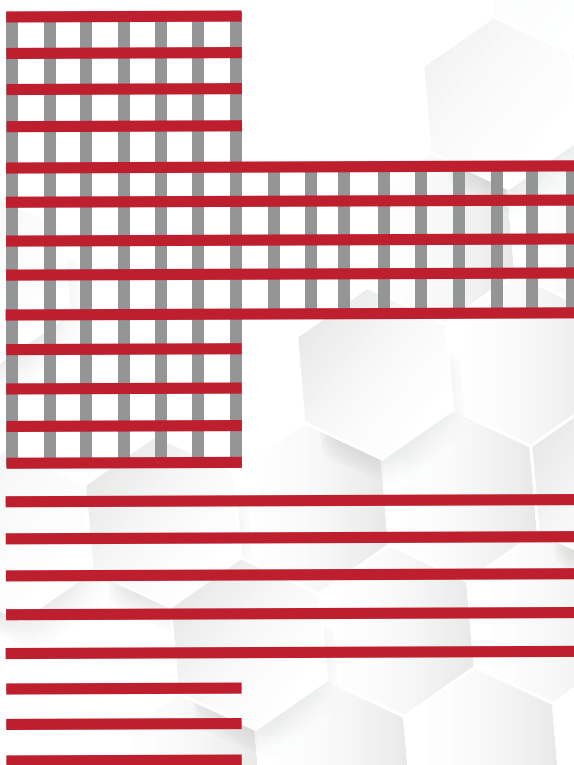




University of Zagreb
Faculty of Textile Technology



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MISSION

The University of Zagreb Faculty of Textile Technology is a higher education institution educating competent experts and conducting high-quality scientific and artistic research and professional work, primarily in the technical field, textile technology fields, although research is also conducted in the natural science, artistic, social and humanistic fields and other fields within the technical field with the aim of synergy, strengthening, interconnectedness and interdisciplinarity. The Faculty is recognizable for its innovations, which are the basis for knowledge transfer into business and the basis for its development. Scientific and artistic research is focused on the needs of social and economic development, and the teaching process is harmonised with the needs of the labour market and society.

VISION

The University of Zagreb Faculty of Textile Technology is recognized as a well organised, exemplary and eminent educational, scientific and artistic institution in Croatia, the region, Europe and the globally, in the field of textile and clothing technology and engineering, as well as in textile and fashion design. It has been, through its activities and results, a relevant factor in the academic community, economy and society.

DEAN'S FOREWORD

Dear colleagues,

It is my pleasure to greet you on behalf of the University of Zagreb Faculty of Textile Technology and wish you a warm welcome to the magical world of textile and clothing technology and fashion and industrial design of textiles and clothing.

The University of Zagreb Faculty of Textile Technology is an internationally recognized educational and scientific institution and a leading national and regional higher education and research institution in the field of textile engineering and technology and fashion design. The University of Zagreb Faculty of Textile Technology is recognizable for innovations that are the basis for the transfer of knowledge to the economy and the foundation of its development. Scientific and artistic research is directed in accordance with the needs of social and economic development, and the teaching process is harmonized with the needs of the labour market and society as a whole.

