

General Information	
Academic subject	Packaging (I.C. Enology and Packaging)
Degree course	Food Science and Technology (L26)
ECTS credits	3 ECTS
Compulsory attendance	No
Teaching language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Carmine Summo	carmine.summo@uniba.it	AGR/15

ECTS credits details	
Basic teaching activities	2.5 ECTS Lectures 0.5 ECTS Laboratory or field classes

Class schedule	
Period	I semester
Course year	Third
Type of class	Lectures and workshops

Time management	
Hours	75
In-class study hours	27
Out-of-class study hours	48

Academic calendar	
Class begins	September 27 th , 2021
Class ends	January 21 th , 2022

Syllabus	
Prerequisites/requirements	Prerequisites: Chemistry; Unit operations of food technology
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Knowledge about the Food Contact Materials (FCM), technological process for the production and the chemical and physical properties ○ Knowledge about the concept of biodegradability of the FCM, production and properties of the biopolymer applied as FCM. <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Applying knowledge about the properties of the FCM in order to select the correct materials function of the foods and the storage conditions applied. <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Ability to correctly direct choices or packaging materials and technologies. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe materials and packaging properties of FCM presented during the course <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Ability to update and deepen the knowledge about food packaging materials and technologies <p>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)</p>
Contents	Definitions and function of the packaging

	<p>Chemical, physical and thermal properties of the FCM. The gas permeability process.</p> <p>The different materials for the FCM; Plastic polymers, metal, paper and glass.</p> <p>Biopolymers and sustainability of the FCM</p>
Course program	
Reference books	<p>Notes from lectures and laboratory classes. Presentations (in pdf) provided by the teacher.</p> <p>Additional readings</p> <p>Gordon L. Robertson, Food Packaging: Principles and Practice, Third Edition. CRC Press, 2013.</p> <p>Joongmin Shin and Susan E.M. Selke, Food Packaging. In: Food Processing: Principles and Applications, Second Edition. Ed: Stephanie Clark, Stephanie Jung, and Buddhi Lamsal. John Wiley and Sons, 2014</p>
Notes	
Teaching methods	<p>Lectures will be presented through PC assisted tools (PowerPoint, video). Field and laboratory classes, reading of regulations will be experienced.</p> <p>Lecture notes and educational supplies will be provided by means of online platforms (i.e.: Edmodo, Google Drive...)</p>
Evaluation methods	<p>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 Bachelor Degree in Food Science and Technology (article 9) and in the study plan (Annex A).</p> <p>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.</p> <p>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 Bachelor's degree in food science and Technology.</p> <p>The foreign student's profit test can be done in English in the way described above</p>
Evaluation criteria	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Describe FCM and their properties <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Describe the possible applications of the materials of the food packaging. Able to understand the technical sheet of the materials <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Express reasonable hypotheses about choice of materials for packaging of food products presented during lectures <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Correct use of technical lexicon of food packaging <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Ability to update personal knowledges about the FCM
Receiving times	The teacher is available from Monday to Friday (8:00 am – 6:00 pm) only by appointment