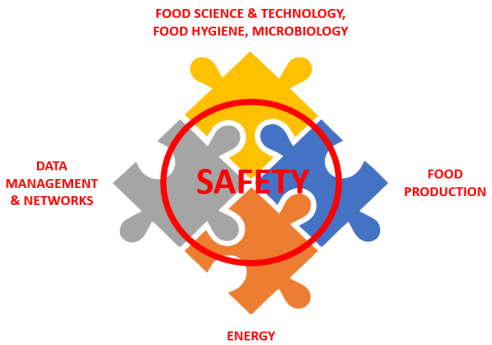
Course structure
120 ECTS 2 years

Course structure

- Safety and hygiene in food processing and products.
- Applied microbiological food safety.
- Unit operations in the food industry.
- Refrigeration and thermal processing technologies.
- Sustainable food packaging.
- Safe and hygienic design of food machinery.
- Automatic machines and robots for the food industry.
- Electronics for safe digital signal processing.
- Plant-safe design and food logistics.
- Managing sustainable and traceable digital supply chains.
- Statistical quality and safety assurance in food processes.
- Safety management and risk management.
- Alloys and coatings for the food industry.
- Electrification, sustainability, and efficiency in food processing.
- Energy management.

MSc Food Industry Engineering

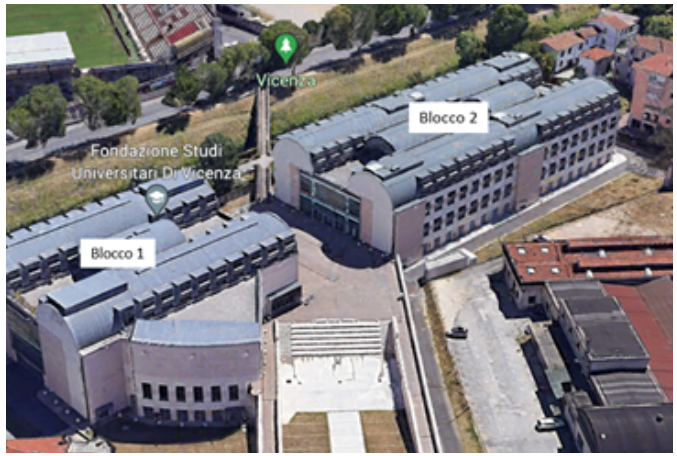


UNIVERSITY OF PADUA

The University of Padova, founded in 1222, is one of Europe's oldest and most prestigious seats of learning; it is a multi-disciplinary university that aims to provide its students with both professional training and a solid cultural background.

About DTG

The Department of Management and Engineering was established in 1998. Its activities encompass engineering, technological, and economic competences required for the development of new products, materials, and production processes, with a focus on technical management and economic profitability. The Department actively participates in the teaching programs of the School of Engineering, including the master's degree programs in engineering and management, product innovation, and mechatronics.



UNIVERSITÀ DEGLI STUDI DI PADOVA

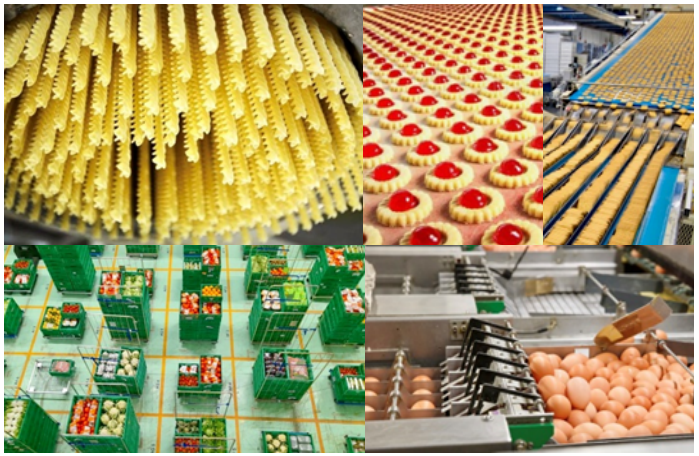
dtg

Department of Management and Engineering
Vicenza (Italy)

Master Degree in

FOOD INDUSTRY ENGINEERING

Second Cycle Degree



COURSE DESCRIPTION

The Master's Degree Course in Food Industry Engineering aims to develop professionals capable of conceptualizing, planning, designing, and managing processes, systems, and services specific to the food industry, with a strong emphasis on safety. Safety serves as a prerequisite to ensure hygiene, product quality, optimal performance, and traceability of materials, as well as technical, economic, and social sustainability.

The objective of the program is to train specialized professionals in various stages of production, from raw material procurement to the packaging of the final product. Food industry plants are characterized by a combination of traditional craftsmanship and integrated automation, often featuring collaborative equipment. Employees in these companies frequently work under challenging environmental conditions, including adverse thermo-hygrometric and environmental factors that can affect human health.

The main focus of professional development in this program lies in technical skills related to the design, management, and optimization of production lines. This includes integrated plant management, monitoring and control of production and process parameters, and efficient resource management. A deep understanding of plant technology is essential, encompassing areas such as freezing, pasteurization, sterilization, and packaging systems. Quality control techniques during production, with a particular emphasis on hygiene and sanitation aspects to prevent and minimize cross-contamination, are of paramount importance. The ideal candidate should also possess a strong focus on innovation and embrace an integrated supply chain approach concerning data management, traceability, energy management, and cost considerations.

PROFESSIONAL OPPORTUNITIES

The training of graduates in Food Industry Engineering opens up numerous employment opportunities in both the private and public sectors, both within Italy and internationally.

Graduates can expect to find employment in responsible positions that primarily focus on automated integrated industrial processes, safety, quality monitoring systems, and food hygiene aspects. The first career path in the industry involves food manufacturing companies, which increasingly seek engineers capable of conceptualizing, evaluating, and managing typical food industry processes and integrated systems while adhering to stringent safety and security standards. A second significant avenue is within companies that produce machines and plants specifically designed for the food industry. Here, graduates with a master's degree will be equipped with advanced design and management techniques applicable to food industry machinery and plants.

A third avenue encompasses distribution companies within the food supply chain. Additionally, private sector companies specializing in qualified consulting services are also likely to express interest in graduates of this program.

COURSE STAKEHOLDERS

- Fondazione Studi Universitari Vicenza.
- Confindustria Vicenza.
- Food manufacturing companies.
- Food machinery manufacturing companies.
- Food distribution companies

VICENZA CITTÀ UNIVERSITARIA

ACCESS REQUIREMENTS

- A minimum three-year undergraduate degree (or equivalent) in Engineering, or related subjects with Food Industry.
- B2 Level (CEFR) or equivalent certificate. Please check out this link (https://www.unipd.it/en/studying-padua/admission/language-requirement) for the full list of accepted certificates, minimum scores and exemptions.

PLACE AVAILABLE

There is no numerical limit for both EU citizens and non-EU citizens.

APPLICATION DEADLINE

For Italian Qualification

http://www.gest.unipd.it/en/courses/cycle-degrees/second-cycle-degrees/food-industry-engineering

For Foreign Qualification

https://apply.unipd.it/