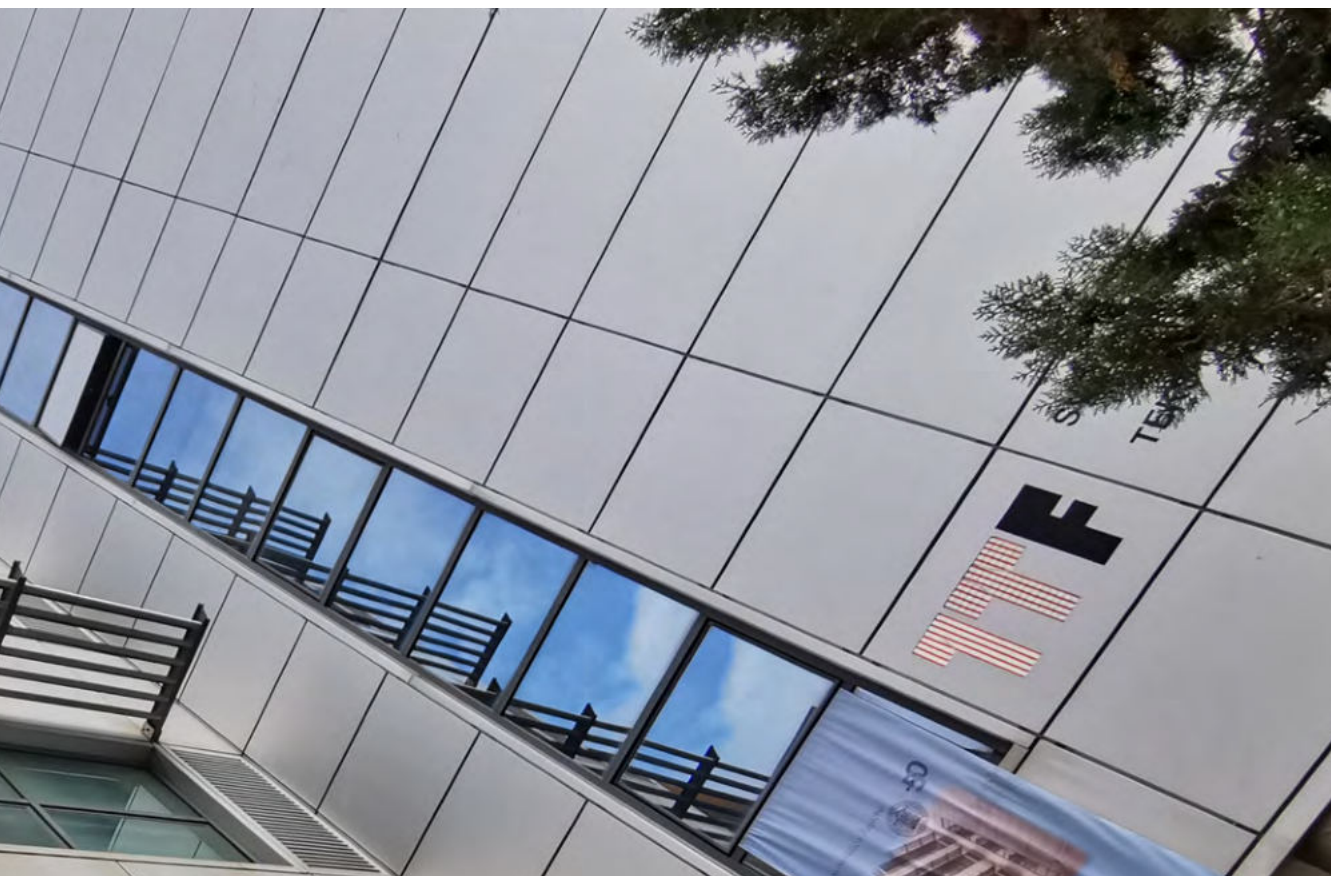


The aim of the study is to educate competent experts in textile engineering, technology and fashion design in the area of technical sciences, the field of textile technology. The university postgraduate study Textile Science and Technology is also performed. Most employees conduct their research in the area of technical sciences, the field of textile technology complementing and interweaving their work with the art and social studies and humanities, and other fields within the technical area in order to gain synergy, strengt and interdisciplinarity not only while teaching but also while doing scientific research, artistic and professional work.

The work of the Faculty and its recognizability in the region and the world is based on more than 60 years of experience in conducting textile studies at the University of Zagreb and more than 30 years of independent work as a integral part of the University of Zagreb. The further development of the Faculty and its modernization is strategically based on the dedicated work of all its employees for the benefit of our students, partners, friends, but also society as a whole.

Dean

Professor Anica Hursa Sajatovic, Ph. D.



HISTORY OF THE UNIVERSITY OF ZAGREB

The University of Zagreb was founded in 1669 and is the oldest university with continuous operation in Croatia and among the oldest in Europe. It is a leading national research institution, recognizable in the world for various forms of cooperation with many foreign universities. As such, it has a special role and responsibility in preserving and enhancing the national intellectual, scientific and cultural heritage and in strengthening the international recognition and attractiveness of Croatian higher education and science.

With its thirty-one faculties, three art academies, two university centres and one international research centre, the University of Zagreb is also the largest and leading university in the region. About 68500 persons study at the Components of the University of Zagreb in 8 undergraduate professional study programs, 143 undergraduate, 167 graduate, 59 postgraduate doctoral study programs, 199 postgraduate specialist study programs and 35 integrated study programs. The constituents of the University of Zagreb offer comprehensive higher education and the acquisition of academic degrees, from bachelors, masters to doctors of science in the biomedical, biotechnical, social, humanistic, natural sciences, technical and artistic fields.

The international activities of the University of Zagreb are a source and stimulus for creativity, quality science and application, and the modernization of teaching. It is one of the key aspects of university activity which through international research activities and mobility of students, teachers and researchers contributes to excellence in all areas of science and art, studies and studies at the University and its global and European visibility and recognition.





THE LEADERSHIP OF THE UNIVERSITY OF ZAGREB

Prof. **Stjepan Lakušić**, Ph. D., Rector

Prof. **Boris Brkljačić**, Ph. D.,

Vice-rector for Students, Undergraduate and Graduate Studies

Prof. **Dubravko Majetić**, Ph. D.,

Vice-rector for Science, Research and Postgraduate Studies

Prof. **Jurica Pavičić**, Ph. D.,

Vice-rector for International and Inter-institutional Cooperation

Prof. **Tomislav Josip Mlinarić**, Ph. D.,

Vice-rector for Innovation, Technology Transfer and Cooperation with Economic Sector

Assoc. prof. **Anamarija Musa**, Ph. D.,

Vice-rector for Quality Management and Ethics

Prof. **Tibor Pentek**, Ph. D.,

Vice-rector for Organization, Infrastructure Development and Human Resources

Prof. **Tomislav Bolanča**, Ph. D.,

Vice-rector for Business and Digitalization

Prof. art. **Jasenka Ostojić**, Ph. D.,

Vice-rector for Art, Culture and Inter-university Cooperations

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HISTORY OF STUDIES IN TEXTILE TECHNOLOGY

Independent studies of textiles and textile technology in Croatia were first organized in the early 1960s, at the same time as studies at the Faculty of Technology in Zagreb (initially only in chemical, and later in mechanical and clothing courses) and as three independent colleges in Duga Resa, Varaždin and Zagreb.

