UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Agrarie, Alimentari e Forestali
ACADEMIC YEAR	2022/2023
MASTER'S DEGREE (MSC)	AGROENGINEERING AND FORESTRY SCIENCES AND TECHNOLOGIES
SUBJECT	FOOD PPROCESS TECHNOLOGY - LABORATORY
TYPE OF EDUCATIONAL ACTIVITY	D
AMBIT	20758-A scelta dello studente
CODE	21726
SCIENTIFIC SECTOR(S)	AGR/15
HEAD PROFESSOR(S)	TODARO ALDO Professore Associato Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	3
INDIVIDUAL STUDY (Hrs)	43
COURSE ACTIVITY (Hrs)	32
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	2
TERM (SEMESTER)	1° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**TODARO ALDO** Monday 15:00 16:00 presso Ufficio 149 presso Ed.4 primo piano viale delle ScienzeMicrosoft TeamsContatto telefonicoEmail Wednesday 12:00 16:00 Ufficio 149 presso Ed.4 primo piano viale delle ScienzeMicrosoft TeamsContatto telefonicoEmail

DOCENTE: Prof. ALDO TODARO

PREREQUISITES	Animal and vegetables products. Chemistry and biology knowledge.
LEARNING OUTCOMES	Knowledge and understanding. Knowledge of and ability to use the specific language of their machines, systems and processes of agro-industries. Acquisition of technical and scientific knowledge on fundamental processes of production of agro-industrial products, as well as the chemical and physical characteristics and composition of the food. Applying knowledge and understanding. Ability to apply the acquired knowledge to the identification of optimal solutions for safe and efficient interventions in the agro-food industry. Ability to independently conduct the choice of technological solutions related to the production process with special attention to the sizing and operation of machines and plants for the production sectors of food. Making judgments. Acquiring the ability to retrieve data and to identify the methods of detection to define solutions to the technical problems that arise in the context of the agro-food industry. Acquiring the ability to critically evaluate the implications and results of the planned interventions. Identify the problems and solutions to improve efficiency in the agro-food industries. Being able to evaluate the problems of choice, the cost of plant and operating costs, reliability, safety of operation and the layout of machines and plants of agricultural and food industries. Communication skills. Ability to translate its scientific-technical language in a popular and led, therefore, to communicate with technical peers and different backgrounds, to illustrate the technical and functional characteristics of the machines and their methods of use, in order to improve the efficiency and the ability to work. Effectively communicating their thesis and choices to a non-specialist audience, conveying the importance of the choices of planning proposals. Ability to translate their own choices in the design documents. Ability to expose the types, characteristics, key components, operation, performance and management of machines and plants of agricultural and food industries, as well as the basic principles of analysis and selection of the same, even to a non-specialist public. Learning skills. Upgrade capabilities through participation in technical workshops and scientific and / or consultation of their scientific publications of these specialized disciplines. Ability to follow, using the knowledge acquired in the two forms, in-depth courses and specialized seminars. Ability to understand the tools developed in the newly acquired areas of research.
ASSESSMENT METHODS	The exam consists of an interview to assess the level of skill and disciplinary knowledge in the subject matter addressed throughout the course; exam scores are expressed in thirtieths. Exam results: Excellent 30/30 cum laude: excellence in the topics covered; Very good 26-29: good command of the subject matter; Good 24-25: good knowledge of the topics; Satisfactory: 21-23 satisfactory knowledge of the topics; Sufficient: 18-20 minimal knowledge of the topics; Unsatisfactory: lacking an acceptable level of knowledge of the subject matter.
EDUCATIONAL OBJECTIVES	The course aims to provide students the knowledge on technologies for the production of baked, tomato products, also we will address the issue of what techniques and technologies adopted to maintain the quality of fruit and vegetable products in the post-harvest and the quality of the food products from animals and fisheries. The module has two purposes: knowledge of the industrial technologies of processed food, and the knowledge of the chemical and physical characteristics and composition of food products.
TEACHING METHODS	Lesson and exercises.
SUGGESTED BIBLIOGRAPHY	Appunti delle lezioni; Zanoni Bruno, 2011, Tecnologia Alimentare, Libreriauniversitaria ISBN: 8862921322; Pompei C., 2005, La trasformazione industriale di frutta e ortaggi, Edagricole ISBN: 9788850651384; Simone S. Eugenio S, Gabriele. 2018. Manuale di ispezione e controllo delle carni. Zanichelli ISBN: 9788808185976; Pompei C., 2009, Operazioni Unitarie della tecnologia alimentare, Casa Editrice Ambrosiana ISBN: 9788808183422; Cappelli P., Vannucchi V., 2005, Chimica degli Alimenti. Zanichelli ISBN: 9788808621238. Letture consigliate: Fellows, 2000, Food Processing Technology Principles and Practice, CRC Press ISBN: 9780849308879 Heldman D.R. & Lund D.B.,2007. Handbook of Food Engineering. CRC Press ISBN: 9781466563124

SYLLABUS

Hrs	Frontal teaching
2	Course overview and introduction
4	Tomato processing. Chemical, physical and sensory analysis
4	Juice processing, jam processing: definition, law, chemical, physical and sensory analysis.
4	Bakery and pasta processing
4	Cooked food product from animals and fisheries

Hrs	Practice
4	ISI paper: study and evaluation
6	PITCH RESEARCH PROJECT: paper evaluation and presentation

Hrs	Others
4	Technical visits.