4854353d825f14cd7>

Here below an extract from the Codigital co-design report:





- 1** Strong evidence-based thinking and the ability to critically evaluate nutrition research before applying it in practice, grounded in a solid understanding of dietary principles and nutritional science

62.2% GEN 3
- 2** Ethical awareness and a strong commitment to public health principles when addressing food systems, environmental sustainability, and social and health inequalities

56.3% GEN 2
- 3** Data literacy, including foundational knowledge of statistic and practical familiarity with dietary assessment tools and effective use of digital health platforms

54.7% GEN 2
- 4** Interdisciplinary collaboration, involving ability to work effectively and constructively with healthcare teams, policymakers, and industry professionals across diverse professional contexts.

53.0% GEN 2
- 5** Cultural competence and sensitivity when working with diverse populations and different dietary traditions or restrictions

52.0% GEN 1