SELF-ANALYSIS

University of Zagreb

Faculty of Textile Technology

Zagreb, March 2021

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Zagreb, 25th March 2021

Faculty Council of the University of Zagreb Faculty of Textile Technology, brought about, on its 7th extraordinary session, held on March 25th 2021 and on the motion of the Acting Dean, pursuant to the Article 19 of the Statute of the University of Zagreb Faculty of Textile Technology, the following

DECISION

The Faculty Council adopts the Self-analysis at the University of Zagreb Faculty of Textile Technology, as an integral part of the re-accreditation procedure.

SVEUČILIŠTE U ZAGREBU • TEKSTILNO-TEHNOLOŠKI FAKULTET

Acting Dean

Assoc. Prof. Anica Hursa Šajatović, Ph.D.

Dostaviti:
1. The Agency for Science and Higher Education (ASHE)
2. Faculty secretary: Sanja Miletić, mag. iur.
3. Archives of the Faculty Council
4. Archives

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Introduction

This ***Self-analysis of the University of Zagreb Faculty of Textile Technology***, in the process of reaccrediting the Faculty, has been carried out by the members of working groups appointed by the Decision on the appointment of the members of the Self-analysis Committee at the University of Zagreb Faculty of Textile Technology, adopted by the Faculty Council at its 2nd regular session, held on November 16th 2020:

1. Assoc. Prof. Anica Hursa Šajatović, PhD, Interim Dean of the Faculty
2. Prof. Tomislav Rolich, PhD, Interim Vice-dean for Education
3. Assoc. Prof. Sandra Flinčec Grgac, PhD, Interim Vice-dean for Scientific Research
4. Assoc. Prof. Sanja Ercegović Ražić, PhD, Interin Vice-dean for Financial Management
5. Assoc. Prof. Anita Tarbuk, PhD, Interim Vice-dean for Interinstitutional and International Cooperation
6. Assist. Prof. Karlo Lelas, PhD, Head of the Quality Assurance Committee
7. Prof. Tanja Pušić, PhD
8. Prof. Mario Cetina, PhD
9. Prof. Branka Vojnović, PhD
10. Prof. Snježana Firšt Rogale, PhD
11. Prof. Ana Sutlović, PhD
12. Prof. Art. Koraljka Kovač Dugandžić
13. Prof. Art. Jasminka Končić, PhD
14. Assist. Prof. Renata Hrženjak, PhD
15. Sanja Miletić, mag. iur.

Working groups have been designated for individual chapters:

1. Interim Dean of the Faculty, Assoc. Prof. Anica Hursa Šajatović, PhD, and the Head of the Quality Assurance Committee Assist. Prof. Karlo Lelas, PhD, in charge of the Self-analysis part entitled I. INTERNAL QUALITY ASSURANCE AND THE SOCIAL ROLE OF THE HIGHER EDUCATION INSTITUTION
2. Interim Vice-dean for Education Prof. Tomislav Rolich, PhD, and the Education Board in charge of the Self-analysis part entitled II. STUDY PROGRAMMES
3. Interim Vice-dean for Education Prof. Tomislav Rolich, PhD, and the Education Board in charge of the Self-analysis part entitled III. TEACHING PROCESS AND STUDENT SUPPORT
4. Interim Vice-deans in charge of the self-analysis part entitled IV. TEACHING AND INSTITUTIONAL CAPACITIES
5. Internim Vice-dean for Scientific Research Assoc. Prof. Sandra Flinčec Grgac, PhD and the Scientific Research and Artistic Board in charge of the Self-analysis part entitled V. SCIENTIFIC/ARTISTIC ACTIVITY.

Interim Dean, Assoc. Prof. Anica Hursa Šajatović, PhD appointed the administrators of the MOZVAG2 system in charge of the segment of Analytic Supplement to Self-analysis on November 26th 2020:

1. Prof. Tomislav Rolich, PhD
2. Ljiljana Fonović, MSc
3. Maja Rukavina, dipl. iur.
4. Gorana Bosnić Krznar, prof.
5. Sanja Projić

On February 10th 2021 the interim Dean appointed two more persons for data entry and the work in the MOZVAG2 system in charge of the segment of Analytic Supplement to Self-analysis (finance):

1. Katarina Novaković
2. Željka Delač

The Self-analysis of University of Zagreb Faculty of Textile Technology was accepted at the 7th extraordinary session of the Faculty Council on March 25th 2021.

History of establishment of the University of Zagreb Faculty of Textile Technology

The independent study of textiles and textile technology in Croatia was organized for the first time in the early 1960s as studies at the Faculty of Technology in Zagreb, initially only textile-chemical technology and later textile- mechanical and clothing technology. In 1961, four independent higher technical schools (junior colleges) were established:

- Higher Technical Textile School in Zagreb
- Higher Technical School of Fashion Design in Zagreb
- Higher Technical Textile School in Varaždin
- Higher Technical Textile School in Duga Resa.

