

# 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>KNITTING AND CLOTHING TECHNOLOGY</b>

## I. Course Name: RAW MATERIALS FOR TEXTILES - LEATHER

## II. Course Details

No of hours/week						
Code	Semester	Credits	Lecture	Seminar	Laboratory	Project
<b>IEMI-0768</b>	<b>III</b>	<b>5</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>-</b>

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

Associate Professor PhD. Eng., Albu Adina-Victoria, adina\_victoria@yahoo.com

## IV. Course objectives

- mastering the general principles of development and familiarizing students with the basic concepts and notions in the field of supplying materials necessary for textile and leather products.
- acquiring skills in understanding processes and developing documentation that comply with the norms of the international ISO standard for raw materials in textiles and leather production

<b>V. Course content</b>	<b>No. of hours</b>
<b>V.1. Lecture (chapters/subchapters and paragraphs)</b>	
General notions of textile fibers and their classification. Structure and composition of textile fibers. Physical, mechanical, chemical properties of textile fibers.	2
Natural Cellulosic Fibers 1. Cotton. Obtaining cotton fiber. 2. Bast fibers. Flax, hemp fibers. 3. Animal fiber. Wools, goat, camel fibers. Silk fibers.	2
Fibers obtained chemically from natural polymers. Cellulosic fibers: Viscose fibers, cellofiber, polynosic fibers, cuproammonium fibers, acetate.	2
Chemically obtained fibers from synthetic polymers. 1. Polyamide fibers: relon. 2. Polyester fibers 3. Polyurethane elastomer fibers 4. Polyacrylic fibers (melana) 5. Polyvinyl alcohol fibers PAV	2
Textile yarns. Classification of yarns. Woven fabrics and knitwear. Cotton fiber fabrics. Linen and hemp yarn fabrics. Wool yarn fabrics. Silk yarn fabrics. Knitwear, generalities, classification.	2
Auxiliary materials used in textile garments, which are classified into: linings, reinforcements, trims, supplies and accessories. Furs, as a base material, for the face of the product or as a trim for fabric products, for collars, cuffs, pockets.	2
1. General information about finished leathers – definition, classification, areas of use, resources 2. Characteristics of finished leathers 2.1. Structure and microstructure of finished leathers	2
3. Assortments of finished leathers 3.1. Flexible finished leather, assortments, characteristics, areas of use 3.2. Rigid finished leathers, assortments, characteristics, areas of use	2
4. Flexible leather substitutes 4.1. General characteristics in correlation with quality characteristics; Sewing threads. 4.2. Textile-based substitutes: structure, composition, quality areas.	2

4.3. Unsupported Substitutes	
4.4. Rigid leather substitutes	
5. Adhesives for bonding joints	
6. Auxiliary materials.	
6.1. Metal and wooden materials	2
6.2. Textile auxiliaries used for joining	
6.3. Fabrics, knits and veils for leather garments	
7. Paints and finishes for finishing footwear	2
Intelligent textile materials. Generalities, classification.	2
Composite textile materials. Used in different industries.	2
<b>V.2. Laboratory/Seminar/Project:</b>	
Materials used in the leather clothing industry and substitutes, characteristics, uses Harvesting and conditioning of samples required for various types of physical/mechanical tests.	4
Determination of elongation and strength of finished leathers and flexible substitutes Determining elasticity figures for leathers intended for technical articles	4
Determination of tear resistance for finished leathers and substitutes Determination of the film friction resistance of finished leathers	4
Determination of the stiffness (flexibility) of finished leathers and substitutes Determination of water, air and water vapor permeability	4
Determination of the shrinkage index of finished leathers Determining the shrinkage of skin substitutes	4
Determination of the resistance of the paint coating of finished leather to the action of organic solvents	4
Knowledge check	4

## VI. Bibliography

<ol style="list-style-type: none"> <li>1. Albu Adina-Victoria – Raw materials for leather textiles – Course notes, E-Learning(e.uoradea.ro), Oradea, 2025</li> <li>2. Bordeianu L., Gribincea V., Textile fibers, vol. 1, 2, Performantica Publishing House, Iași, 2002</li> <li>3. Bucevschi M.D., Negreanu D.S. Artificial and synthetic leathers, Technical Publishing House Bucharest, 1990</li> <li>4. Cociu V., Mărcuș L., Raw materials and materials used in light industry, Didactic and Pedagogical Publishing House, Bucharest, 2001</li> <li>5. A. Chiriță – Raw materials and auxiliary materials for leather garments, Didactic and Pedagogical Publishing House, Bucharest, 1967</li> <li>6. Gh. Chiriță – Basics of leather manufacturing, Technical Publishing House, Bucharest, 1980</li> <li>7. Dodu, A. and collaborators, - Textile Engineer's Handbook, Ed. AGIR, Bucharest, 2003</li> <li>8. Dragomir Alina - Raw materials for footwear. Methods and means of quality testing, Performantica Publishing House, Iași, 2009</li> <li>9. C. Ionescu Luca, S. Volocariu – Raw materials for leather garments and substitutes, University of Oradea Publishing House, 2005</li> <li>10. Cioara, Ioan - Textile process engineering - Cermi Publishing House, Iași, 1998</li> <li>11. Lutic L., - General engineering in textiles and leather, Performantica Publishing House, Iași, 2008</li> </ol>
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## VII. Grading criteria

Activities	Assessment	% of final grade
Exam	<p>Written exam:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> </ol>	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%
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### VIII. Learning outcomes:

The student/graduate has knowledge about information regarding materials used in the footwear, clothing and leather goods industry, by presenting the materials (textiles, leather, leather substitutes) of their physical-mechanical, hygienic, thermal properties, chemical composition and structure that influence the quality of the finished product.

Done on the date: 20.09.2025

Approved in the FC meeting: 24.09.2025

Course coordinator,

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

*\*Se va completa cu unul din programele de studii de licență sau master gestionat de:*

- ***DIEn: APPLIED INFORMATICS IN POWER ENGINEERING, POWER SYSTEMS ENGINEERING, ENERGY ENGINEERING FOR INDUSTRY, RENEWABLE ENERGY SYSTEMS ENGINEERING, RENEWABLE ENERGY, ENERGY SYSTEMS MANAGEMENT SYSTEMS ENGINEERING***
- ***DTMPI: KNITTING AND CLOTHING TECHNOLOGY, INDUSTRIAL ECONOMICS ENGINEERING, QUALITY MANAGEMENT AND CONSUMER'S PROTECTION IN THE FIELD OF TEXTILES AND LEATHER***