General information		
Academic subject	**Food preserved technology (I.C. Cereal and food preserves technologies)**	
Degree course	*Master Programme: Food science and technology (LM70)*	
Academic Year	*First*	
European Credit Transfer and Accumulation System (ECTS)		5 ECTS
Language	*Italian*	
Academic calendar (starting and ending date)		*September 26th, 2022 – January 20th, 2023*
Attendance	*No Compulsory*	

Professor/ Lecturer	
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Department and address	*DiSSPA*
Virtual headquarters	*Microsoft Teams*
Tutoring (time and day)	Monday-Friday 9.00-14.00

Syllabus	
Learning Objectives	*The course aims to provide knowledge and skills about the main preserved and semi-preserved food chains. The standardization of the stabilization process through thermal and no-thermal approaches, the legal aspects linked to the commercialization and labelling and the technological process will be the principal topics of the course.*
Course prerequisites	*Knowledge of the unit operations of food technology and of the machines for the food industry. Knowledge of the food composition and constituents*
Contents	*Preserved and semi-preserved foods definition according to Italian and European Community laws.* *The thermal treatments for the canned foods. Concept of F0 and its determination.* *Canned meat products: definition, classification and technological processes applied.* *Charcuteries: Definition and classification and processing of dry cured ham, cooked ham, fermented sausages and mortadella.* *Canned fish-based foods: Classification, composition and technological process* *Preserved fruit-based foods: Classification and processing of jams, marmalades and Canned fruit products.* *Juices and nectar: Definition and classification. Processing of apple juices, peaches and apricots nectars, citrus juices.* *Preserved tomato-based foods: Shelled tomato, tomato paste, tomato juices and Ketchup (definition, classification and processing).*
Books and bibliography	*• Pompei C. La trasformazione industriale di frutta e ortaggi. Tecnologie per la produzione di conserve e semiconserve. Ed. Edagricole 2005.* *• Handbook of Meat Processing. Blackwell Publishing, 2010* *• Processing Vegetables: Science and Technology. Technomic Publishing CO., Inc, 1997.* *• Scientific Reviews*
Additional materials	*Notes, slides and other bibliographic materials will be furnished during the course*

Work schedule	

Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/Self-study hours
Hours			
125	*32*	*14*	*79*
ECTS			
5	*4*	*1*	

Teaching strategy	The topics of the course will be treated with the help of Power Point presentations. The exercises will consist of laboratory activities and cases study All the material used for the lessons will be made available to students on special web platforms.
Expected learning outcomes	The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the master's degree in food science and Technology (expressed through the European Descriptors of the qualification)
Knowledge and understanding on:	o Knowledge of the technological process of the main preserved and semi-preserved foods and ability to understand the technological steps that are influent on the quality characteristics of the preserved foods. o Knowledge of the legal aspects linked to the commercialization and labelling of the main preserved foods. o Knowledge of the analytical methods applied for the determination of the quality characteristics of the preserved.
Applying knowledge and understanding on:	o Ability to define the technological parameters and the effect on the composition, structure and properties of the foods. o Ability to apply the analytical procedures for the assessment of the quality parameters of the preserved foods
Soft skills	• *Making informed judgments and choices* o Ability to choose the technological solutions able to produce high quality preserved and semi-preserved foods. o Ability to choose the analytical procedures and methods able to assess the quality parameters of the preserved foods. • *Communicating knowledge and understanding* o Ability to describe the technological processes and the process parameters to produce the main preserved foods. o Ability to describe the analytical procedures and methods able to assess the quality parameters of the preserved foods. • *Capacities to continue learning* o Ability to deepen and upgrade their skills respect to the technological process on the main preserved foods and the legal aspect related to the commercialization

The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification).

Assessment and feedback	
Methods of assessment	The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the laboratory/production plants, as reported in the Academic Regulations for the Master Degree in Food Science and Technology (article 9) and in the study plan (Annex A).

	Students attending at the lectures may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for a year. The evaluation of the preparation of the student occurs on the basis of established criteria, as detailed in Annex B of the Academic Regulations for the Master Degree in Food Science and Technology. Non-Italian students may be examined in English language, according to the aforesaid procedures.
Evaluation criteria	• *Knowledge and understanding* o Describe the technological process of the main preserved and semi-preserved foods. o Describe the legal aspects linked to the commercialization and labelling of the main preserved foods. o Describe and apply the analytical methods for the determination of the quality characteristics of the preserved foods. • *Applying knowledge and understanding* o Describe the influence of the technological parameters on the composition, structure and properties of the foods. o Describe the strategies needed for the set-up of the technological process of the main preserved foods. • *Autonomy of judgment* o Make reasonable hypothesis to modulate the technological parameters to produce high quality preserved and semipreserved foods. o Make reasonable hypothesis to choose the analytical procedures and methods able to assess the quality parameters of the preserved foods. • *Communicating knowledge and understanding* o Describe the technological processes and the process parameters to produce the main preserved foods. o Describe the analytical procedures and methods able to assess the quality parameters of the preserved foods. • *Communication skills* o The student will be evaluated considering the use of appropriate technical language. • *Capacities to continue learning* o Describe of the methods to deepen and upgrade their skills respect to the technological process on the main preserved foods and the legal aspect related to the commercialization
Criteria for assessment and attribution of the final mark	The evaluation criteria that contribute to the attribution of the final mark will be: knowledge and understanding, the ability to apply knowledge, autonomy of judgment, i.e. the ability to criticize and formulate judgments, communication skills
Additional information	