Due to the increased needs of the textile industry for trained personnel, the Faculty of Technology of the University of Zagreb organized separate branches of study in 1971 - Textile Chemical Engineering and Textile Mechanical Engineering. Three years later, in 1974, Textile engineering was established as an independent organization within the Faculty, with the aim of organizing textile studies. Textile Engineering functioned independently from 1978. The Higher Technical School of Textiles in Zagreb started training textile and clothing designers in the mid-1970s. On July 1st 1983, all textile technical schools were integrated into the Institute of Textiles and Clothing of the Faculty of Technology at the University of Zagreb. The Institute of Textiles and Clothing reorganized itself on November 15th 1991 as an independent institution and a member of the University, under the name of the Faculty of Textile Technology, University of Zagreb. In the beginning, the Faculty had four departments in Zagreb and two business units in Varaždin and Duga Resa.

Thanks to the continuous and hard work of teachers and researchers, the Faculty of Textile Technology, University of Zagreb, became the only higher education institution in the field of technical sciences, textile technology in Croatia and the only institution systematically engaged in scientific research and professional work in this field.

In terms of the number of academic and teaching staff, the number of students and opportunities for professional work, the Faculty was the strongest institution of higher education in the field of textiles and clothing in the former Yugoslavia, and it is still one of the most important institutions of its kind in Europe. The diplomas obtained at the University of Zagreb are internationally recognized by the Association of Textile University of Europe (AUTEX) and the Textile Institute of Manchester (UK).

Undergraduate and graduate study programs at the Faculty of Textile Technology, University of Zagreb, 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.

University of Zagreb Faculty of Textile Technology Today

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).

Currently, 608 students are enrolled at the Faculty: 333 undergraduate students, 207 graduate students, 23 professional students in Varaždin and 55 postgraduate students.

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.

Activities and Organization of the University of Zagreb Faculty of Textile Technology

The Faculty of Textile Technology is a part of the University of Zagreb, which, in accordance with the provisions of the Act on Scientific Activity and Higher Education and the Statute of the University of Zagreb, has the right of foundation over the Faculty. The University of Zagreb Faculty of Textile Technology is a legal entity registered in the Court Register of institutions, the Register of Scientific Organizations and the Register of Higher Education Institutions of the Ministry of Science and Education of the Republic of Croatia. Basic general act of the University of Zagreb is the Statute of 2018.

Scope of activity

The Faculty carries out the following activities:

- organising and conducting university undergraduate, graduate, postgraduate (doctoral) and postgraduate professional studies and specialised studies,
- organising and conducting scientific research, artistic research and professional work,
- designing and proposing scientific, artistic, professional and development projects,
- organising scientific/artistic and professional meetings (conferences, symposia, etc.),
- cooperation with scientific/artistic, professional, pedagogical and other legal persons and institutions
- organising and implementing professional educational programmes based on the principles of lifelong and adult education
- provision of consulting and design services,
- popularisation of scientific, artistic and professional results,
- establishing and organising accredited laboratories and certification bodies
- publishing and publishing activities for the purposes of educational process, scientific, artistic and professional work
- selling of textbooks, other press materials and souvenirs,
- library activities,
- gallery activity,
- study and development of textile materials,
- process engineering design,
- design of devices, equipment, installations and complex systems,
- design, development and improvement of technological processes,
- issuing of certificates (test reports and certificates) in the field of textile technology,
- ensuring and quality control of materials and processes,
- organising and conducting exhibitions, fashion shows, design competitions and similar events
- manufacture of clothing, collections, costumes, textiles and products made of textiles or products in which textiles play an important role as a raw material.

Structure

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

The Dean represents the Faculty, brings the business decisions in accordance with the regulations, leads the Faculty Council and proposes the agenda of the meetings of the Faculty Council, acts as a member of the relevant Council scientific fields, proposes measures to improve the work of the Faculty Council, implements the decisions of the Faculty Council, the decisions of the University Senate and the Council of scientific field as far as they concern the Faculty, carries out other activities in accordance with the law, the Statute of the University of Zagreb and the Statute of the Faculty of Textile Technology.

In his/her work, the Dean is assisted by Vice-Deans. The Faculty has four Vice-Deans: Vice-Dean for Education, Vice-Dean for Scientific Research, Vice-Dean for Financial Management and Vice-Dean for Interinstitutional and International Cooperation.

The Faculty Council is a professional Council of the Faculty and consists of all the staff in scientific-educational and artistic-educational status, a representative of employees elected in teaching status, a representative of employees elected in associate status, representatives of students and a representative of other employees.

Faculty Council adopts the Statute of the Faculty, elects the dean, elects vice-deans at the proposal of the Dean, conducts elections for the members of the Council of the scientific fields, decides on the annual report of the Dean, adopts the budget and annual financial statement of the Faculty, takes care and makes decisions in order to ensure the quality of studies and scientific, artistic and professional work, initiates the process of adoption and manages the implementation of educational programmes, studies, scientific and artistic projects, and provides an opinion on the proposal of the University educational plans and programmes as a whole or in parts of its activities, as well as in the scope of its work.

