



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Scienze Agrarie, Alimentari e Forestali		
<b>ACADEMIC YEAR</b>	2017/2018		
<b>MASTER'S DEGREE (MSC)</b>	FIRM AND QUALITY FOR THE AGRICULTURAL AND FOOD SYSTEM		
<b>INTEGRATED COURSE</b>	INDUSTRIAL PLANTS AND LOGISTICS - INTEGRATED COURSE		
<b>CODE</b>	12549		
<b>MODULES</b>	Yes		
<b>NUMBER OF MODULES</b>	2		
<b>SCIENTIFIC SECTOR(S)</b>	AGR/09, ING-IND/17		
<b>HEAD PROFESSOR(S)</b>	VALLONE MARIANGELA	Professore Associato	Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	AIELLO GIUSEPPE	Professore Associato	Univ. di PALERMO
	VALLONE MARIANGELA	Professore Associato	Univ. di PALERMO
<b>CREDITS</b>	12		
<b>PROPAEDEUTICAL SUBJECTS</b>			
<b>MUTUALIZATION</b>			
<b>YEAR</b>	2		
<b>TERM (SEMESTER)</b>	1° semester		
<b>ATTENDANCE</b>	Not mandatory		
<b>EVALUATION</b>	Out of 30		
<b>TEACHER OFFICE HOURS</b>	<p><b>AIELLO GIUSEPPE</b> Monday 10:00 13:00 Dicgim Ed.9 - stanza personale</p> <p><b>VALLONE MARIANGELA</b> Thursday 10:00 12:00 Studio docente.Dipartimento Scienze Agrarie, Alimentari e Forestali, edificio 4, ingresso E, 1° piano, settore Meccanica Agraria. stanza 133</p> <p>Friday 10:00 12:00 Studio docente.Dipartimento Scienze Agrarie, Alimentari e Forestali, edificio 4, ingresso E, 1° piano, settore Meccanica Agraria. stanza 133</p>		

DOCENTE: Prof.ssa MARIANGELA VALLONE

<b>PREREQUISITES</b>	Basic knowledge of food technologies
<b>LEARNING OUTCOMES</b>	<p>Knowledge and understanding. Acquire sufficient knowledge for the management of the food industry systems. Ability to choose the spaces during design and / or advice to the food industry entrepreneurs in the choice of machines and plants for the production of quality food products.</p> <p>Applying knowledge and understanding. Ability to assess the technical and plant needs of the food industry related to the type of production.</p> <p>Making judgements Be able to suggest the choice of machines, plants and relative lay-outs for the different production sectors to improve the qualitative and quantitative aspects of food production.</p> <p>Communication skills. Being able to use a proper simple and technical language in addressing entrepreneurs to maintain good management levels in the agri-food industry.</p> <p>Learning skills. Acquire the ability to link the various factors that influence food production according to the actual knowledge through consultation of scientific publications.</p>
<b>ASSESSMENT METHODS</b>	<p>Oral exam covering the topics of the course. The exam is passed if the vote is greater than 18/30 for both modules.</p> <p>The final vote is given by the arithmetic mean of the votes obtained in the two modules. Rating ranking: starting with the vote of 18/30, conferred when the knowledge is elementary, up to the 30/30 vote with eventual honneurs, when the knowledge is excellent.</p>
<b>TEACHING METHODS</b>	Lectures, technical visits.

**MODULE  
LOGISTICS OF AGRO-FOOD PRODUCTS**

*Prof. GIUSEPPE AIELLO*

**SUGGESTED BIBLIOGRAPHY**

Monte A.. Elementi di impianti industriali vol.I  
Pareschi A., Persona A., Ferrari E., Regattieri A.. Logistica integrata e flessibile. Societa' editrice Esculapio  
Caron F., Wegner R., Marchet G. Impianti di movimentazione e stoccaggio dei materiali. Hoepli  
Christopher M.. Logistics and supply chain management. Prentice Hall  
Appunti del docente

<b>AMBIT</b>	21005-Attività formative affini o integrative
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

Aim of the module is to define the types and working principles of industrial warehouses and their size. Knowledge relating to the management of operational stocks and security will be acquired.

**SYLLABUS**

Hrs	Frontal teaching
6	Introduction to the course and characteristics and classification of production systems
2	Definition of the units to be stocked and transported
7	Transport systems
7	Warehouse typologies and index of performance
7	Warehouse dimension
4	Production management, material requirement planning
17	Stock management
Hrs	Practice
4	Warehouse project
6	Stock management and stock security exercises

**MODULE  
AGRO-FOOD PLANTS**

*Prof.ssa MARIANGELA VALLONE*

**SUGGESTED BIBLIOGRAPHY**

G. Nardin – A. Gaudio – G. Antonel – P. Simeoni Impiantistica enologica – Ciclo tecnologico di vinificazione e progettazione degli impianti – Edagricole  
Oleum - Manuale dell'olio da olive - Edagricole  
Appunti del docente

<b>AMBIT</b>	50546-Discipline della ingegneria agraria
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

The objective of this course is to deepen the technical and functional characteristics of machines and plants for the food industry to obtain quality products. The selection criteria and machine management will be studied for the entire production process of extra virgin olive oil, wine and fruit and vegetables. The food processing machines, storage and packaging of food products will be studied with particular reference to the technical, constructive, operational characteristics of the machines and plants, to their adjustments depending on the characteristics of the input product and the output product.

**SYLLABUS**

Hrs	Frontal teaching
2	Presentation of the course, objectives and role of the agri-food plants
4	Technology cycle of production
2	Machines and wine-making plants. Weighing, sampling, measurement, discharge hopper and primary conveyor
4	De-stemming, crushing, draining, protected atmosphere and pumps
4	Must production, continuous and discontinuous presses, operating cycles
4	Filtration: surface, depth, with deposit, with precoating, with filter layers, traditional tangential, tangential membrane, ultrafiltration and microfiltration, rotary vacuum filtration
2	The bottling plant: palletizing, washing, filling, capping, labeling, boxing and palletizing
4	Olive oil extraction plants. Weighing, sampling, measurement, discharge hopper and primary conveyor
5	Washing, crushing, malaxing, separation with decanter, centrifuge
3	Storing, filtering and packaging
4	Plants for table olives processing
2	Machines and plants for fruits and vegetables processing
8	Machinery and systems for fruit and vegetables conditioning for fresh consumption and ready-to-eat. The cold chain. Packaging machines.
Hrs	Practice
12	Three technical visits to Sicilian Food and Drink Industries