

General Information	
Academic subject	Equipment and plants (C.I. Systems in the Agri-Food Industry)
Degree course	Italiano
Curriculum	
ECTS credits	3
Compulsory attendance	No
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Antonia Tamborrino	antonia.tamborrino@uniba.it	AGR/09

ECTS credits details	3		
Basic teaching activities			

Class schedule	
Period	II semester
Year	2021-2022
Type of class	Lecture- workshops

Time management	
Hours	75
In-class study hours	30
Out-of-class study hours	45

Academic calendar	
Class begins	March, 1st
Class ends	June, 17 nd

Syllabus	
Prerequisites/requirements	Basic knowledge for the design and specifications of machines and plant used food processing industry with particular regard to the sustainability of the process.
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> • Knowledge of the various types of agro-food food processing systems; • Knowledge of machinery and plant solutions adopted for agri-food processing plants. • Knowledge about the layout of the food-processing industry. <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> • Capacity to describe the operation and dimensioning of machines and plants for food processing; • Ability to apply the main typologies of machines commonly used in the agri-food industry, considering both the operating principle and the criteria guiding the choice; <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> • Ability to assess the main design aspects of machines and plant for agri-food processing. • Ability to correctly and critically evaluate plant and machine specifications that can be used depending on the type of product to be processed, the needs and the structure of the company.

	<p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> • Ability to describe the design aspects of machines and plants for agri-food products. • Ability to interact with the various actors involved in a food industry with a technical language. <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> • Ability to deepen and update the knowledge about machines and plant for the food process system of agri-food products.
Contents	<ul style="list-style-type: none"> • Presentation of the course • Introduction • Equipment and machines for olive oil processing • Equipment and machines for wine processing • Equipment and machines for dairy processing • Working times. Working capacity of food industry machinery. Labour productivity.
Course program	
Bibliography	<ul style="list-style-type: none"> • Lessons note • P. De Vita, G. De Vita. "MANUALE DI MECCANICA ENOLOGICA". ULRICO HOEPLI MILANO (2007) • P.J. Fellows, "Food processing technology, principles and practice", CRC Press, Boca Raton Boston New York Washington, DC, 2000. • Peri C. e Zanoni B., "Manuale di Tecnologie Alimentari I", Parte. 1, 2 e 3, CUSL, Milano, 1994. • THE EXTRA-VIRGIN OLIVE OIL HANDBOOK (John Wiley & Sons, Ltd. 2014). • Alfa-Laval. Dairy Handbook. Alfa-Laval, Food Engineering AB. P.O. Box 65, S-221 00 Lund, Sweden.
Notes	
Teaching methods	Course topics will be handled with PowerPoint presentations, video footage, field tour.
Assessment methods (indicate at least the type written, oral, other)	<p>The final exam, unique, total, and collegial, for the Systems in the Agri-Food Industry I.C., consists of an oral test on the topics of three modules ("Food Processing", "Principles of Technical Physics" and "Machinery and Equipment"). The marks are out of 30, as defined in the Didactic Regulations of the Bachelor in Techniques for Sustainable Agriculture.</p> <p>For students enrolled in the academic year of the course, there is an oral exemption test related to the topics of lessons and exercises conducted in the period preceding the test (about half the program). Examination for the Food Processing module is overcome if the student shows at least sufficient preparation, a level of knowledge appropriate to the minimum level of requirements, sufficient mastery of acceptable subject matter and language, and ability to analyse problems and structure of the arguments and has also successfully passed the exemption tests of the other two modules of the C.I. The positive outcomes of the exemption tests of the three modules contribute to the evaluation of Systems in the Agri-Food Industry I.C. and have the validity of one academic year.</p> <p>For students eligible for exoneration, the final oral exam will only cover the topics of lessons and exercises carried out during the period following the exemption test. In this case,</p>

	<p>the assessment of the final exam is expressed as the mean between the mark of the exemption and the final tests. For foreign students the exam can be done in English.</p>
<p>Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are.</p>	<p>The evaluation of the student's preparation is based on established criteria, as detailed in the Didactic Regulations of the Bachelor program. For the final exam, the oral test aims to evaluate the knowledge and skills obtained on the course of both modules. The positive outcome of the oral test will result in the final evaluation of the examination, which will be expressed as the arithmetic mean of the oral tests of the three modules. The final exam is passed with a mark of at least 18/30.</p>
<p>Further information</p>	