Organisational units of the Faculty are departments, the Study Unit Varaždin (SJV), the Centre for Development and Transfer of Textile and Clothing Technologies and Fashion Design (CTD), the Textile Science Research Centre (TSRC), the Secretariat and the Financial Service.

The department is an organisational unit in the field of work of the Faculty in which teaching, scientific-research and/or artistic-research and professional staff are organised. The following departments and study units are active at the Faculty, as its organisational units:

- Department of Textile and Fashion Design
- Department of Materials, Fibres and Textile Testing
- Department of Clothing Technology
- Department of Applied Chemistry
- Department of Textile Design and Management
- Department of Textile Chemistry and Ecology
- Department of Fundamental Natural and Engineering Sciences
- Study Unit Varaždin.

The **Deans' Board** is advisory board which members are Dean, Vice-deans, Heads of departments and Secretary.

The Centre for Development and Transfer of Textile and Clothing Technologies and Fashion Design (CTD) is the organisational unit of the Faculty engaged in the cooperation with business in the field of textile and clothing technologies and fashion design.

The Textile Science Research Centre (TSRC) is the organisational unit of the Faculty dealing with encouraging, coordinating and continually developing scientific research and artistic research at the Faculty and connecting it with other international and domestic scientific institutions and business.

The Secretariat is the organisational unit of the Faculty which takes care of legal, personnel and administrative affairs, preparation and coordination of the performance of undergraduate, graduate, professional and postgraduate studies, the work of the Office for projects, the work of the Library and technical functioning of the Faculty.

Financial service is the organisational unit of the Faculty for accounting, finances, and necessary procurement of goods at the Faculty.

The following centres, offices and galleries are active at the Faculty:

- Centre for e-learning
- Centre for Lifelong Learning (COBRA)
- Centre for Creative Weaving
- Centre for Career and Professional Practice (established in July 2020)
- Office for Publishing Activities
- International Relations Office of University of Zagreb Faculty of Textile Technology (IRO TTF)
- Office for projects and
- TTF Gallery.

The Permanent Faculty Councils, Boards and Committees are:

1. The CTD Council,
2. The TSRC Council,
3. The Council of Doctoral Study,
4. Artistic judgement board of TTF Gallery,
5. The Education Board,
6. The Scientific Research and Artistic Board
7. The Library Board,
8. Public Relations Board,
9. The Occupational Safety and Environmental Protection Board,
10. Ethics Committee,
11. Quality Assurance Committee,
12. Committee for Publishing activities,
13. Committee for projects,
14. Committee for study programmes,
15. Committee for Student Transfers and Register of Equally Valued Courses,
16. Committee for Student Disciplinary Responsibility,
17. Commission for Pre-Assessment and Unification of Professional Reports for Teacher Advancement.

