

General Information	
Academic subject	Biochemistry (I. C.: Food Biochemistry and Genetics)
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
	Maria Pizzigallo	maria.pizzigallo@uniba.it	AGR/13

ECTS credits details		
Basic teaching activities	2.5 ECTS Lectures	0.5 Laboratory classes

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

Time management	
Hours	75
In-class study hours	27
Out-of-class study hours	48

Academic calendar	
Class begins	October 2 nd , 2017
Class ends	January 26 th , 2018

Syllabus	
Prerequisites/requirements	Prerequisites: "Chemistry" Knowledge of chemical and physico-chemical basic concepts
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ The basic knowledge of structure and properties of the molecules that make up living organisms <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Capacity to utilize basic biochemistry notions to understand to transformation of biomolecules and energy in the metabolisms of food biochemistry <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Awareness and autonomy of judgment to use the knowledge in the subsequent courses <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe the constituents of living matter and biochemical phenomena related <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Ability to deepen and update the knowledge about the biochemical processes <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>Structures and function of the biological macromolecules. Bioenergetics and enzymatic kinetics, ATP cycle.</p> <p>Structure and functions of membranes and cell wall.</p> <p>Principles of spectrophotometry and application to the enzymatic activity measure</p>
Course program	

Reference books	<ul style="list-style-type: none"> • Notes of the lectures distributed during the course. • Nelson D. e Cox M.M.: <i>I principi della biochimica di Lehninger</i>, 2014, Zanichelli, Bologna. • For foreign students (LLP-Erasmus, Tempus, ecc.) text book in english language is: • D.L. Nelson, M.M. Cox: <i>Lehninger principles of biochemistry</i>, 4th edition Freeman and Company, New York and Basingstoke
Notes	
Teaching methods	Course contents will be presented through PC assisted tools (Powerpoint).
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 A 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"> ○ Describe the structure and function of 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 bioenergetic and enzymatic catalysis <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Capacity to understand the importance of the structures and functions of biomolecules in living cells <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Capacity to describe structures and functions of biological macromolecules; bioenergetics and enzymatic catalysis; structure and function of membranes <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Capacity to deepen and update the knowledge about the biochemical processes
Receiving times	All afternoons previous telephonic or E-mail appointment