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
	Roberto Terzano	roberto.terzano@uniba.it	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 12th, 2020
Class ends	January 22th, 2021

Syllabus	
Prerequisites/requirements	
Expected learning outcomes	*Knowledge and understanding* ○ 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 *Applying knowledge and understanding* ○ Ability to utilize chemical knowledge to understand and apply correctly transformation, storage and distribution procedures related to food and beverage *Making informed judgements and choices* ○ Awareness and autonomy of judgment in using chemical knowledge in the subsequent courses *Communicating knowledge and understanding* ○ Ability to name and describe the structure, properties and reactivity of the main classes of organic molecules of biological and food interest *Capacities to continue learning* ○ Ability to deepen and update the knowledge about the chemical and chemical-physical processes in the agri-food sector 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)
Contents	Representing organic molecules; resonance structures.

	Alkanes: structure, isomerism, nomenclature, properties, reactivity; cycloalkanes: structure, conformations, cis-trans isomerism, nomenclature. Alkenes: structure, isomerism, nomenclature, properties, reactivity: electrophilic addition; polyenes. Alkynes: structure, nomenclature. Enantiomers. Alkyl halides: structure, nomenclature, reactivity: nucleophilic substitution, elimination reactions. Aromatic compounds: structure, nomenclature, properties, reactivity: electrophilic aromatic substitution; benzene and its derivatives; polycyclic aromatic hydrocarbons; heterocyclic aromatic compounds. Alcohols, thiols, phenols, ethers: structure, nomenclature, properties. Ammines: structure, nomenclature, properties. Carbonyl compounds (aldehydes, ketones, carboxylic acids, acyl halides, esters, amides, anhydrides): structure, nomenclature, properties, reactivity. Oxidation and reduction of functional groups; radicals.
Course program	
Reference books	• Lecture notes and teaching material made available during the course • W.H. Brown, T. Poon, **Introduction to Organic Chemistry**, 6th edition, John Wiley and Sons Inc.
Notes	
Teaching methods	Course contents will be presented through PowerPoint, blackboard and multimedia tools.
Evaluation methods	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). 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. 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. Non-Italian students may be examined in English language, according to the aforesaid procedures.
Evaluation criteria	*Knowledge and understanding* ○ Knowledge of the structure of the main classes of organic molecules and of their properties and reactivity *Applying knowledge and understanding* ○ Understanding the basic principles of organic chemistry for applications in food science *Making informed judgements and choices* ○ Making correct hypotheses on the products, energy and kinetics of chemical processes involving organic molecules *Communicating knowledge and understanding* ○ Describing the structure and properties of the main organic molecules of biological and food relevance *Capacities to continue learning*

	○ Ability to understand phenomena related to the transformation and conservation of food
Receiving times	Every day on appointment to be defined by e-mail.