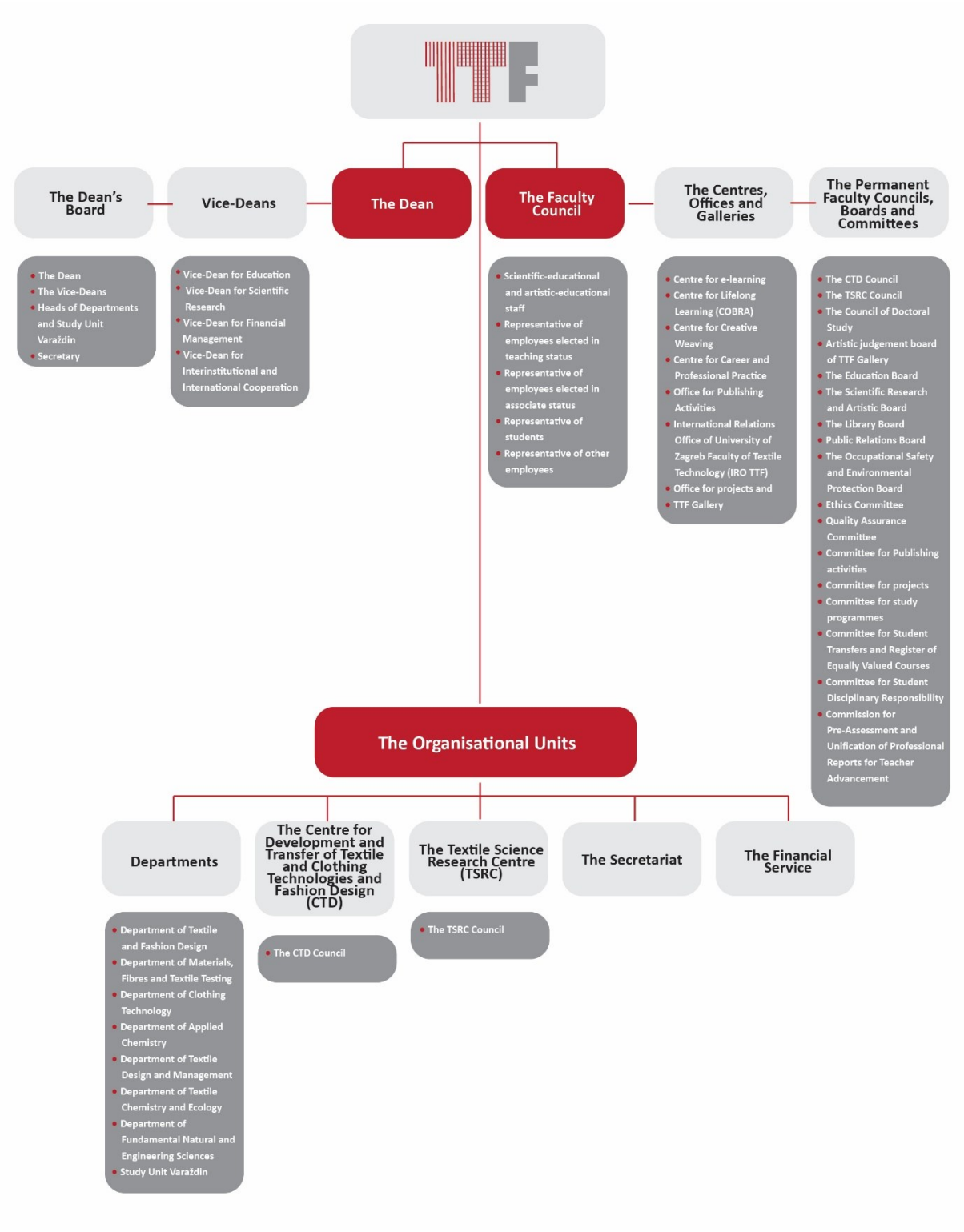

Fig. 1: *Organisational scheme of the University of Zagreb Faculty of Textile Technology*

Mission and Vision of the University of Zagreb Faculty of Textile Technology

The University of Zagreb Development Strategy defines the mission and vision of the Faculty as the basis for continuous work and progress in all activities, teaching, scientific research, artistic and professional activities.

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.

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.

The Faculty also performs undergraduate professional study in the study unit in Varaždin.

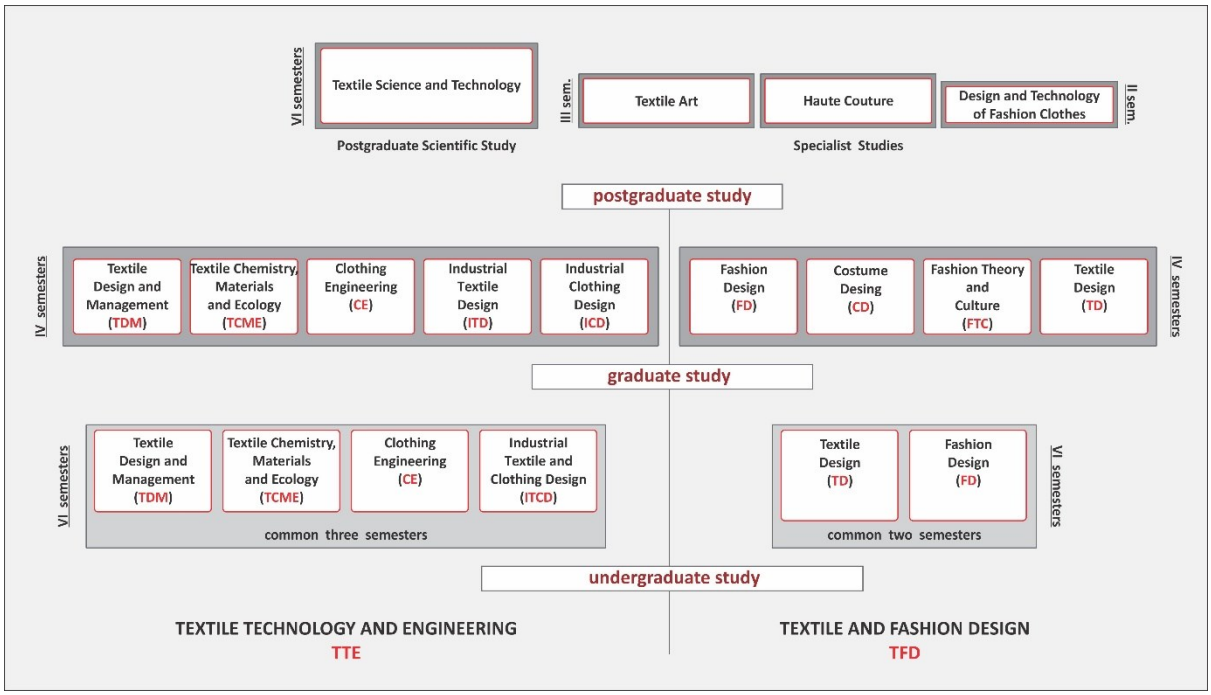

Fig. 2: *A schematic overview of the University of Zagreb Faculty of Textile Technology undergraduate, graduate and postgraduate studies*

