

# COURSE SYLLABUS

<b>University</b>	<b>UNIVERSITY OF ORADEA</b>
<b>Faculty</b>	<b>FACULTY OF ENERGY ENGINEERING AND INDUSTRIAL MANAGEMENT</b>
<b>Study program*</b>	<b>QUALITY MANAGEMENT AND CONSUMER'S PROTECTION IN THE FIELD OF TEXTILES AND LEATHER</b>

## I. Course Name: Environmental impact of Textiles and Leather

## II. Course Details

Code	Semester	No of hours/week				
		Credits	Lecture	Seminar	Laboratory	Project
<b>IEMI-0413</b>	<b>I</b>	<b>5</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>

## III. Course coordinator (title, name, surname, e-mail):

Associate Professor PhD. Eng., Albu Adina-Victoria, [adina\\_victoria@yahoo.com](mailto:adina_victoria@yahoo.com)

## IV. Course objectives

- developing the capacity to contribute to improving the quality of processes and products in the textile and leather sector, in order to reduce their impact on human health and the environment.
- acquiring general principles to highlight the fundamental aspects of environmental quality following textile and leather production, as well as improving technological processes to eliminate textile and leather waste and pollutants..
- understanding the manner of developing the extension of environmental protection measures in leather clothing and footwear enterprises, performance indicators and the level of environmental quality

V. Course content	No. of hours
<b>V.1. Lecture (chapters/subchapters and paragraphs)</b>	
Eco textiles - a current concept	1
The impact of the textile industry on the environment	1
The impact of the textile industry on human health	1
The impact of the leather industry on the environment	1
The impact of the leather industry on human health	1
Textile waste management	1
Leather and substitute waste management	1
Best available recovery techniques for the textile industry	1
The best recovery techniques available for leather tanning	1
Eco-label for textile products	1
Eco-label for footwear	1
Ecological management in the context of sustainable development	1
Integrated waste management systems	1
European legislation in the field of environmental impact	1
<b>V.2. Project:</b>	
Biodegradability of organic compounds	2
Ecological and toxicological characteristics of textile dyes and auxiliaries	2
Ecological and toxicological characteristics of complex agents and surfactants	2
Self-purification and treatment of wastewater from the textile and leather industry	2
Eco-labeling; references to the presence of pesticides, dyes and PH value	2
Environmental audit. Methods for determining environmental quality	2
Case study on environmental quality in textile manufacturing enterprises - clothing and footwear	2

## VI. Bibliography

1. Albu, A.V. – The ecological impact of products and technologies in the textile-leather field – collection of papers for the seminar, E-Learning, e.uoradea.ro, Oradea, 2022
2. Berteau, A., Butnaru, R. – Ecological and toxicological aspects of chemical textile finishing, “Dosoftei”

Publishing House, Iași, 1997

3. Giri, C. – Pollutants & waste streams in textile industry, Indian journal of environment & health, 2003

4. Ionescu, C. – How to build and implement an environmental management system in accordance with ISO 14001, Economic Publishing House, Bucharest, 2000

5. Olinescu, R., Greabu, M. – Mechanisms of defense of the body against chemical pollution, Technical Publishing House, Bucharest, 1990

## VII. Grading criteria

Activities	Assessment	% of final grade
Exam	<p>Written exam:</p> <p>1. Requirements to get the minimum grade for passing the exam Knowledge and understanding of the course content at the level of basic ideas. For the minimum grade, the student must correctly solve 5 questions on the final exam. Solving at least half of the quizzes in the written exam.</p> <p>2. Requirements for the maximum grade Knowledge and understanding of the course content at the level of high ideas. For the minimum grade, the student must correctly solve 10 questions on the final exam. Solving all the quizzes in the written exam.</p>	70%
Seminar/Laboratory/Project	The evaluation of the laboratory activity is based on tests (10%), the paper produced and presented (10%), and the method of active participation in debates (10%).	30%

## VIII. Learning outcomes:

The student/graduate has knowledge of elementary concepts and notions relating to principles, laws, basic notions in the field of engineering, analyzes and processes their application in the case of ecological impact and environmental audit, necessary for carrying out production activity.

Done on the date: 20.09.2025

Approved in the FC meeting: 24.09.2025

Course coordinator,

**Associate Professor PhD. Eng., Albu Adina-Victoria**