INTERNATIONAL JOINT MASTER IN INNOVATIVE LEATHER TECHNOLOGY

INSTRUMENTAL ANALYSIS

COORDINATION
ZENGİN, GÖKHAN

ACADEMIC YEAR
2023-2025

SUBJECT GENERAL INFORMATION

Subject name	**INSTRUMENTAL ANALYSIS**			
Code	*4SEM-GC-SUB2*			
Typology	*4th semester. Continued evaluation.*			
Course number of credits (ECTS)	*3*			
Type of activity, credits, and groups	*Degree*	*Course*	*Character*	*Modality*
	Joint Master Degree in Leather Technology	*1*	*Compulsory*	*Blended learning*
Coordination	*ZENGİN, GÖKHAN*			
University	*EGE*			
Language	*English*			

LEARNING OBJECTIVES

1- Put the students within a situation where the 4 main problematics of a company come up in order for them to understand the essential bases that make up the priorities of a new CEO.

LEARNING OUTCOMES

Basic

CB010 That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.

General

CG02. Technically and economically manage projects, facilities, plants, companies and technology centres.

CG04. Lead, plan and supervise multidisciplinary teams.

Transversal

CT03. Propose innovative, creative and entrepreneurial solutions in situations typical of the professional field.

Specific

CE13. Integrate solutions and business processes to meet the information needs of organizations, allowing them to achieve their objectives effectively and efficiently, thus giving them competitive advantages.

SUBJECT CONTENT

1. BUSINESS MODEL SIMULATION

1. INTODUCTION TO THE SPECTROSCOPY TECHNIQUES

L1.1 Introduction to instrumental analysis and the application principles.

L1.2 Radiation

2. UV-VISIBLE, INFRARED, MASS, NMR SPECTROSCOPY

L2.1 Introduction the spectroscopy techniques and the general application rules.

L2.2 UV-Visible spectroscopy, **Lambert** Beer.

L2.3 Infrared spectroscopy.

L2.4 Mass spectroscopy.

L2.5 Nuclear magnetic resonance (NMR) spectroscopy.

3. THIN LAYER CHROMATOGRAPHY, GC, HPLC

L3.1 Introduction to Chromatography Techniques

L3.2 Gas chromatography (GC)

L3.3 High pressure liquid chromatography (HPLC)

METHODOLOGY

SERIOUS GAME

General description: group exercises based on a company simulation (production, marketing and financial aspects).

Deliverable: Oral presentation of the business model strategies chosen.

EVALUATION

Exercises	40%
Exercises	60%