Undergraduate University Study

Textile technology and engineering (TTE). After completing this three-year study, students gain 180 ECTS credits and the academic title of Bachelor (baccalaureus) of textile technology and engineering (*Univ. bacc. ing. techn. text.)* with a designation of branch:

- Textile Design and Management
- Textile Chemistry, Materials and Ecology
- Clothing Engineering
- Industrial Textile and Clothing Design

Textile and fashion design (TFD). After completing this three-year study, students gain 180 ECTS credits and the academic title of Bachelor (baccalaureus) of textile and fashion design engineer (*Univ. bacc. ing. des. text.*) with a designation of branch:

- Textile Design
- Fashion Design.

The courses of the first three semesters of the TTE undergraduate study, i.e., the first two semesters of the TFD undergraduate study, are common for all branches. During these semesters, basic engineering and design competences are acquired, which offers flexibility in employment at the labour market (horizontal employment potential). Later on the students acquire specific competences necessary for efficient and rapid integration into the work processes in specific areas of their profession (narrower specialty as employment potential).

Graduate University Study

Textile technology and engineering (TTE). After completing this two-year study 120 ECTS credits and the academic title Master of Textile Technology and Engineering (*mag. techn. text*.) are awarded with a designation of branch:

- TextileDesign and Management
- Textile Chemistry, Materials and Ecology
- Clothing Engineering
- Industrial Textile Design
- Industrial Clothing Design.

Textile and fashion design (TFD). After completing this two-year study, 120 ECTS credits and the academic title Master of Textile and Fashion Design Engineering (*mag. des. text*.) are awarded with a designation of branch:

- Textile Design
- Fashion Design
- Costume Design
- Fashion Theory and Culture.

Postgraduate Study

The university postgraduate doctoral study *Textile Science and Technology* lasts for 3 years and upon completion students are awarded 180 ECTS credits and the academic degree of doctor of science (PhD) in the field of technical sciences, textile technology.

The Faculty also has a permit for conducting postgraduate specialist studies lasting for three semesters (sections: *Textile Art, Haute Couture*) and two semesters (section: *Design and Technology of Fashion Clothes*).

Undergraduate Professional Study

In accordance with the postulates of the Bologna process, as of the academic year 2005/2006, the Faculty also organizes professional study of *Textile, Clothing and Footwear Technology* (TCFT) located in the Study unit Varaždin (Fig. 3). The study is organised in accordance with the interests of companies in this field.

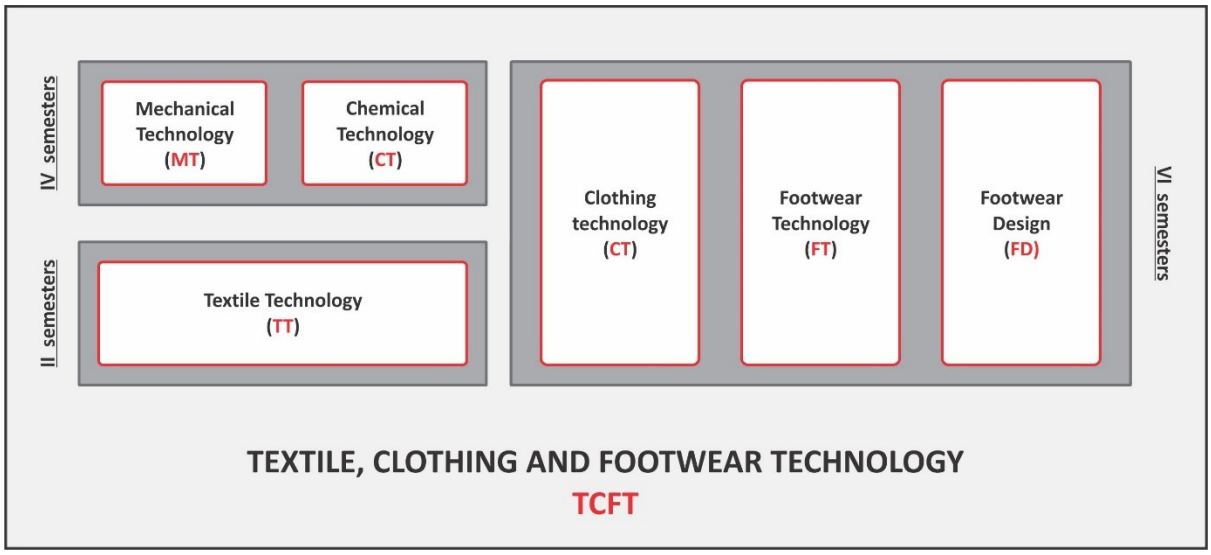

Fig.3: *A schematic presentation of the undergraduate professional study of Textile, clothing and footwear technology*

The study lasts for 3 years, and by graduating the students earn 180 ECTS credits. After graduating, the academic title of Bachelor (baccalaureus/a) engineer of textile, clothing and footwear technology (Bacc. ing. techn. text.) is awarded, with the designation of branch:

- Clothing Technology
- Textile Technology - Chemical
- Textile Technology - Mechanical
- Footwear technology
- Footwear design.