The Zagreb High School began educating textile and clothing designers in the mid-1970s. In 1983, several schools joined the Institute of Textiles and Clothing (at that time part of the Faculty of Technology).

When the Institute of Textiles and Clothing was organized as an independent institution in 1991, under the name Faculty of Textile Technology, University of Zagreb, it became the only higher education institution in the field of textile technology in Croatia and the only one engaged in scientific research in that field.

In terms of concentration of scientific and higher education staff, number of students and opportunities for professional work, the Faculty was the strongest higher education institution in the field of textiles and clothing in the region. Today it is one of the largest colleges of its kind in Europe, and our degrees are internationally recognized by the Association of Universities for Textiles (AUTEX) and The Textile Institute of Manchester (GB) for the Commonwealth and the USA.

Undergraduate and graduate university study programs Textile Technology and Engineering at the University of Zagreb Faculty of Textile Technology, have met the requirements of the European Federation of National Engineering Associations (FEANI) for the education of engineers and are included in the FEANI Index list of recognized European faculties and study programs. This enables all undergraduate and graduate students of Textile Technology and Engineering to complete the so-called A European engineering card that allows them to quickly prove their level of education and encourages the mobility of engineers in the European Union and beyond.

Today, Faculty is a modern higher education institution whose scientific and artistic activity is focused on a wide range of scientific and artistic disciplines. Research work goes beyond the field of textile and clothing technology, and scientific activity is manifested in a wide range of scientific fields, such as technical, natural and social sciences, and artistic activity is synergistically intertwined in terms of technology and design of textiles and clothing.

The University of Zagreb Faculty of Textile Technology, is recognized as a leading institution in the fields of textile technology and design and therefore continuously improves both scientific research and artistic activities.

FACULTY MANAGEMENT

The Faculty is managed by the Dean and the Faculty Council.

The Dean, as the head of the Faculty with the powers determined by special regulations, manages the Faculty and undertakes all legal actions in the name and on behalf of the Faculty.

Prof. **Anica Hursa Šajatović**, Ph. D., Dean

Asst. prof. **Ksenija Smoljak Kalamir**, Ph. D.
Vice Dean for Academic and Student Affairs

Asst. prof. **Ivana Špelić**, Ph. D.
Vice Dean for Scientific Study and Art Affairs

Asst. prof. **Bosiljka Šaravanja**, Ph. D.
Vice Dean for Finance and Business Affairs

Assoc. prof. **Anita Tarbuk**, Ph. D.
Vice Dean for Interinstitutional and International Cooperation

The Faculty Council is an expert council of the Faculty, whose field of activity, composition and manner of decision-making is determined by special regulations.



FACULTY ORGANIZATION

The work of the Faculty is organized through organizational units consisting of Departments, Study Unit Varaždin, Center for Development and Transfer of Textile and Clothing Technologies and Fashion Design (CTD), Scientific Research Center for Textiles (TSRC), Secretariat and Financial Service.

Teaching, scientific-research, artistic-research and professional work in the field of activity of the Faculty is performed in the Departments and the Study Unit.

- **Department of Textile and Clothing Design**

Assoc. prof. Irena Šabarić, Ph. D.

- **Department of Materials, Fibers and Textile Testing**

Assoc. prof. Ružica Brunšek, Ph. D.

- **Department of Clothing Technology**

Asst. prof. Blaženka Brlobašić Šajatović, Ph. D.

- **Department of Applied Chemistry**

Prof. Branka Vojnović, Ph. D.

- **Department of Textile Design and Management**

Assoc. prof. Dragana Kopitar, Ph. D.

- **Department of Textile Chemistry and Ecology**

Asst. prof. Lea Botteri, Ph. D.

- **Department of Basic Natural and Technical Sciences**

Asst. prof. Miljenko Krhen, Ph. D.

- **Study Unit Varaždin**

Josip Petric, higher lecturer, B.Sc.

The Secretariat of the Faculty is responsible for performing administrative and professional-technical affairs of the Faculty.

The Financial Service is responsible for accounting, financial, bookkeeping and procurement activities of the Faculty.

