



PROTEIN CHEMISTRY

COORDINATION

MORERA PRAT, JOSEP MARIA

ACADEMIC YEAR

2023-2025

SUBJECT GENERAL INFORMATION

Subject name	PROTEIN CHEMISTRY			
Code	1SEM-SUB2			
Typology	1st semester. Continued evaluation.			
Course number of credits (ECTS)	6			
Type of activity, credits, and groups	Degree	Course	Character	Modality
	Joint Master Degree in Leather Technology	1	Compulsory	Blended learning
Coordination	MORERA PRAT, JOSEP MARIA			
University	UdL			
Language	English			

LEARNING OBJECTIVES

1. Know the definition of amino acids, peptides and proteins
2. Formulate amino acids, peptides and proteins correctly
3. Know and apply the acid-base properties of amino acids
4. Know the structure of proteins
5. Know the factors that influence the denaturation of proteins
6. Know the composition of collagen
7. Know the main applications of collagen
8. Know the main chemical reactions that affect the tanning process
9. Know the main types of tanning and retanning

LEARNING OUTCOMES

Basic

CB6 Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.

CB7 That students have the learning skills that allow them to continue studying in a way that will be largely self- directed or autonomous.

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General

CG1 Appropriately apply mathematical, analytical, scientific, instrumental, technological and management aspects.

Specific

CE2 Analyse, apply and project the main unit operations and the systems that make up the leather manufacturing process.

CE4. Apply theories and principles of leather engineering in order to analyse complex situations and make decisions through engineering resources.

CE9 Project, calculate and design products, processes, facilities and plants, related to the field of leather engineering.

SUBJECT CONTENT

THEORY

1. Amino acids, peptides and proteins
2. The collagen
3. Main reactions of collagen during the tanning process
4. Stabilization of collagen: Types of tanning

LABORATORY PRACTICES

1. Buffering simulation in deliming
2. Manufacture of a chrome liquor
3. Study of the reduction-oxidation of chrome salts
4. Masking of chrome salts
5. Detanning methods
6. Leather faded

METHODOLOGY

1. MASTER CLASSES. THEORETICAL EXPLANATION REINFORCED WITH EXAMPLES.
2. PROBLEMS. DISCUSSION AND CORRECTION OF EXERCISES PROPOSED AT HOME. THE EXERCISES WILL BE PROVIDED TO THE STUDENT IN A DOSSIER.
3. PRACTICES. IN THE LABORATORY FOR GROUPS. EACH GROUP WILL HAVE TO SUBMIT A REPORT.
4. WRITTEN EVIDENCE. EXERCISE RESOLUTION BY THE STUDENT INDIVIDUALLY.

EVALUATION

In the middle of the course, there will be an eliminatory midterm exam. At the end of the course, there will be a second midterm exam and a final exam.

At the end of the course, the student who passed the first midterm exam will have the possibility of taking the second midterm exam or doing the final exam. The student who has suspended the first midterm exam may only take the final exam. Each midterm exam will be worth 35% of the final mark of the subject and the final exam will be 70%. The exercises presented and evaluated during the course will weigh 10% of the final mark of the subject.

Exercises	10%
Practices	20%

Midterm exam 1 35%

Midterm exam 2 35%

Final Exam 70%
