

COURSE SYLLABUS

University	UNIVERSITY OF ORADEA
Faculty	FACULTY OF ENERGY ENGINEERING AND INDUSTRIAL MANAGEMENT
Study program*	INDUSTRIAL ECONOMICAL ENGINEERING

I. Course Name: Structure and design of footwear and leather articles

II. Course Details

Code	Semester	No of hours/week				
		Credits	Lecture	Seminar	Laboratory	Project
IEMI-0478	V	6	2	-	1	2

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

Associate Professor PhD. Eng., Albu Adina-Victoria, adina_victoria@yahoo.com

IV. Course objectives

- understanding and mastering the concepts and processes necessary for the design of leather and substitute products, footwear and leather goods.
- developing a unique way of economic thinking that will serve to correctly assess opportunities and risks in the actions taken.

V. Course content	No. of hours
V.1. Lecture (chapters/subchapters and paragraphs)	
Structure and functions of footwear – evolution, structure, classification, footwear manufacturing systems	2
Elements of anatomy and physiology of the foot 2.1. Topography of the foot 2.2. Resistance, connective, muscular, nutritional, control system 2.3. Skin of the foot 2.4. Static and functional anomalies	2
Foot Anthropometry 3.1. Foot Anthropometric Parameters	2
Shoe Lasts 4.1. Topographic Elements of the Last 4.2. Classification of Lasts	2
Footwear Design 5.1. Obtaining the surface of the last using paper 5.2. Drawing the construction grid 5.3. Drawing the pattern lines with the allowances for drawing, processing and joining the parts of the footwear	2
Design of footwear constructions 6.1. Men's shoes 6.2. Women's shoes	2
6.3. Men's Boots 6.4. Women's Boots 6.5. Children's Boots	2
6.6. Men's Long Boots 6.7. Women's Long Boots 6.8. Children's Long Boots	2
7. Design of outer and inner linings 8. Design of the lower assembly 8.1. Insole, insole cover, insole reinforcement, padding 8.2. Toe, toe cap 8.3. Sole, heel	2
9. Classification of leather goods and the materials used in their manufacture	
10. Structure of leather goods	2
11. Assortments of leather goods; Peculiarities of the leather goods design process	2
12. Preparation and cutting of materials Processing of leather goods parts	2

13. Sewing assembly of leather goods. Quality control and packaging	2
V.2. Laboratory:	
Study of human body proportions	1
Foot and hand proportions	1
Fashion design concepts	1
Shape studies, last-form of the footwear product	1
Drawing a shoe model on a shoe last	1
Obtaining shoe patterns from the last	1
Placing shoe patterns on natural leather to determine leather consumption	1
Leather goods product form. Applications	1
Economical use of materials when tailoring the components of leather goods	1
Design of small leather goods	1
Belt design	1
Purse design	1
Glove design	1
Creation of the collection and presentation material	1
V.3. Project:	
Shoe structure	2
Functions of footwear	2
Static and functional abnormalities of the foot	2
Foot anthropometry	2
Basic methods in designing the upper assembly of footwear (unfolding the surface of the last using self-adhesive paper). Drawing construction networks	2
Constructive design of men's shoes	2
Constructive design of women's shoes	2
Constructive design of children's shoes	2
Design of lower assembly parts	2
Designing small leather goods with cutting patterns from leather or substitutes	2
Designing belts with cutting patterns from leather or substitutes	2
Designing handbags with cutting patterns from leather or substitutes	2
Glove design with cutting patterns from leather or substitutes	2
Presentation of the work folder	2

VI. Bibliography

<p>1. Albu Adina-Victoria "Structure and design of footwear and leather goods" - MatrixRom Publishing House, Bucharest, 2023</p> <p>2. Albu Adina-Victoria "Structure and design of footwear and leather goods" - Guide for practical work and project, MatrixRom Publishing House, Bucharest, 2023</p> <p>3. Costea M., Footwear modeling and rapid prototyping of prophylactic components. Performantica Publishing House, IAȘI, 2015</p> <p>4. Curteza A. Clothing design. Fundamental notions" - Performantica Publishing House, IAȘI, 2003</p> <p>5. Crețu P. "Initiation into product aesthetics" - Technical Publishing House, Bucharest, 19734. Costea M., Footwear modeling and rapid prototyping of prophylactic components. Performantica Publishing House, IAȘI, 2015</p> <p>6. Harnagea F., Technology of Leather Goods, Performantica Publishing House, Iași, 2002</p> <p>7. Mălureanu G., Mihai A., Basics of Shoe Design, Performantica Publishing House, Iași, 2003 www.lectiadeortopedie.ro, „Lecția de Ortopedie” www.ortoprofil.ro, „Ort profil” https://ro.wikipedia.org/wiki/Omul_Vitruvian https://bigstep.ro/incaltaminte-copii-biomechanics</p>

VII. Grading criteria

Activities	Assessment	% of final grade
Exam	Written exam: 1. Requirements to get the minimum grade for passing the exam Knowledge and understanding of the course content at the level of basic	60%

	<p>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>	
Laboratory	The evaluation of the laboratory activity is based on tests (10%), and the method of active participation in debates (10%).	20%
Project	Presentation of the work folder, the paper produced and presented (20%),	20%

VIII. Learning outcomes:

The student/graduate has the skills to apply design concepts to obtain leather products: footwear, leather goods, technical items, sports items, leather clothing; Combining theoretical presentations with images from the creations of great designers; Developing management and communication skills.

Done on the date: 20.09.2025

Approved in the FC meeting: 24.09.2025

Course coordinator,

Associate Professor PhD. Eng., Albu Adina-Victoria