STUDIES ON FACULTY OF TEXTILE TECHNOLOGY

From the academic year 2005/06 the Faculty organizes two undergraduate university studies: Textile Technology and Engineering with specializations: Clothing Engineering; Textile design and management; Textile chemistry, materials and ecology; Industrial design of textiles and clothing, which at the graduate university study is divided into directions: Clothing Engineering; Textile design and management; Textile chemistry, materials and ecology; Industrial design of textiles and Industrial design of clothing and Textile and fashion design with directions: Textile design and Fashion design which is divided into graduate studies in the following directions: Textile design; Fashion design; Costume Design and Theory and Culture of Fashion.

Undergraduate and graduate study programs meet the exceptionally high requirements of the European Federation of National Engineering Associates (FEANI), which brought our Faculty on the list of FEANI European Engineering Education Database (EED) of recognized European universities and study programmes. This gives all Bachelor and Master students of Textile Technology and Engineering at our Faculty the right to acquire the European engineering card, by completing one of these study programmes, which means that they can without delay prove their educational level, at the same time stimulating the mobility of engineers in the European Union and elsewhere.

The Faculty is the only faculty in the field of textile technology in the Republic of Croatia and is the only institution that systematically works on the development of its scientific field. The Faculty is a member of the European Community of Higher Education Institutions in the field of textiles (AUTEX). The diplomas obtained at the University of Zagreb Faculty of Textile Technology are internationally recognized by the Association of Textile University of Europe (AUTEX) and the Textile Institute of Manchester (UK).

STUDY PROGRAMMES

Study programmes at the University of Zagreb Faculty of Textile Technology are organised according to the curriculum harmonized with the postulates of the Bologna process, at the undergraduate level as of the academic year 2005/2016, and at the graduate level as of academic year 2008/2009.

The courses are conducted at two undergraduate university studies: Textile Technology and Engineering (TTE) and Textile and Fashion Design (TFD), of which TTE is divided into 4 branches (etc. 2), while TFD is divided into two branches. At the graduate level, 2 graduate university studies are organised under the same names (TTE and TFD), of which TTE is divided into 5 branches and TFD into four branches. The Faculty has 4 permits for conducting postgraduate university studies, one doctoral and 3 specialist studies.

UNIVERSITY STUDIES IN ZAGREB

Within the university studies the Faculty operates at three levels:

UNIVERSITY UNDERGRADUATE STUDIES with the duration of 3 years (6 semesters), upon which completion of at least 180 ECTS credits are earned. The studies are divided into modules, allowing the student to take the specialization based on the selected field of textile professions:

- **Textile Technology and Engineering (TTI):**
 - o Textile Design and Management (PMT)
 - o Textile Chemistry, Materials and Ecology (TKME)
 - o Clothing Engineering (OI)
 - o Industrial Textile and Clothing Design (IDTO)
- **Textile and Fashion Design (TMD)**
 - o Textile Design (DT)
 - o Fashion Design (MD).

UNIVERSITY GRADUATE STUDIES with the duration of 2 years (4 semesters), upon which completion of at least 120 ECTS credits are earned.

- **Textile Technology and Engineering (TTI):**
 - o Textile Design and Management (PMT)
 - o Textile Chemistry, Materials and Ecology (TKME)
 - o Clothing Engineering (OI)

- o Industrial Clothing Design (IDT)
- o Industrial Textile Design (IDO)
- **Textile and Fashion Design (TMD):**
 - o Textile Design (DT)
 - o Fashion Design (MD)
 - o Costume Design (K)
 - o Fashion Theory and Culture (TKM).

UNIVERSITY POSTGRADUATE DOCTORAL STUDY with the duration of 3 years (6 semesters), upon which completion at least 180 ECTS credits are earned.

- **Textile Science and Technology (TZT).**

UNIVERSITY PROFESSIONAL STUDY IN VARAŽDIN

University professional study offers students an appropriate level of knowledge and skills in branches of the textile profession. Professional study is connected with practice; this is the reason why students are obliged to attend practical training in industrial plants.

Professional study lasts for 6 semesters and is divided into four modules:

- **Textile Technology (TT)**
 - o mechanical technology (TTM)
 - o chemical technology (TTK)
- **Clothing Technology (OT)**
- **Footwear Technology (OBT)**
- **Footwear Design (DO).**

ECTS CREDITS AND STUDENT-CENTRED LEARNING

When forming university undergraduate and graduate study programmes, attention was paid to the rationalization and organisation of teaching and the compatibility of ECTS credits with actual student workload. In accordance with the guidelines of the Bologna process, the compatibility of ECTS credits with the actual workload of students is monitored and analysed. When drawing up curricula and content of courses, special attention is being paid to ECTS credits, which are an integral part of the lecture and implementation plan of all study programmes. Each course is awarded an appropriate number of ECTS credits, distributed according to the main student activities and workload on the courses. 1 ECTS credit corresponds to the workload of students 25-30 working hours, including all forms of teaching (lectures, seminars, exercises) and all activities necessary to pass the exam (seminars, programmes, maps, literature studies, independent learning, etc.). All courses at the undergraduate and graduate studies last for one semester.

