

General Information	
Academic subject	Organic Chemistry
Degree course	Bachelor programme: Food Science and Technology
ECTS credits	3 ECTS
Compulsory attendance	No
Teaching language	Italian

Subject teacher	Name Surname	Mail address	SSD
	<b>Roberto Terzano</b>	<a href="mailto:roberto.terzano@uniba.it">roberto.terzano@uniba.it</a>	AGR/13

ECTS credits details	
Basic teaching activities	2 ECTS Lectures   1 ECTS Laboratory classes

Class schedule	
Period	I semester
Course year	First
Type of class	Lectures - Exercises

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

Academic calendar	
Class begins	October 18, 2021
Class ends	January 28, 2022

Syllabus	
Prerequisites/requirements	
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>Basic knowledge of the structure, properties and reactivity of the main classes of organic molecules of relevance in food science; understanding the relationship between chemical structure and reactivity useful to the interpretation of biological and technological processes of food transformation</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>Ability to utilize chemical knowledge to understand and apply correctly transformation, storage and distribution procedures related to food and beverage</li> </ul> <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> <li>Awareness and autonomy of judgment in using chemical knowledge in the subsequent courses</li> </ul> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>Ability to name and describe the structure, properties and reactivity of the main classes of organic molecules of biological and food interest</li> </ul> <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> <li>Ability to deepen and update the knowledge about the chemical and chemical-physical processes in the agri-food sector</li> </ul> <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	Representing organic molecules; resonance structures.

	<p><b>Alkanes:</b> structure, isomerism, nomenclature, properties, reactivity; cycloalkanes: structure, conformations, cis-trans isomerism, nomenclature.</p> <p><b>Alkenes:</b> structure, isomerism, nomenclature, properties, reactivity: electrophilic addition; polyenes.</p> <p><b>Alkynes:</b> structure, nomenclature.</p> <p>Stereoisomery and Enantiomery.</p> <p><b>Aromatic compounds:</b> structure, nomenclature, properties, reactivity: electrophilic aromatic substitution; benzene and its derivatives; polycyclic aromatic hydrocarbons; heterocyclic aromatic compounds.</p> <p><b>Alcohols, thiols, phenols, ethers:</b> structure, nomenclature, properties.</p> <p><b>Amines:</b> structure, nomenclature, properties.</p> <p><b>Carbonyl compounds (aldehydes, ketones, carboxylic acids, acyl halides, esters, amides, anhydrides):</b> structure, nomenclature, properties, reactivity.</p>
Course program	
Reference books	<ul style="list-style-type: none"> <li>Lecture notes and teaching material made available during the course</li> <li>W.H. Brown, T. Poon, <b>Introduction to Organic Chemistry</b>, 6<sup>th</sup> edition, John Wiley and Sons Inc.</li> </ul>
Notes	
Teaching methods	Course contents will be presented through PowerPoint, blackboard and multimedia tools.
Evaluation methods	<p>The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom, 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 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 skills 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"> <li>Knowledge of the structure of the main classes of organic molecules and of their properties and reactivity</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>Understanding the basic principles of organic chemistry for applications in food science</li> </ul> <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> <li>Making correct hypotheses on the products, energy and kinetics of chemical processes involving organic molecules</li> </ul> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>Describing the structure and properties of the main organic molecules of biological and food relevance</li> </ul> <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> <li>Ability to understand phenomena related to the transformation and conservation of food</li> </ul>
Receiving times	Every day on appointment to be defined by e-mail.

