

COURSE SYLLABUS

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

I. Course Name: Quality Assurance and Comfort of Textile and Leather Products

II. Course Details

No of hours/week						
Code	Semester	Credits	Lecture	Seminar	Laboratory	Project
IEMI 0432	8	5	28	-	28	-

III. Course coordinator (title, name, surname, e-mail): Lecturer, Cristina, Secan, cris_secan@yahoo.com

IV. Course objectives

- Familiarizing students with basic concepts and notions in the field of textiles and leather.
- Developing skills for understanding technological processes and related phenomena.
- Defining and presenting basic notions regarding quality assurance in spinning-weaving, knitting, and garment enterprises.
- Presenting theoretical and practical methods used for controlling textile products.
- Presenting norms and working methods related to quality assurance of textile products.
- Applying theoretical concepts through practical control applications on products and processes.

VI. Course content:	No. of hours
1. Concepts regarding the definition of quality	1
1.1. The concept of quality	
1.2. Standards, norms, and regulations related to quality	
1.3. Quality characteristics specific to products	
1.4. Quality indicators	
2. Quality system	1
2.1. The concept of a quality system	
2.2. Selection of the quality system structure	
2.3. Elements of the quality system	
2.4. Stages of implementing a quality system	
3. Methods for controlling and measuring the quality of clothing products	2
3.1. Data analysis	
3.2. Monitoring and measuring products	
3.3. General methods of measuring quality	
3.4. Specific methods for quality control	
4. Quality of products and processes in the knitting sector	2
4.1. Quality characteristics and classification criteria	
4.2. Methods of evaluating quality	
4.3. Quality analysis of knitted products	
5. Analysis and control of non-quality	2
5.1. Defect classification criteria	
5.2. Evaluation of non-quality in knitted products	
6. Influence factors on the quality of knitted products	2
6.1. Influence of raw material	
6.2. Influence of the knitting machine	
6.3. Influence of servicing personnel	
7. Types of control	1
7.1. Total control and sampling control	
7.2. Characterization of statistical populations	
7.3. Estimation of statistical parameters	

8. Statistical process control	2
8.1. Application of statistical control	
8.2. Preliminary phase	
8.3. Control charts	
8.4. Actual statistical control	
9. Contributions regarding the application of control methods in the manufacturing processes of knitted products	1
10. Defining the functions of clothing	2
11. Concepts related to heat and mass transfer	2
12. Comfort parameters and calculation methods	2
13. Global comfort index	2
14. Hygiene conditions specific to materials intended for leather products and substitutes	2
15. Comfort state. Footwear microclimate	1
16. Ergonomic and hygienic properties of footwear	1
17. Qualitative analysis of footwear from a health-protection perspective	1
18. Harmful effects of leather substitutes on the human body	1

V.2. Laboratory/Seminar/Project: **No. of Hours**

1. Study of basic standards in the textile garment industry, adopted accordingly to EN and ISO standards.	2
2. Evolution and classification of ISO standards regarding quality.	2
3. Quality of raw materials.	2
4. Quality control on clothing manufacturing lines.	2
5. Quality control in knitting enterprises.	2
6. Identification of defects, causes, prevention, and remediation.	2
7. Technical quality control and acceptance criteria.	2
8. Morphological structure analysis.	4
9. Determining comfort parameters for clothing ensembles.	3
10. Determining comfort parameters for footwear structures.	3
11. Rheological characterization of leather substitutes.	4

