

General information

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The degree and type of study: Undergraduate study programme – university study programme

Duration: 3 years (6 semesters), total of 180 credits ECTS

Title: Bachelor of Science (B.Sc.)

Field of study according to ISCED classification: (54) Manufacturing and processing

Classification of the study programme according to KLASIUS-P: (5420) Textiles, clothes, footwear, leather (broad programmes)

Classification of the study programme according to KLASIUS-P-16: (0723) Textiles (clothes, footwear and leather)

Classification of the study programme according to KLASIUS-SRV: (16204) Academic higher education (first Bologna cycle)

Scientific research discipline according to Frascati classification: Engineering and Technology

Basic Goals and competences

The basic goal of the university study programme Textile and Clothing Planning is to train experts capable of managing the most technologically demanding processes in the textile and clothing industry, to train them in planning complex products and technological processes, and at the same time provide appropriate basic natural science and professional knowledge for further education at the second level.

Competence profile of a graduate

General competences

- expertise gained by the study of theoretical and methodological concepts;
- ability to transfer theoretical knowledge into practice and use it to solve problems, especially by seeking new sources of knowledge and using scientific methods;
- ability to experiment and visually transfer various concepts of thinking;
- developed capacity for independent learning in a specific professional area;
- initiative and independence in decision making and management of the most demanding work;
- ability to communicate with colleagues and experts in related disciplines, which facilitates active cooperation in teamwork and in the area of projects based on linking professional principles with the design practice;
- developed professional, ethical and environmental responsibility;
- ability to use modern tools, skills and dexterity, primarily in the field of IKT technologies in daily professional and scientific research work.

Subject-specific competences

- in-depth knowledge of mathematics, physics and chemistry with the developed capacity for thinking in terms of natural sciences;
- theoretical knowledge that allows good judgment and linking properties of fibres to their morphological structure, or its modification during the technological processing of fibres;
- understanding the interdisciplinary development of modern fibre forming polymers by combining different scientific disciplines: chemistry, bio (techno)logy, nanotechnology, information technology, to create responsive and intelligent fibre forming polymers;
- capacity to link the effects of various raw materials and technological factors to the structure and properties of yarns, woven and knitted fabrics, nonwovens and knitwear;
- knowing about basic weaving and knitting structures, the properties originating from them, and their advantages and shortcomings;
- capacity of optimising technological processes of clothing production by transferring theoretical knowledge into practice and achieving higher quality of the final product;
- knowledge of the theoretical basics of finishing, which forms the basis for independent creative research work in the fields of dyeing, printing, finishing and care of textiles;
- capacity of planning pre-finishing, dyeing, printing and finishing processes with regard to the constructional characteristics of the textiles and with consideration for environmental requirements;
- mastering computer-assisted patterning of yarns, woven and knitted fabrics, knitwear and printing patterns;
- capacity of supervision, analysis and management of the production process, the capacity of planning the production process using the methods of network planning and recognition of the possibility of introducing computer applications in the production process as well as their evaluation from the standpoint of cost and organisation of work;
- ability to understand modern concepts of quality management systems and their importance in the context of global competition.

Employment possibilities

With their acquired knowledge, the Textile and Clothing Planning graduates can be employed in textile and clothing companies in the fields of the production and marketing of fibres, 2D textiles, medical and technical textiles, and textiles with improved properties. They can also be employed in research institutes working in the field of textiles and clothing activities in counselling organisations, trade and government administration.



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