

General information	
Academic subject	Food Biochemistry
Degree course	Bachelor programme: Food Science and Technology
ECTS credits	6 ECTS
Compulsory attendance	No
Teaching language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Carmine Crecchio	carmine.crecchio@uniba.it	AGR/13

ECTS credits details	
Basic teaching activities	4 ECTS Lectures 2 ECTS Laboratory classes

Class schedule	
Period	I semester
Course year	Second
Type of class	Lecture- laboratory

Time management	
Hours	150
In-class study hours	60
Out-of-class study hours	90

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

Syllabus	
Prerequisites/requirements	Prerequisites: "Chemistry" Basic knowledge in general and organic chemistry and cell structure and functioning
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> Introduction to food biochemistry and metabolic processes <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> knowledge of the biochemical system of animals and plants. <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> Capacity to use the acquired information to be used for further studies. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> Capacity to describe the metabolic pathways of the main food components in animals and plants. <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> Capacity to upgrade at higher levels the knowledge relative to biosynthesis and degradation of the main food biomolecules by animal and plant organisms <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	<p>Adsorption, anabolism and catabolism of glycidis.</p> <p>Adsorption, anabolism and catabolism of lipids.</p> <p>Adsorption, anabolism and catabolism of proteins.</p> <p>Anabolism and catabolism of vitamins.</p> <p>Photosynthetic production of glycidis.</p> <p>Theory and applications in biochemistry of centrifugation, cell</p>

	lysis and fractionation, electrophoresis.
Course program	
Reference books	<ul style="list-style-type: none"> • Slides used during the course. • Pinton, Cocucci, Nannipieri, Trevisan: Fondamenti di Biochimica Agraria, 2016, Patron Editore, Bologna • Principi di Biochimica – Settima edizione, Nelson, Cox – Zanichelli. • Introduzione alla Biochimica di Lehninger – Sesta Edizione Nelson, Cox – Zanichelli. • Wilson, Walker. Biochimica e biologia molecolare – Principi e tecniche. Raffaello Cortina Ed. • Wilson, Walker. Metodologia biochimica: le bioscienze e le biotecnologie. Raffaello Cortina Ed.
Notes	
Teaching methods	<p>Course contents will be presented through PC assisted tools (Powerpoint slides) and laboratory practical experiences.</p> <p>Lecture notes and educational supplies will be provided by means of a mailing list or online platforms (i.e.: Edmodo, Google Drive...)</p>
Evaluation methods	<p>During the course, the students will have the possibility to attend an intermediate written exam. The results of this partial exam will contribute to the final evaluation that will be obtained by sustaining an oral exam at the end of the course, dealing with the unverified part of the program. The results of the intermediate exam will be considered valid for one year. Students from abroad may have their evaluation exams in English.</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 Degree in Food Science and Technology.</p>
Evaluation criteria	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Describe the main metabolic pathways of food biomolecules in animal and plant systems <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Describe the importance of biochemical studies to understand the functioning of higher plants and animals <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Capacity to understand the importance of the biochemical processes in living cells <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Capacity to describe the metabolic pathways of biomolecules present in food <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Capacity to use the chemical background to understand and describe the main cellular metabolisms
Receiving times	Every afternoon following phone or e-mail appointments