Students at the University of Zagreb Faculty of Textile Technology gain expertise and knowledge through various teaching methods: conventional teaching methods (lectures, exercises and seminars) and additionally via e-learning and field teaching. Teaching methods encourage teamwork, development of presentation skills and the use of new technologies, all with the aim of acquiring and adopting the expected learning outcomes. For students with disabilities, this mixed form of learning proved to be good and useful to aid with their health problems. Active work by the coordinators for students with disabilities enables them to study in a quality manner, while adapting teaching process and methods in order to achieve the expected learning outcomes.

When applying and implementing exchange programmes, students have the support of ECTS and Erasmus coordinators and members of the International Relation Office of Faculty (IRO TTF). The ECTS coordinator communicates with teachers who teach the outgoing students a mandatory course during their stay abroad. The aim is to agree on the recognition of compulsory courses in the semester when the student is on the exchange, in order to achieve maximum compatibility of courses in order to recognise the audited and courses as equivalent to the courses that the student would listen and pass at the Faculty during the period.

ACADEMIC TITLES, COMPETENCES AND EMPLOYMENT

Upon completion of the university UNDERGRADUATE study students are awarded the academic title of:

- **Bachelor of engineering in textile technology and engineering, with an indication of module (PMT, TKME, OI, IDTO)**

Upon completion of the university undergraduate study Textile Technology and Engineering, the student acquires the knowledge and skills necessary to work on corresponding tasks in the field of textile technology. Students are qualified to organize and directly manage specific technological processes covered through the study - from working in textile production companies as technologists or by managing the individual production phases. Students can also initiate smaller production companies, work in dealerships, trading houses and in high schools as a professional associate. Through the study programme Industrial Design of Textiles and Clothing, basic engineering knowledge in textile technologies is combined with art skills. Thus, the student acquires the ability to include creativity and design with engineering practice in the process of designing and making textiles and clothing.

- **Bachelor of engineering in textile and fashion design, with an indication of module (DT, MD)**

Upon completion of the university undergraduate study Textile and Fashion Design, the students are able to express creativity developed during their studies falling in the scope of art and design professional education, which enables them to create and follow world fashion trends and translate them into original and recognizable work by creating textiles and clothing.

Upon completion of the university GRADUATE study, the academic title is acquired:

- **Master of engineering in Textile Technology and Engineering, with indication of module (PMT, TKME, OI, IDT, IDO)**

Upon completion of the university graduate study of Textile Technology and Engineering, students are trained to perform the most complex engineering tasks based on a scientific approach to problem solving. The acquired knowledge enables the students to master the skills to quickly fit into any stage of production, organize and manage any part of the process or the entire production process, and to contribute to the rationalization and improvement of production.

They are also trained for creative work in order to develop and rapidly transfer the modern technologies in specific production processes. Future employment possibilities cover areas from trading houses to teaching in high schools. If mastering their knowledge through scientific and professional postgraduate training, students are given the opportunity of employment in science through research professions.

- **Master of engineering in Textile and Fashion Design, with an indication of module (DT, MD, K, TKM)**

Upon completion of the graduate university study Textile and Fashion Design, students are trained to work in design studios of textile and clothing companies, fashion studios, theatres, film industry, television, museums and high schools and other places where knowledge and understanding of fashion trends is required, as well as artistic sensibility and breadth of humanistic education.

Upon completion of the university POSTGRADUATE DOCTORAL STUDY, the academic title is acquired:

- **Doctor of Science in the area of technical sciences, field of textile technology**

The university postgraduate doctoral study Textile Science and Technology combines theoretical knowledge, research work and experience in solving problems based on knowledge of modern production systems. It provides research in the field of textile-mechanical engineering, materials science, textile chemistry and technology, and clothing technology. Upon completion, the applicants are trained for teamwork and independent management of national, bilateral and European scientific projects in the field of doctoral research. The acquired knowledge and research potential enable them to complete scientific research through postgraduate training upon completion of their studies.

Upon completion of the university PROFESSIONAL UNDERGRADUATE study students are awarded the academic title of:

- **Bachelor in textile technology, with reference to a specialisation in Mechanical Technology (TTM)**

In addition to professional knowledge, the student will understand today's global economy and the rapid adaptation to international market trends. The student will gain complete knowledge as managers for yarn, fabrics, knitwear, trimmings, non-woven and technical textiles production. In addition, through vocational education in which 60% of exercises and 120 hours of practice in industry are represented in the 5th and 6th semesters, conditions have been created for a young professional to engage in self-employment.

- **Bachelor in textile technology, with reference to a specialisation in Chemical Technology (TTK)**

In the production of textiles, finishing is of special importance, which gives special properties, and at the same time textile materials are processed according to the purpose and market requirements. The student will gain knowledge that enables him to lead the technological process of pre-processing, dyeing, textile printing, finishing and care of textiles. Through professional practice in industry conducted in the 5th and 6th semesters, the student will gain professional knowledge and acquire the conditions for a young professional to engage in self-employment.

