

General Information	
Academic subject	Food analyses (I.C. Food quality certifications and analyses)
Degree course	Bachelor programme: Food Science and Technology
ECTS credits	4 ECTS
Compulsory attendance	No
Teaching language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Giacomo Squeo	giacomo.squeo@uniba.it	AGR 15

ECTS credits details	
Basic teaching activities	2 ECTS Lectures 2 ECTS Laboratory or field classes

Class schedule	
Period	II Semester
Course year	Third
Type of class	Lectures and laboratory exercitation

Time management	
Hours	100
In-class study hours	44
Out-of-class study hours	56

Academic calendar	
Class begins	March 1 st , 2022
Class ends	June 17 th , 2022

Syllabus	
Prerequisites/requirements	Prerequisites: "Chemistry" Knowledge about the food composition and of the analytical parameters applied for the evaluation of the food quality.
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Knowledge and understanding about the analytical methods applied for the determination of the composition and the quality of foods <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to apply the analytical methods for the determination of the composition and the quality of foods <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Ability to choose the analytical procedures and methods able to assess the quality parameters of foods <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe the analytical procedures and methods able to assess the quality parameters of the preserved foods <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Ability to deepen and update the knowledge regarding analytical procedure for the food quality assessment <p>The learning outcomes, in terms of knowledge and ability, are detailed in the Regulation of Bachelor in Food Science and Technology - Annex A (expressed by European descriptors in the framework of food technology field).</p>
Contents	Sampling and treatment of samples in the analysis of foods; Analytical methods for the evaluation of the composition of foods: Determination of the water content activity water of foods; Determination of the lipid content of food by Soxhlet method; Determination of the protein content of foods by Kjeldhal method;

	<p>Determination of the carbohydrate content by chemical and physical procedures.</p> <p>Analytical determination for the quality evaluation of the vegetable oils: free acidity, peroxide number, UV parameters.</p> <p>Analytical determination for the quality evaluation of the wine: total and volatile acidity. Measurement of the alcoholic strength by distillation and Malligand methods. Sulphur anhydride determination.</p> <p>Analytical determination on for the quality evaluation of milk: Density, pH and total solid. Total fat by Gerber method. Total acidity and protein content determination.</p>
Course program	
Reference books	<ul style="list-style-type: none"> • Notes of the lectures distributed during the course (all the support materials are available online by means of the Edmodo educational network). • Cabras P., Tuberoso C.I.G. – Analisi dei Prodotti Alimentari. Piccin edizioni 2010. • Moret S., Purcaro G., Conte L.S. Il campione per l'analisi chimica – tecniche innovative ed applicazioni nei settori agroalimentare e ambientale – Springer edizioni, 2014. • AOAC international, Official methods of analysis
Notes	
Teaching methods	<p>All the topics will be treated through Power Point presentations, videos and laboratory esercitazioni. on-line platforms such as Edmodo, google drive, mailing list of students to provide didactic materials and to interact with the students will be moreover used.</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 Degree in Food Science and Technology.</p> <p>Non-Italian students may be examined in English language, according to the aforesaid procedures.</p>
Evaluation criteria	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Prove to know the analytical methods for the assessment of the foods composition and quality <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Prove to be able to apply the analytical methods for the assessment of the foods composition and quality <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Prove to be able to choose the correct analytical method for the assessment of the foods composition and quality <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Prove to be able to communicate the analytical procedures applied in food analysis context <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Prove to be able to deepen and update the knowledge regarding analytical procedures applied in food analysis context
Receiving times	Monday-Friday, 9-11 am and 3-5 pm after agreement by e-mail.

