

“GHEORGHE ASACHI” TECHNICAL UNIVERSITY OF IAȘI

Faculty of Industrial Design and Business Management

Department of Engineering and Design of Textile Products

Competition for the post of **Professor**, position **2**, in the List of positions for the Academic Staff

The disciplines of the post: Textile structures – Woven fabrics

Industrial Design – Woven fabrics

TOPICS OF COMPETITION

For the position of **Professor**

1. Construction parameters of woven fabrics. Properties of woven fabrics. Basic structural parameters and structure / property correlations.
2. Simple woven fabrics: fundamental weave structures - method of construction, appearance of fabrics, particularities of weaving.
3. Simple woven fabrics: derivative weave structures - method of construction, appearance of fabrics, particularities of weaving.
4. Simple woven fabrics / combined weave structures - method of construction, appearance of fabrics, particularities of weaving.
5. Compound woven fabrics: double-warp/double weft woven structures - construction method, fabric appearance, particularities of weaving.
6. Compound woven fabrics: double-face woven fabrics - mode of construction, appearance of fabrics, particularities of weaving.
7. Geometric modelling of woven fabrics. Phases of the structure and methods for analytical calculation of yarn crimp in fabrics.
8. Indices of structural characterization of fabrics: Cover factor, density coefficient, compactness degree.
9. Correlations between raw / finished fabric parameters.
10. Technical calculations for fabrics.
11. 3D interlock woven fabrics for textile composite reinforcements.

Bibliography:

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5. Structura și designul țesăturilor, Cioară L., Ed. Performantica, Iași, 2011.
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8. Metode de diversificare structurală a țesăturilor, Cristian I., Ed. Performantica, Iași, 2013.
9. Woven fabric Engineering, Dobnik Dubrovski P., Intech Open Access, 2010.
10. Woven Textiles. Principles, Technologies and Applications, 2019, Ed. Kim Ghandi, Elsevier, 2019.
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12. Principles of woven fabric manufacturing, Majumdar A., CRC Press/Taylor&Francis Group, 2017.
13. Fabric Structure and Design, Gokarneshan N., New Age International, 2004.
14. Handbook of Weaving Adanur S., CRC Press/Taylor&Francis Group, 2000.
15. Modern Woven Fabrics Technology, Ed. Savvas Vassilidis, Intech Open access, 2011.
16. Handbook of Technical Textiles Vol.1 și 2: Technical Textile Processes/ Technical Textiles Applications, Ed. Horrocks A.R., Anand S. C., Woodhead, 2016.
17. Advances in 3D Textiles, Ed. Chen X., Woodhead 2015.

Dean,

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