- **Bachelor in clothing technology (OT)**

Participants are trained for independent work preparing technological documentation for the processes of tailoring, sewing and finishing clothes, time analysis and rationalization of work, and planning and rational use of materials. Students are also trained as independent designers of modern clothing, production line managers in technological processes of clothing production, plant managers, control managers, and as independent entrepreneurs in private sector.

- **Bachelor in footwear technology (OBT)**

Students acquire professional knowledge in the field of footwear technology such as: footwear materials, biomechanics, footwear technology and footwear construction. In addition to professional technical and theoretical knowledge of footwear technology, the module program also provides the development of artistic and creative abilities and skills. In addition, through vocational education in which 60% of exercises and 120 hours of practice in industry are represented in the 5th and 6th semesters, conditions have been created that a young professional can be employed in business entities in the field.

- **Bachelor in footwear design (DO)**

Students acquire professional knowledge such as: materials for footwear, biomechanics, manufacturing technology, computer design and classical and computer footwear construction. In addition to professional technical and theoretical knowledge of footwear technology, the module program provides the development of artistic and creative abilities and skills with special emphasis on individual development of creative thinking and expression encouraging experimentation, research and innovation ranging from idea to 3D shoe design. Thus, the student acquires the ability to include a creative art and design component in the real process of making shoes. Through internships in industry, they acquire professional knowledge in the field of construction and production of footwear and thus become experts with wide possibilities of action in the fields of fashion design and production of footwear.

INTERNATIONAL STUDENTS MOBILITY

In addition to contributing to the academic and personal development of the individual student, student exchange is considered to be one of the contributing factors to the quality of the education system and the building of a knowledge-based Europe. Student exchange at the University of Zagreb takes place through a series of programs: Erasmus+, Bilateral exchange on the basis of inter-university agreements, CEEPUS, Bilateral exchange on the basis of inter-faculty agreements, Scholarships on the basis of bilateral cooperation of the Republic of Croatia in the field of higher education.

The Faculty has been included in the CEEPUS network since academic year 1996/1997, and is one of the first constituent units of the University of Zagreb to use this form of international cooperation. The International Relation Office of the Faculty of Textile Technology (IRO TTF) was established in 2007, with the aim of strengthening mobility and international cooperation by implementing international projects and providing support to teachers, associates and students to involve in international projects and exchange. One of the key activities of the IRO TTF is student exchange. It should be noted that the Faculty had Erasmus cooperation even before Croatia signed the Erasmus Charter in 2010. In the academic year 2008/2009, a joint study of members of AUTEX was held at the Faculty, an E-TEAM, within which the first two students of the Faculty went abroad. With the start of the Erasmus programme, the first exchange took place in 2010/2011. Over the years, the number of mobility opportunities has increased, and with it, the number of outgoing students.

CEEPUS is a program of academic exchange of students and professors of the Central European Exchange Programme for University studies, realized through the multilateral agreement establishing cooperation in the field of higher education and training.

For longer stay abroad students mostly use Erasmus+ programme for education, training, youth and sport. Erasmus+ enables students to be mobile for a total duration of up to 12 months for each level of study (undergraduate, graduate, professional and postgraduate), including all forms of international experience in mobility for study (may also include the drawing up of final/graduate theses) and/or in mobility for training (internship).

The student mobility for study is done exclusively on the basis of interinstitutional agreements concluded between faculties/academia and foreign institutions, while student mobility for training can be carried out by students in companies, institutions, organizations and other entities with the status of a legal entity and active in labour market or in the field of education, as well as in higher education institutions with the Erasmus Charter for Higher Education.

International mobility of students is most often achieved through CEEPUS network and ERASMUS+ programme, but it is also possible to realise mobility through bilateral exchange, based on interuniversity agreements, bilateral exchange based on interfaculty agreements and through particular projects. Students are also offered the option of short-term international exchange through international winter/summer schools, organized by foreign institutions. For the purpose of informing students, IRO TTF regularly forwards information on student mobility competitions via Faculty website, social networks, via e-mail as well as at the meetings of the Faculty Council. Immediately prior to launching a mobility competition, the Office organises a student forum entitled “Student mobility under ERASMUS+, CEEPUS and bilateral interuniversity exchanges”.

Mobility Types

- Student mobility for study - SMS (3 - 12 months) - includes the completion of a final thesis (does not include independent research which is not an integral part of the study).
- Student mobility for placement (internship, traineeship) - SMP (3-12 months) - if it is a part of the curriculum. If it is not a part of the curriculum, the home faculty must specifically approve the internship.
- Combination of SMS and SMP (3-12 months total - provided that the traineeship is performed under the supervision of the same higher education institution at which the student will accomplish mobility for study, and that the two activities are carried out one after the other without interruption.
- International Schools - Students are offered an option of short-term international exchange through summer/winter schools organized by foreign institutions.
- Academic mobility - postgraduate doctoral students are offered the opportunity to attend scientific and professional conferences.

