

Academic subject: Packaging Technologies			
Degree Class: LM-86		Degree Course: Safety and Health of Food of Animal Origin	
		Academic Year: 2020/2021	
		Kind of class: mandatory	
		Year: II	Period: I semester
		ECTS: 5 divided into ECTS lessons: 4 ECTS exe/lab/tutor: 1	
Time management, hours, in-class study hours, out-of-class study hours lesson: 40 exe/lab/tutor: 25 in-class study: 0 out-of-class study: 60			
Language: Italian		Compulsory Attendance: no	
Subject Teacher: Maria Lisa Clodoveo		Tel: e-mail: marialisa.clodovoe@uniba.it	
		Office: Interdisciplinary Department of Medicine Room Floor	
		Office days and hours: Monday to Friday (8:00 am – 6:00 pm) only by appointment	
Prerequisites: knowledge of the Food Contact Materials (FCM) and their properties			
Educational objectives: <i>Knowledge and understanding</i> Describe the different packaging and filling technologies and the influence on the quality of foods and beverages. Describe the aspects linked to the quality decrease during storage of foods and beverages. Define the tests for the shelf-life assessment of foods and beverages. <i>Applying knowledge and understanding</i> Describe the applications of the packaging and filling technologies. Apply the different test for the shelf-life assessment and capacity to understand the results. <i>Making informed judgements and choices</i> Make reasonable hypotheses about the modulate of technological parameters in the packaging and filling technologies Make reasonable hypotheses to choose the test able to simulate and forecast the shelf-life of foods and beverages. <i>Communicating knowledge and understanding</i> Describe the packaging and filling technologies using technical lexicon.			
Expected learning outcomes (according to Dublin Descriptors)		Knowledge and understanding: Knowledge of the packaging and filling technologies and their influence on the food quality. o Knowledge about the aspects linked to quality decrease during storage of foods and beverages. o Knowledge of the tests for the shelf-life assessment. Applying knowledge and understanding: Ability to Apply knowledge about the packaging and filling technologies and the shelf-life assessment Making judgements: Ability to choose the correct packaging technologies able to preserve the food quality and extend the shelf-life. o Ability to choose the test for the shelf-life assessment Communication: Ability to describe the packaging technologies, the test for the shelf-life assessment and to understand the results. Lifelong learning skills: Ability to deepen and upgrade their skills respect to the food packaging technologies and the shelf-life assessment 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)

Course program

Packaging and filling technologies.

Packaging technologies for food quality: Sterilization of materials and packs, ATM and functional packaging.

Example about the applications of the packaging technologies on animal and vegetable foods.

Shelf-life of foods: Quality parameters and limits of acceptability.

Tests for the shelf-life assessment.

Teaching methods:

Lectures will be presented through PC assisted tools (PowerPoint, video). Field and laboratory classes, reading of regulations will be experienced.

Lecture notes and educational supplies will be provided by means of online platforms (i.e.: Edmodo, Google Drive...)

Auxiliary teaching:

Material developed and provided by the teacher, blackboard, photocopies and use of visuals and power point presentations.

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 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).

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.

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 Safety of Animal Origin and Health.

Bibliography:

Piergiovanni, L., & Limbo, S. (2010). *Food packaging: materiali, tecnologie e soluzioni*. Springer Science & Business Media.