VI. Bibliography

<p>1. Oana I., <i>Controlul și auditul calității</i>, Edit. Univ. din Oradea, 2008.</p> <p>2. Preda C-tin, <i>Metode și aparate pentru controlul calității materialelor textile destinate confecționării produselor de îmbrăcăminte</i>, Edit. BIT, Iași, 1996.</p> <p>3. Ionescu Luca C., <i>Legislația și auditarea sistemelor calității</i>, Editura Performantica Iași, 2007.</p> <p>4. Moisescu E., <i>Controlul tehnic de calitate</i>, Editura “Gh. Asachi” Iași, 2000.</p> <p>5. Florea A., <i>Controlul calității</i>, Editura “Gh. Asachi” Iași, 2002.</p> <p>6. Oana I., Oana D., <i>Analiza controlului final al confecțiilor textile</i>, Annals of the Oradea University Fascicle of Management and Technological Engineering 2006, cod CNCSIS 564.</p> <p>7. Secan C., <i>Calitatea și funcționalitatea produselor textile</i>, note curs 2023.</p> <p>8. Baciuc C., <i>Anatomia funcțională și biomecanica aparatului locomotor</i>, Editura Sport – Turism, București, 1977.</p> <p>9. Ionescu C., <i>Asigurarea și controlul calității încălțămintei pe fluxul de fabricație</i>, Editura Universității din Oradea, 2002.</p> <p>10. Mitu Stan, <i>Confortul și funcțiile produselor vestimentare</i>, Gh. Asachi Publishing House, Iași, 2000.</p> <p>11. Mitu Stan, Hoblea Z., <i>Elemente de fiziologie și confort vestimentar</i>, Îndrumar de lucrări practice, Tipar Rotaprint, IPI, 1984.</p> <p>12. Secan C., <i>Studiu privind influența structurii înlocuitorilor de piele asupra permeabilității la vapori de apă</i>, Textilele Viitorului, Simpozionul Anual al Specialiștilor din Industria de Tricotaje-Confecții, Facultatea de Textile-Pielărie, nov. 2008.</p> <p>13. Secan C., Mitu S., <i>Cercetări experimentale privind stabilirea limitelor parametrilor de confort pentru produse din piele și înlocuitori</i>, Textilele Viitorului, Simpozionul Anual al Specialiștilor din</p>

Industria de Tricotaje-Confecții, Facultatea de Textile-Pielărie, nov. 2008

14. Porav V., Secan C., *An analysis the influence of the textile material doubling process by thermofusing on vapor permeability*, Annals of the Oradea University, "Fascicle of Textile - Leatherwork", TheInternational scientific conference, "Innovative solutions for sustainable development of textiles industry", vol XVII, Ed.Universității din Oradea, 2016.,ISSN 1843-813X,pg.107, **articol indexat în baza de dateULRICH'S**.

15. Porav V., Secan C., *The influence of doubling of textile materials through thermofusing on their hydrophilicity*, Annals of the Oradea University, "Fascicle of Textile - Leatherwork", TheInternational scientific conference, "Innovative solutions for sustainable development of textiles industry", vol XVII, Ed.Universității din Oradea, 2016.,ISSN 1843-813X,pg.111, **articol indexat în baza de dateULRICH'S**.

16. Secan C., *Comportarea din punct de vedere sanogenetic a înlocuitorilor la confecționarea încălțăminteii*, referat doctorat.

17. Secan C., *Contribuții la optimizarea utilizării înlocuitorilor din piele în procesul de fabricare a încălțăminteii*, teza doctorat.

18. Secan C., *ANALIZA PARAMETRIILOR FIZIOLOGICI ȘI DE CONFORT*, Editura Universității din Oradea, ISBN 978-606-10-2237-3, anul 2023.

19. Secan C., Cuc Sunhilde, *ASPECTS REGARDING THE PHYSIOLOGICAL AND COMFORT PARAMETERS IN SHOES MADE OF LEATHER SUBSTITUTES*, ICAMS, 2022,Proceedings of THE 9 th INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS AND SYSTEMS, ISSN 2068-0783, pp. 461-467, Bucuresti, 26-28 oct.,2022, www.icams.ro

VI. Grading criteria

Activities	Assesment	% of final grade
Exam	Written exam: Requirements in order to get the minimum grade for passing the exam: Lectures: written exam with 10 questions (1 hour), possibly online. Laboratory: tests (5%), report + presentation (20%), participation (5%). Requirements for the maximum grade	10 subjects, of which 5 are made for the minimum grade, and 10 for the maximum grade.
Seminar/Laboratory/Project	Exam – written examination (70%). Laboratory activities (30%)	Project presentation

VII. Learning outcomes:

- Understanding modern quality management concepts.
- Using digital and communication tools.
- Applying software for quality control and organizational communication.
- Developing sustainable strategies in industrial contexts.

Course coordinator,

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