

Course Unit Descriptor

Study Programme: Clothing engineering		
Course Unit Title: Textile product design		
Course Unit Code: DAS324		
Name of Lecturer(s): Assistant professor Nadiia Bukhona, PhD		
Type and Level of Studies: Scientific and professional		
Course Status (compulsory/elective): Elective		
Semester (winter/summer): Summer		
Language of instruction: English		
Mode of course unit delivery (face-to-face/distance learning): Face-to-face		
Number of ECTS Allocated: 6		
Prerequisites: Doesn't have		
Course Aims: Acquiring basic knowledge about designing yarns, fabrics and knitwear		
Learning Outcomes: Students are trained to independently design yarns, fabrics and knitwear		
Syllabus: <i>Theory:</i> Division and characteristics of yarns. Characteristics of fibers applicable to individual spinning processes and their impact on yarn characteristics. Influence of fiber preparation on the structural and constructional characteristics of yarns spun by conventional and new spinning methods. Yarn quality parameters, the impact of structure on yarn characteristics, and the relationship between technological parameters and yarn characteristics. Methods of designing individual types of yarns. Project task and fabric design. Types and divisions of fabrics. Basic parameters of fabric design. Designing the structural characteristics of woven textile materials. Design parameters of jacquard fabrics. Decomposition of fabrics. Project task and knitwear design. Characteristics of knitwear structure and their determination. Designing basic and derived weaves. Surface mass per square meter of knitwear. Loop modules. Lengthwise, surface, and volumetric fill of knitwear. Yarn interweaving in knitwear. Volumetric and total porosity. Mass fill of knitwear. Volumetric coefficient of knitwear. Shrinkage of knitwear. <i>Practice:</i> Through exercises (and project work), students deal with specific tasks of designing yarns, fabrics and knitted fabric.		
Required Reading: <ol style="list-style-type: none"> 1. J. Stepanović, B. Antić; Design of Fabrics; Faculty of Technology, Leskovac, University of Niš; 2005. 2. S. Milosavljević, T. Tadić, S. Stanković; Book on Spinning and Yarns; Faculty of Technology and Metallurgy, University of Belgrade; 2000. 3. V. Petrović; Knitting Technology; Faculty of Technology "Mihajlo Pupin", Zrenjanin; 2000. 4. V. Gligorijević; Knitting Technology Part I; Faculty of Technology, Leskovac, University of Niš; 1996. 5. V. Lasić; Knitting Patterns, Zagreb; 1997. 6. M. Nikolić; Structure and Design of Fabrics; Faculty of Technology and Metallurgy, Belgrade; 1993. 7. V. Orešković, J. Hadžina; Weaves and Fabric Construction of Shaft Loom Weaving; ETS Bihać; 1982. 		
Weekly Contact Hours: 5	Lectures: 3	Practical work: 2

Teaching Methods:

Verbal teaching methods. Illustrative teaching methods. Demonstration teaching methods.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	20
Practical work		oral exam	20
Preliminary exam(s)	30		
Project(s)	20		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.