COURSE OF STUDY *Master degree: Food Science and Technology (LM70)*
ACADEMIC YEAR *2023-2024*
ACADEMIC SUBJECT *Food preserved technology (5 ECTS) - I.C. Technology of cereal-based and preserved foods (9 ECTS)*

General information	
Year of the course	*First*
Academic calendar (starting and ending date)	*first semester (September 25th, 2023 – January 19th, 2024)*
Credits (CFU/ETCS):	5
SSD	*Food Science and Technology (AGR/15)*
Language	*Italian*
Mode of attendance	*No Compulsory*

Professor/ Lecturer	
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Department and address	*DIP. DISSPA – Università degli Studi di Bari*
Virtual room	*Microsoft Teams:*
Office Hours (and modalities: e.g., by appointment, on line, etc.)	*Monday to Friday by appointment only.*

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
125	*32*	*14*	*79*
CFU/ETCS			
3	*4*	*1*	

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

Teaching strategie	Course topics are addressed with the aid of Power Point presentations, case study analysis and classroom exercise for the design of the thermal stabilization process.
Expected learning outcomes in terms of	
Knowledge and understanding on:	• 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. • Knowledge of the legal aspects linked to the commercialization and labelling

	of the main preserved foods. • Knowledge of the analytical methods applied for the determination of the quality characteristics of the preserved.
Applying knowledge and understanding on:	• Ability to define the technological parameters and the effect on the composition, structure and properties of the foods. • Ability to apply the analytical procedures for the assessment of the quality parameters of the preserved foods
Soft skills	• Making informed judgments and choices: ○ Ability to choose the technological solutions able to produce high quality preserved and semi-preserved foods. ○ Ability to choose the analytical procedures and methods able to assess the quality parameters of the preserved foods. • Communicating knowledge and understanding: ○ Ability to describe the technological processes and the process parameters to produce the main preserved foods. ○ Ability to describe the analytical procedures and methods able to assess the quality parameters of the preserved foods. • Capacities to continue learning: ○ 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.
Syllabus	
Content knowledge	○ 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).
Texts and readings	• 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.
Notes, additional materials	• Scientific papers
Repository	All teaching material will be available to students on web platforms

Assessment	
Assessment methods	The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in practical activities (laboratory and educational visits). Students 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 one academic year (Art. 4 of the Didactic Regulations of the Master's Degree Course in Food Science and Technology). The result of the mid-term exam is communicated by publication in the student's electronic register and contributes to the assessment of the profit examination by means of calculation of the weighted average. The exam for foreign students may be conducted in English as described above.

Assessment criteria	• *Knowledge and understanding*
	  ○ Describe the technological process of the main preserved and semi-preserved foods.
	  ○ Describe the legal aspects linked to the commercialization and labelling of the main preserved foods.
	  ○ Describe and apply the analytical methods for the determination of the quality characteristics of the preserved foods.
	• *Applying knowledge and understanding*
	  ○ Describe the influence of the technological parameters on the composition, structure and properties of the foods.
	  ○ Describe the strategies needed for the set-up of the technological process of the main preserved foods.
	• *Autonomy of judgment*
	  ○ Make reasonable hypothesis to modulate the technological parameters to produce high quality preserved and semipreserved foods.
	  ○ Make reasonable hypothesis to choose the analytical procedures and methods able to assess the quality parameters of the preserved foods.
	• *Communicating knowledge and understanding*
	  ○ Describe the technological processes and the process parameters to produce the main preserved foods.
	  ○ Describe the analytical procedures and methods able to assess the quality parameters of the preserved foods.
	• *Communication skills*
	  ○ The student will be evaluated considering the use of appropriate technical language.
	• *Capacities to continue learning*
	  ○ 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

Final exam and grading criteria	The assessment of the student's preparation is based on predetermined criteria in accordance with the Didactic Regulations of the Master's Degree Course in Food Science and Technology (art. 4). The Examination Committee has a score ranging from a minimum of 18 to a maximum of 30 points for a positive assessment of the student's performance. By unanimous vote of its members, the Board may award honours in cases where the final mark is 30.
Further information	