Creating Self-analysis

The University of Zagreb Faculty of Textile Technology has passed two procedures of external independent periodic assessment of the quality assurance system and one procedure of revalidation until now. Based on the results of these procedures, the Faculty has started preparations for the revalidation process, preceded by writing this Self-analysis.

Upon the receipt of the Notice on the Revalidation procedure of the University of Zagreb Faculty of Textile Technology, sent by *the Agency for Science and Higher Education*, (hereinafter: *the Agency*) dated November 4th 2020 (CLASS: 602-04/20-04/0036, REG. no.: 355-02-04-20-0003), all employees were informed of the official beginning of the process of reaccreditation and the Faculty Council decided on November 16th 2020 to appoint the members of the Self-analysis Committee at the University of Zagreb Faculty of Textile Technology.

Fifteen staff members were appointed to the working groups, and each working group was additionally assisted in its work by the teachers appointed to the respective boards (Education Board and Scientific Research and Artistic Board). Head of the Quality Assurance Committee of the University of Zagreb Faculty of Textile Technology Assist. Prof. Karlo Lelas, PhD and vice-head Prof. Branka Vojnović, PhD were actively involved in writing Chapter I - *Internal quality assurance and the social role of the higher education institution.*

By Interim Deans' decisions on the appointment of persons in charge of data entry and the work in the MOZVAG2 system, from November 26th 2020 and February 10th 2021, the persons in charge of the segment of Analytic Supplement to Self-analysis, coordinated by Interim Vice-dean for Education Prof. Tomislav Rolich, PhD were appointed.

During the preparation of the Self-analysis, the Faculty Management (dean, vice-deans) and the head of the Quality Assurance Commttee participated at the on-line workshop for Self-analysis on October 27th 2020. The persons in charge of the MOZVAG2 system took part in the workshop held on December 9th 2020. The head of the Library, Davor Jokić, mag. phil., participated in the workshop for the administrators of the Croatian Scientific Bibliography (CROSBI), and the head of the Office for projects Franjo Benjak, mag. oec., participated at the workshop for database administrators of project activities in the system of science and higher education of the Republic of Croatia (POIROT).

The Self-analysis of the University of Zagreb Faculty of Textile Technology was accepted at the 7th extraordinary session of the Faculty Council on March 25th 2021.

I. Internal quality assurance and the social role of the higher education institution (ESG 1.1, ESG 1.7, ESG 1.8)

1.1. The higher education institution has established a functional internal quality assurance system.

Elements of the standard

- *Internal quality assurance system includes and evaluates all activities of the higher education institution (study programmes, teaching process, student support, support to students from under-represented and vulnerable groups, learning resources, scientific/artistic activity, professional activity, etc.) and provides underlying documentation.*
- *Internal quality assurance system seeks to involve all stakeholders of the higher education institution (students and external stakeholders - employers, alumni, representatives of professional organisations, civil society organisations and internal stakeholders).*
- *The higher education institution adopted a quality assurance policy, which is a part of its strategic management and is achieved through the implementation of the strategy, including the strategic research agenda, involving a period of at least five years.*
- *The implementation of the strategy includes SWOT or similar analysis, strategic goals, programme contract goals (where applicable), operational plan, defined responsibilities for implementation, monitoring mechanisms and the report on its implementation. The stakeholders recognize the strategy as an effective tool for improvement.*
- *The higher education institution systematically collects and analyses data on its processes, resources and results, and uses them to effectively manage and improve its activities, as well as for further development.*
- *The higher education institution uses various methods for collecting data on quality (student satisfaction surveys, peer review, feedback from employers and/or associates, graduates etc.).*
- *The higher education institution is committed to the development and implementation of human resource management policies (managerial, scientificteaching, artistic-teaching, administrative, professional and support resources), in accordance with professional principles and standards.*

The process of quality assurance and improvement is an integral part of all activities of the University of Zagreb Faculty of Textile Technology in teaching, scientific research, artistic, as well as in professional activities. Quality management, through strategic planning, is based on quality policy, goals and responsibilities realised within the quality framework by planning activities, their continuous monitoring, ensuring and improving quality. Improving quality is based on self-maintenance, student surveys, employee surveys and internal and external evaluations.

