
	PROCESO PARA EL DESARROLLO DE LAS ENSEÑANZAS DE LA ESCUELA DE INGENIERÍAS AGRARIAS		
		CÓDIGO: P/CL009_D002	

PROGRAMME IN FOOD TECHNOLOGY

Academic course: 2019-2020

Identification and characteristics of the subject					
Code	501246			Créditos ECTS	6
Name (Spanish)	Bioquímica				
Name (English)	Biochemistry				
Degree	ENGINEERING IN AGRICULTURAL AND FOOD INDUSTRIES				
Center	Agricultural Engineering School				
Semester	(5th)	Type	Compulsory		
Module	Specific Technology				
Subject	Biochemistry				
Language	Spanish				
Professor/s					
Name	Room	e-mail	Web link		
Francisco Javier Martin Romero	DBQ4	fjmartin@unex.es			
Jaime M^a Merino Fernandez	DBQ2	jmmerino@unex.es			
Fernando Henao Davila	DBQ6	fhenao@unex.es			
Field of knowledge	Biochemistry and Molecular Biology				
Department	Biochemistry and Molecular Biology and Genetics				
Coordinator (if there is more than one professor)	Francisco Javier Martin Romero				
Lessons and contents					
Syllabus					
<p>SECTION I.- STRUCTURAL BIOCHEMISTRY</p> <p><u>Lesson 1. Aminoacids, peptides, and proteins.</u></p> <p><u>Lesson 2. Protein structure and spatial conformation</u></p> <p><u>Lesson 3. Monosaccharides and polysaccharides</u></p> <p><u>Lesson 4. Lipids and biological membranes</u></p> <p><u>Lesson 5. Nucleotides.</u></p> <p><u>Lesson 6. DNA replication.</u></p>					

Lesson 7. RNA transcription.

Lesson 8. Protein synthesis: translation.

Lesson 9. Regulation of gene expression.

SECTION II.- ENZIMOLOGY.

Lesson 10. Enzymes and enzymatic catalysis

Lesson 11. Introduction to intermediate metabolism

SECTION III.- METABOLISM.

Lesson 12. Glycolysis and Gluconeogenesis

Lesson 13. Tricarboxylic acids cycle

Lesson 14. Mitochondrial respiratory chain.

Lesson 15. Glycogen metabolism.

Lesson 16. Photosynthesis.

Lesson 17. Biosynthesis of hexoses in plants.

Lesson 18. Fatty acids metabolism.

PRACTICAL SYLLABUS

Practical lesson #1: **Protein concentration measurement.**

Practical lesson #2: **Enzymatic kinetics.**

Practical lesson #3: **Enzymatic inhibition.**

Practical lesson #4: **Molecular chromatography**

Practical lesson #5: **DNA restriction enzymes**