No. 10

Course syllabus for Second cycle studies					
1.	**Course title**	Structure and Design of Yarns			
2.	**Code**	CDEM3M2			
3.	**Study Program**	Clothing Design and Engineering			
4.	**Study program organizer (unit, institute, department, division)**	Faculty of Technology and Metallurgy, Institute of Textile Engineering			
5.	**Degree (first, second, third cycle)**	First Cycle			
6.	**Academic year / semester**	2th year 3th semester	7.	**Number of ECTS**	7
8.	**Instructors**	Dr. Emilija Toshikj, Associate Professor			
9.	**Prerequisites for course enrollment**				
10.	**Objectives of the course syllabus (competences):** Acquiring knowledge about the parameters of yarn construction in terms of the influence of individual yarn properties on their structure and design. Familiarization with the basic processes of treatment and finishing of yarns and with the technical and technological parameters that ensure the production of high-quality yarn. **Acquired skills (competences):** Students are equipped to know yarn construction depending on their parameters of yarn construction and to understand the influence of yarns structure on their properties and design. Students are capable of understanding the techniques for yarn production and their application. Students will acquire knowledge about the classification and application of textile yarns, and the technological procedures for producing yarns.				
11.	**Content of the course:** Basic concepts, classification, and labeling of yarns. Properties and parameters of yarn construction. Structure and properties of conventional and unconventional yarns. Modifying the properties and design of yarns by varying their geometry. The properties of the yarn in function of the fineness of the fibers and the yarn. Influence of spinning on the structure and properties of the yarn. Technological procedures and techniques for achieving the design and quality of yarns, taking into account the raw material composition, structural design, and relief, i.e., structural elements of the yarn that simultaneously affect the overall impression of the yarn.				
12.	**Study methods:** Method of oral presentation, method of programmed instruction, method of independent work with a textbook, method of problem-based teaching (problem situation, problem, problem task, and problem question, conditions for implementing problem-based teaching and levels of application of the problem-based teaching method), method of using technical aids (need and opportunities for using computers and dialogic educational methods), selection and combination of teaching methods.				

13.	**Total available time**		210	
14.	**Allocation of available time**			
15.	**Teaching activities**	15.1.	Lectures-theoretical instruction	45
		15.2.	Exercises (laboratory, auditorium), seminars, team work	30
16.	**Other types of activities**	16.1.	Project tasks	20
		16.2.	Independent tasks	35
		16.3.	Home learning	80

17.	**Grading system**		
	17.1.	Tests	80 points
	17.2.	Successfully completed laboratory/auditorium exercises	12 points
	17.3.	Activity and participation	4 points
	17.4.	Homework and/or seminar work	4 points

18.	**Grading criteria (points/grade)**	Up to 61 points	5 (five) (F)
		From 61 to 69 points	6 (six) (E)
		From 70 to 79 points	7 (seven) (D)
		from 80 to 89 points	8 (eight) (S)
		From 90 to 95 points	9 (nine) (B)
		from 95 to 100 points	10 (ten) (A)

19.	**Prerequisites for taking the final exam**	12 points from activity 17.2. and a minimum of 4 points from activities from 17.3 to 17.4.
20.	**Language in which lectures are conducted**	English
21.	**Method for monitoring the quality of lectures**	Anonymous Student Survey

22. **LITERATURE**

22.1. Compulsory literature

No.	Author	Title	Publisher	Year
1.	C. Lawrence	Fundamentals of Spun Yarns Technology	CRC Press, Boca Raton	2003
2.	Emilija Toshikj, Magdalena Prendzova,	Structure and Design of Yarns	Faculty of Technology and Metallurgy, University „St. Cyril and Methodius,Skopje, ISBN 978-9989-43-481-5, COBISS.MK-ID 59246853	2023
3.				

22.2. Additional literature

		No.	Author	Title	Publisher	Year
		1.	Peter R. Lord	Handbook of Yarn Production: Technology, Science and Economics	Woodhead Publishing, Oxford	2003
		2.				
		3.				