The quality assurance system at the University of Zagreb Faculty of Textile Technology is defined by the policy, the *Manual for improvement and quality assurance*, (In Croatian: Politika kvalitete, Pravilnik o sustavu osiguravanja kvalitete na Sveučilištu u Zagrebu Tekstilno-tehnološkom fakultetu, Priručnik za unapređivanje i osiguravanje kvalitete na Sveučilištu u Zagrebu Tekstilno-tehnološkom fakultetu), the Development Strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020 and the Research Strategy of University of Zagreb Faculty of Textile Technology for period 2014-2020). New strategies are being drafted: *the Development Strategy of the University of Zagreb Faculty of Textile Technology* and the *Research Strategy of the University of Zagreb Faculty of Textile Technology for the period 2021-2027,* which will also include the chapter on quality assurance in teaching, scientific research, artistic and professional activities of the Faculty.

Quality policy of the University of Zagreb Faculty of Technology contains quality assurance in all the segments of activities and competences: mission, vision and strategic framework for the development of the Faculty, the development of quality management systems based on university strategic documents, legal regulation in the Republic of Croatia, standards and guidelines for quality assurance in the European higher Education area (ESG) and other normative quality documents related to the development of institutions of higher education; internal and external independent judgements of quality management systems.

The quality assurance system at the Faculty has been effective since the academic year 2005/2006, when the Quality Assurance Committee of the University of Zagreb Faculty of Textile Technology was established. It was renamed on October 15th 2007 as the Faculty of Textile Technology Quality Assurance Committee. In accordance with the decision of the Faculty Council of July 4th 2011, the Quality Assurance Committee (hereinafter: PUK) was established, with the aim systematically regulate, plan, monitor, evaluate and improve the quality of teaching, scientific research, artistic, professional, administrative and other activities of the Faculty. Through its activities, educational, scientific research, artistic and professional activities, the strategic guidelines of the Faculty are adopted, established standards continuously developed and highest quality standards achieved, to the satisfaction of all stakeholders in science and higher education system. Quality assurance and improvement activities at the Faculty are implemented by the Quality Assurance Committee a permanent expert body of the Faculty Council, the members of which are Faculty staff and administrative personnel, as well as external stakeholders and students.

The involvement of external stakeholders in the work and development of the Faculty is a continuous process, visible in their participation in management, as well as in teaching, scientific research, artistic and professional work. Especially important in this context is the role played by external stakeholders – alumni, included in teaching as external associates, participating in the implementation of professional practice, holding professional panels for students and teachers of the Faculty, participating in scientific research, artistic and professional work, working as experts in the preparation of experimental parts of student evaluation etc. The role of employers and businesses is reflected in their support and implementation of professional practice, design and implementation of experiments for evaluation, Also, the Faculty's employees prepare elaborates, expert and professional projects for the needs of particular businesses and, based on the above-mentioned cooperation, the Faculty has signed business agreements or cooperation agreements and contracts with them.

Scientists from various universities participate in the working of several Competitiveness clusters *(Defence industry, Automotive industry, Textile and footwear manufacturing, Creative industry)*, as well as professional associations in Croatia (*Croatian Engineering Association* - HIS, *Croatian Textile Engineering Association - HIST, The Croatian Leather and Footwear Society - HDKO) and abroad (The European Apparel and Textile Confederation* - EURATEX, *Association of Universities for Textiles* - AUTEX, *The Textile Institute*, *The American Association of Textile Chemists & Colorists* – AATCC, *Balkan Society of Textile Engineers* – BASTE), public institutions (*Croatoian Standards Institute* – HZN, *Croatian Accreditation agency* – HAA, *Sectoral councils* – SV).

Based on the mechanisms adopted, quality assurance activities are regularly implemented in order to continuously improve the system. *The Quality Assurance Manual* (In Croatian: *Priručnik za osiguravanje kvalitete*) has been developed with the aim of defining activities and procedures in order to improve and ensure the quality of higher education. This Manual ensures continuous monitoring of various quality indicators and the creation improvemed measures to enhance quality. Internal assessment of the quality assurance system is a complex procedure determining whether the activities

and results of those activities constituting the quality assurance system are efficient and in accordance with national and ESG standards. It assesses the contribution to continuous improvement of quality culture and determines the level of development and efficiency of quality assurance systems.

University of Zagreb The Faculty of Textile Technology uses various methods of collecting information on the quality in all areas of its work: student surveys of the work of teachers, student surveys of their satisfaction with study programmes (described in Chapter 4.3), the data from the ISVU system and the state graduation system, student surveys of the satisfaction with the work of the services offered by the Faculty Secretariat and related professional services, surveys of the employees of the Faculty regarding their satisfaction with the work of the Deans' Board, together with Faculty departments and related professional services. Data collected by all these methods are presented in public either orally at the meetings of the Faculty Council or in reports and on the Faculty website (In Croatian: Odluke i izvješća).

