COURSE SYLLABUS

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

I. Course Name: PROCESSES AND KNITTING MACHINES II

II. Course Details

No of hours/week						
Code	Semester	Credits	Lecture	Seminar	Laboratory	Project
IEMI-0617	8	6	2	-	2	2

III. Course coordinator (title, name, surname, e-mail): Ş.L.dr.ing. Böhm Gabriella, bohmgaby@gmail.com

IV. Course objectives

The aspects treated – knowledge of knitting technologies on rectilinear machines, study of the main mechanisms and devices of knitting machines, analysis of the technological possibilities of knitting machines, technological programming of knitting machines, regulation of technological parameters of operation of knitting machines – contributing to the professional completion of the future engineer, its success in the optimal use of industrial machines.

V. Course content	**No. of hours**
V.1. Lecture (chapters/subchapters and paragraphs)	
1. The peculiarities of the knitting process in the same direction on automatic knitting machines, patent and lincs.	2
2. Patent rectilinear machine with knitting in the same direction. Characteristics of rectilinear machines with knitting in the same direction.	2
3. Mechanisms of the patent-type rectilinear machine with knitting in the same direction.	2
4. Technological knitting possibilities for patent rectilinear machines	2
5. CMS STOLL knitting machine. Machine mechanisms.	2
6. Analysis of the technical and functional characteristics of the CMS STOLL knitting machine	2
7. Shima seiki shima knitting machine, ssr 112 of finesse 7 e	2
8. Shima sekiki rectilinear knitting machine, ssr 112 of finesse 7 e. Presentation of knitting principles	2
9. Production of knitted knitwear on circular knitting machines with pre-bucledes. The Circular Machine Harghita.	2
10. Knitting technologies on circular knitting machines with a large diameter. General elements. Schemes of principle.	2
11. Production of imitation fur knits. Processes. Calculation of theoretical production in circular machines for the production of imitation fur knits.	2
12. Large-diameter circular machines of the latest generation. Main mechanisms	2
13. Electronic ally-selected machines for the production of plush jacard knitting	2
14. General characterisation of circular knitting machines for stockings	2
V.2. Laboratory:	
1. Technological study of MC STOLL multi-age knitting machines.	2
2. Technological study of MC STOLL knitting machines of knit and wear type.	2
3. Analysis of the technological possibilities of MC STOLL knitting machines.	2
4. Calculations on the productivity growth possibilities of MC STOLL knitting machines.	2
5. Technological study of the shima SEIKI SES knitting machine.	2
6. Technological study of the shima SEIKI SIG knitting machine.	2
7. Technological study of the knitting machine SHIMA SEIKI WHOLGARAGE.	2

8. Analysis of the technological possibilities of Shima Seiki knitting machines.	2
9. Calculations on the productivity-growing possibilities of Shima Seiki knitting machines.	2
10.Technological study of the circular knitting machine with a cylinder and disc with hooks for stockings made of fine yarn.	2
11. Calculations on the possibilities of increasing the productivity of knitting machines for stockings made of fine yarn.	2
12. Technological study of steIGER circular knitting machines.	2
13. Calculations on the productivity growth possibilities of STEIGER knitting machines.	2
14. Verification of acquired knowledge.	2
V.3. Project	
Cap.1. The assortment and technology 1.1.Presentation of the assortment 1.2. The first material 1.3.Setting the technological process	4
Chapter 2. Choosing machines 2.1.Technological features 2.2.Technological study of machine mechanisms 2.3.Analysis of technological possibilities	4
Chapter 3. Structure of knitting 3.1.Representation of the knitting structure 3.2.Calculation of structure parameters	4
Chapter 4. Technological design of the knitting operation 4.1.Technological calculations 4.2.Technological programming of the knitting machine 4.3.Calc of production capacity	8
Chapter 5. Technological calculations 5.1.Calculation of specific consumption by yarn 5.2.Loss calculation and consumption indices 5.3.Calculations of the raw material requirement	8

VI. Bibliography

Bibliografie

1. BUDULAN, R. –*Bazele tehnologiei tricoturilor*, Editura BIT, 1996;
2. DAN DORIN –*Procese şi maşini de tricotat. Maşini de tricotat automate mecanice,* Editura Performantica, Iaşi, 2005;
3. MACOVEI L., –*Tehnologii şi utilaje în tricotaje* , Editura „Gh. Asachi", ŞERBAN V. Iaşi, 2002;
4. MATEESCU, M. –*Tehnologia tricotajelor*, Editura didactică şi pedagogică, Bucureşti, 1970;
5. PENCIUC M.,BLAGA M. DORIN DAN –*Tehnologii de tricotare pe maşini rectilinii,* Editura Performantica, Iaşi, 2004;
6. PETREANU, C. –*Tehnologia tricotajelor. Maşini moderne*, Editura tehnică, Bucureşti, 1966;
7. POTORAN, I. –*Structura şi proiectarea tricoturilor*, Editura didactică şi pedagogică, Bucureşti, 1965;
8. REICHER, F. –*Elemente de proiectare a maşinilor din industria tricotajelor şi confecţiilor*, Editura didactică şi pedagogică, Bucureşti, 1971;
9. ŞERBAN, V.; MACOVEI,L. –*Tehnologii de tricotare pe maşini circulare*, Editura „Gh. Asachi", Iaşi, 2002;
10. *Note de curs.*

VII. Grading criteria

Activities	Assesment	% of final grade
Exam	Written exam: 1. Requirements in order to get the minimum grade for passing the exam: to obtain a grade of 5 (five) all subjects are mandatory in the proportion of 50%. 2. Requirements for the maximum grade: For note 10(ten) all subjects are 100 % mandatory.	80%
Seminar/Laboratory/Project	100% presence at the laboratory	20%

VIII. Learning outcomes:

 Definition of principles and methods in the technical sciences of the field of knitting for the identification and analysis of the functional characteristics of specific processes.

 Use of basic knowledge to explain and interpret the processes, techniques and methods necessary for the correct design of knitwear and the appropriate choice of specific technological processes.

 Application of basic principles and methods for the aesthetic design of knitwear and specific technological processes.

 Appropriate use of standard criteria and methods of evaluation for the adoption of basic processes, techniques and methods applied to assess the quality and efficiency of knitting manufacturing systems.

 Development of specific professional projects, based on the selection, combination and use of established principles and methods in the technical sciences of the field of knitting for the identification and analysis of the functional characteristics of specific processes and machines.

Course coordinator,
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