RESEARCH WORK AND STUDIES

The University of Zagreb Faculty of Textile Technology, has significant research potential confirmed by scientometric data as well as numerous national and international research projects in various programs. The innovation of Faculty employees is reflected in the number of patents, according to which Faculty is the leading component within the University of Zagreb. Faculty of Textile Technology is the only academic institution in Croatia that can qualitatively follow world scientific and artistic trends, primarily in the field of textile technology.

Apart from the area of technical sciences, research work is also carried out in the area of natural sciences, social sciences, humanities and arts. In accordance with research excellence and years of experience in the field of textiles, Faculty experts are involved in the work of the European Technology Platform, which identified topics for future research aimed at raising excellence, and through the “innovation helix” which represents cooperation between academia, government, industry and society considering environment.

At present, the staff of the Faculty has carried out or actively participated in the implementation of a total of 35 national, international, research and expert projects, namely: 17 research projects of the Croatian Science Foundation, 1 established research project of the Croatian Science Foundation, 1 project of scientific cooperation of the Croatian Science Foundation, 4 projects of career development of young researchers - training of PhD students of the Croatian Science Foundation, 5 projects co-financed by the European Regional Development Fund, 2 projects co-financed by the European Social Fund, 1 project co-financed by the Erasmus+ programme, 1 project co-financed by the Cost programme and 3 bilateral projects (Slovenia, Serbia and China).

The total number of employees at the Faculty is 139, including 62 in scientific-pedagogical and artistic-pedagogical professions, 23 employees in associated professions, 7 lecturers, 6 professional employees, 1 senior technician, 3 technicians, 29 employees in administrative-technical fields and 8 cleaners. Of these, 10 people are employed in research projects alone.

Research is carried in numerous specialised laboratories:

- **Laboratory with standard atmosphere for testing of physical-mechanical textile properties**
- **Laboratory for CAD/CAM systems in clothing engineering**
- **Laboratory for physical testing of textiles materials**
- **Laboratory for physical and chemical testing of textiles**
- **Laboratory for controlled monitoring of crosslinking Process**
- **Laboratory for colour metrics**
- **Laboratory for advanced materials and advanced technologies**
- **Plasma treatment laboratory**
- **Laboratory for process parameters**
- **Laboratory for CAD/CAM system for textile and clothing design and clothing construction preparation**
- **Laboratory for restoration and conservation of textiles and forensic analysis**
- **Laboratory for textile-mechanical testing**
- **Laboratory for textile chemistry and ecology**
- **Laboratory for thermophysiological comfort of textiles**
- **Laboratory for thermophysiological comfort of footwear**
- **SEM laboratory**
- **Laboratory - knitting workshop**
- **Fiber Laboratory**
- **Studio for engineering design and design of yarns, woven fabrics, knitted fabrics, technical textiles and nonwovens**
- **Weaving studio**
- **Studio for 3D body scanning**
- **Weaving workshop**
- **Technological laboratory**

LABORATORY WITH STANDARD ATMOSPHERE FOR TESTING OF PHYSICAL-MECHANICAL TEXTILE PROPERTIES

The laboratory equipment is intended for a wide range of physical and mechanical testing of textiles and related materials in accordance with national, international and European standards and procedures. The textile testing service in accordance with national and international standards has been made available to the textile industry including manufacturers, importers, exporters and retailers.

LABORATORY FOR CAD/CAM SYSTEMS IN CLOTHING ENGINEERING

Computer CNC automatic cutting machines PROSPIN FASHION 72 and VER-SALIS, manufactured by Lectra Systems, are installed in the laboratory. The aggregates are intended for cutting one layer of textile material, and can also be used for cutting individual cutting parts or complete cutting pattern from paper or stencils, and as such are adapted for making prototypes or smaller series of garments.

LABORATORY FOR PHYSICAL TESTING OF TEXTILES MATERIALS

Measuring techniques - apparatus and instruments - cover the field of testing all basic physical and mechanical properties of fibres, yarns, fabrics and knits, nonwovens and technical textiles. Different methods and procedures of testing individual properties are applied, depending on the need, i.e. the purpose and purpose of the test, and in connection with the scientific-teaching process or in cooperation with external clients.

LABORATORY FOR PHYSICAL AND CHEMICAL TESTING OF TEXTILES

Within this laboratory, a numerous basic physical-chemical tests of various textile materials are carried out, both for the teaching process and for scientific research and cooperation with the economy. In addition to the suitability for basic tests unavoidable in the quality control of textiles in accordance with standard requirements, the laboratory is also equipped for testing of certain functional properties in accordance with the requirements for modern textile materials of special and high properties.

LABORATORY FOR CONTROLLED MONITORING OF CROSSLINKING PROCESS

The laboratory was established in 2019 and equipped with Goniometer with drop shape analysis system and tilting table, FTIR spectrometer with ATR

heating unit up to 300°C, Moisture Management Tester, Apparatus for testing the ability of drop absorption, Apparatus for measuring the spread of water in a horizontally laid sample, Apparatus for determining water retention capacity and testing device for investigation of textile dust.

