



DOUBLE-FACE PRODUCTION TECHNOLOGY

COORDINATION

ADIGÜZEL ZENGİN, ARİFE CANDAŞ

ACADEMIC YEAR

2023-2025

SUBJECT GENERAL INFORMATION

Subject name	DOUBLE-FACE PRODUCTION TECHNOLOGY			
Code	2SEM-SUB4			
Typology	2nd 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	ADIGÜZEL ZENGİN, ARİFE CANDAŞ			
University	EGE			
Language	English			

LEARNING OBJECTIVES

1. Understand the chemical fundamentals in double face production.
2. Recognize the environmental impact of each differentiated double face operation.
3. Solve technical problems occurred in double face manufacturing processes.
4. Suggest solutions for possible defects and redesign the process.
5. Analyse the variables that affect the double face leather quality.
6. Recognize and identify of differentiates of the double face leathers used in shoe upper and garment leather.

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.

CB10 That students have the learning skills that allow them to continue studying in a way that will be largely self- directed or autonomous.

General competitions

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

CG2. Technically and economically manage projects, facilities, plants, companies and technology centres

CG3. To investigate, develop and innovate.

Transversal

CT3 Propose innovative, creative and entrepreneurial solutions in situations typical of the professional field

Specific

CE1 Analyse the different raw materials, intermediate and final products in the leather manufacturing process

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 using engineering resources

CE5. Identify the main industrial processes of leather manufacturing in its three phases: beamhouse, tanning and post-tanning and finishing

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

SUBJECT CONTENT

1. FUR LEATHERS, REQUIRED PROPERTIES, TYPES OF RAW HIDES USED IN PRODUCTION

L1.1 Introduction of the Course: Content, Importance, Rules, and Requirements. Definition of fur leathers and required properties from double face leathers

L1.2 Types of raw skins used in double face production

2. GENERAL PRINCIPLES OF FUR PRODUCTION

L2.1 Histological structure of wool and leather

L2.2 Main production principles of double face production

L2.3 Differences of double face production in chemical and mechanical operations

3. PRE / POST TANNING OF FUR PRODUCTION

L3.1 Beamhouse processes of double face

Soaking, Degreasing, Bating, Pickling

L3.2 Tanning and Post tanning processes for double face

Tanning, Wool Dyeing, Neutralization, Dyeing, Retanning, Fatliquoring

L3.4 Mechanical operations of double face production

All mechanical operations performed in double face production

4. DOUBLE-DACE PRODUCTION FOR GARMENT AND SHOE UPPER LEATHERS

L4.1 Double face leather production for shoe upper leathers

L4.2 Double face leather production for garment use

METHODOLOGY

THEORY CLASSES

Expository lectures: by the teacher, with the explanation of concepts, materials, and work plan. Support.

Material: Course notes and relevant bibliography.

EXERCISES AND SELFSTUDY

General description: Individual exercises, self-learning, and individual study. Support material: Course notes and relevant bibliography.

Deliverable: Exercises to deliver at the end of every unit via digital campus.

PRACTICES IN THE PILOT PLANT

General description: Formulations of different processes will be performed on a pilot level, individually or in small groups. It should be performed a notebook where to recorded all the modifications of the process and used products during the process.

Support material: Practices are held at the tanning pilot plant. All materials and reagents are in the same pilot plant. The scripts of the processes will be provided by the teacher in charge of monitoring practices.

Deliverable: At the end of these practices the student shall deliver the practices report, which will content note of all the data, calculations, incidents, and observations.

EVALUATION

Exercises	15%
Practices	30%
Exam 1	20%
Exam 2	35%