LABORATORY FOR COLOUR METRICS

Specialised laboratory equipped by Digital Textile Inkjet Printing Machine, High-speed scanning fluorescence spectrophotometer, engineered for a wide range of fluorescence measurement, UV/VIS absorption spectrophotometer to determine Ultraviolet Protection Factor and remission spectrophotometer for measuring colour parameters of flat surfaces, whiteness, optical brightness and fluorescent colours.

LABORATORY FOR ADVANCED MATERIALS AND ADVANCED TECHNOLOGIES

This laboratory contains devices for conditioning the samples carried out in the stability climate chamber, a device for laboratory simulation of material aging, devices for spectrophotometric analysis, devices for skin testing and laboratory analytical balance.

PLASMA TREATMENT LABORATORY

Plasma Treatment Laboratory (B-ZP2) was established in 2008. In the laboratory low-pressure plasma system type Nano LF-40kHz, with a vacuum pump of the suction power of 8m³/h, and (oxygen and argon) gasses is situated. The main function of the laboratory is scientific research and development of new environmentally friendly treatments by surface modification of textile materials with the aim of achieving the targeted functional properties.

LABORATORY FOR PROCESS PARAMETERS

Laboratory for process parameters of the Department of Clothing Technology intended for teaching and scientific research purposes. As part of the project, research is being conducted in the field of smart and intelligent clothing development and research into the thermophysiological properties of clothing on devices that are designed, moderate and patented by the research team operating in the laboratory. Also, the laboratory conducts research in the field of sewing and high-tech methods of joining parts of clothing by ultrasonic method, high-frequency electromagnetic field method and thermal method using conduction and convection.

LABORATORY FOR CAD/CAM SYSTEM FOR TEXTILE AND CLOTHING DESIGN AND CLOTHING CONSTRUCTION PREPARATION

The laboratory is equipped with a modern CAD/CAM system manufactured by Lectra, intended for the computer design of textiles and clothing and computer clothing construction preparation. The latest licenses of textile and clothing design programs, as well as programs for computer construction, modelling and grading of cuts and fitting of cutting images, have been installed on 12 computers. The laboratory is also equipped with a digitizer for cutting parts and a plotter of cutting patterns.

LABORATORY FOR RESTORATION AND CONSERVATION OF TEXTILES AND FORENSIC ANALYSIS

The laboratory is primarily set for teaching activities related to the courses dealing with conservation and restoration of textiles and clothing and forensic fibre analysis. Current laboratory equipment is appropriate for essential investigations during different conservation and restoration phases as well as for various analysis of textile fibres and materials structures and properties. Except for teaching activities, laboratory is also used for scientific research and collaboration with other institutions.

LABORATORY FOR TEXTILE-MECHANICAL TESTING

Apparatus within the laboratory serves for testing the mechanical properties of yarns, woven fabrics, knitted fabrics, nonwoven and technical textiles, which are in accordance with ISO standards. Special mention should be made of the Textechno Statimat M for testing the tensile properties of yarns and fabrics, the Mesdan twist tester for determining the twist of single and multi-threaded yarns and the Hess thickness gauge.

LABORATORY FOR THERMOPHYSIOLOGICAL COMFORT OF TEXTILES

The laboratory for thermophysiological comfort of textiles measures the objective parameters of thermophysiological comfort of textiles, thermal resistance and water vapor resistance. The laboratory is equipped with a Sweating Guarded Hot Plate, manufactured by Thermetrics, located in a chamber for adjusting various ambient conditions (temperature and relative humidity).

LABORATORY FOR THERMOPHYSIOLOGICAL COMFORT OF FOOTWEAR

The laboratory is equipped with a device called Thermal foot, manufactured by UCS d.o.o. measuring the thermal resistance of footwear and socks as an important parameter of thermophysiological comfort.

FIBER LABORATORY

In the new and modernly equipped laboratory, according to the pedagogical and methodically elaborated sequence, an experimental form of teaching is organized starting from basic chemical-analytical and physical methods of fiber identification to complex tests and research of structure and properties of fibers or fibrous formations. Which is also used in scientific research work related to projects that are designed and implemented at the Department, but also other departments of the Faculty of Textile Technology.

SEM LABORATORY

SEM laboratory is equipped for examination of the morphological and chemical characteristics of a wide range of nano and micro size samples. In addition to the teaching process and scientific research, the laboratory is actively involved in cooperation with the economic sector. In accordance with the requirements of testing high performance and advanced materials, the laboratory is equipped with highly sophisticated devices.

STUDIO FOR 3D BODY SCANNING

The studio is equipped by 3D body scanner Vitus smart, the input unit of the computer system for construction preparation. Scanning area 1000x800 mm and 2040 mm high. The scanning is performed with a system of eight cameras and four lasers and lasts 12 seconds, during which 500,000 to 600,000 spatial points on the surface of the scanned body are isolated.