In accordance with the Development Strategy, strengthening and improvement of the Faculty in terms of the number and competence of teachers in scientific-educational, artistic-educational, teaching and collaborative status is encouraged, while activities such as planning of teaching potentials, collecting data on teaching staff and teaching workload, drafting a plan for recruitment of new teachers and advancement of existing teachers are continuously being implemented. The University of Zagreb Faculty of Textile Technology as the only national institution educating experts in the field of textile technology, establishes professional training of employees in Croatia and abroad through various types of mobility, as one of its most important objectives (Erasmus, CEEPUS, academic mobility, bilateral mobility, etc.). In accordance with the Development Strategy of the University of Zagreb Faculty of Textile Technology continuously takes care of the number of employees (teachers, associates, administrative and professional staff), trying to reach the optimal correlation of the number of teachers and the number of students, the highest possible level of teaching workload, as well as the quality of personal standards of employees and students.

1.2. The higher education institution implements recommendations for quality improvement from previous evaluations.

Elements of the standard

- *The higher education institution analysed the recommendations for improvement and undertakes activities on the basis of previous internal and external evaluations.*
- *The higher education institution analyses improvements and plans further development accordingly.*

The University of Zagreb Faculty of Textile Technology has been continuously developing and improving the quality assurance system based on the results of internal and external evaluations. In the period from 2010 until today, the Faculty has undergone several external evaluation procedures:

- external evaluation of the Faculty carried out by the National Council for Higher Education, 2008
- introduced quality management system in the segment of administrative business according to HRN EN ISO 9001 and continuous implementation of activities since 2010 (recertification of quality management system 2013, 2016 and 2019)
- Faculty Reaccreditation conducted by the Agency for Science and Higher Education, 2015
- internal assessment of quality assurance system in accordance with the request of the University of Zagreb, 2016
- revalidation of the postgraduate university doctoral study *Textile Science and Technology* carried out by the Agency for Science and Higher Education, 2016
- undergraduate and graduate university study programmes *Textile Technology and Engineering* and technological engineering have been included in the list FEANI EEED since 2016 - FEANI European Engineering Education Database) of well-known European universities and study programmes.

The University of Zagreb Faculty of Textile Technology has been continuously working on improving its business and management processes, which is proven by acquiring certificates for the quality management system HRN EN ISO 9001:2015 in the area of Faculty management, administrative-professional and auxiliary departments of the Faculty.

Certification, recertification and implementation of independent evaluations with the aim of extending the validity of the certificate have been continuously carried out since 2010. Based on the findings after conducted audits, corrective activities and measures were defined to eliminate objections and irregularities, while further development has been planned to improve them. The last monitoring ISO audit was carried out on June 18th 2020, where no non-conformities were found.

The Agency for Science and Higher Education regularly evaluates the Faculty in order to determine the extent to which the institution of higher education meets the conditions for performing the activities of higher education and scientific activities laid down in the Act on Quality Assurance in Science and Higher Education (NN 45/09), as well as *the Ordinance on the content of the permit and the conditions for issuing the permit for performing the activities of h*igher education, conducting the study programme and reaccrediting higher education institutions (NN 24/10) and *the Ordinance on the conditions for issuing the permit for performing scientific activities, the conditions for the revalidation of scientific organisations and the content of the permit* (NN 83/10).

Previous evaluation in 2015 was carried out by an expert committee appointed by the Agency Accreditation Council. The expert Commission visited to the Faculty on March 23rd and 24th 2015, and their work was based on the Self-analysis prepared by the Faculty. After the visit, the International expert Committee adopted the final Report (June 11th 2015) which included a detailed analysis by individual standards and criteria for the revalidation of higher education institutions, providing recommendations for improvement of quality (In Croatian: Završno izvješće AZVO).

On November 23rd 2015, the Agency for Science and Higher Education issued an accreditation recommendation to the Ministry of Science, Education and Sports. The Faculty was then rated "mostly implemented" for six out of seven standards, and "partially implemented" for one standard (5 - Scientific and professional activities).

In accordance with the accreditation recommendation, on November 27th 2015, the Minister of Science, Education and Sports issued a certificate on the fulfilment of conditions for performing the activities of higher education and scientific activities with subsequent monitoring of activities that included the preparation of the action plan within 6 months and reporting to the Agency once a year on the implementation of the action plan.

Based on the recommendations received, an Action Plan for improving the quality and Annual Report on the realisation of the (In Croatian) Action Plan was prepared, adopted at the meeting of the Faculty Council in May 2016, explaining further actions for improving the quality in individual chapters and given recommendations of the Agency.

In accordance with the recommendations obtained and the Action Plan for improving the quality, a part of activities was implemented in order to improve the quality per individual chapters. According to the recommendations, student satisfaction has been more frequently assessed (In Croatian): surveys are conducted every semester, teachers conduct self-calibration through the form defined by the University of Zagreb, students are continuously interviewed regarding the quality of teaching on individual courses. Recommendations related to study programmes and their reorganization have been considered and the project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology* has introduced the elaboration of new occupational standards, of which 6 were evaluated and accepted by the end of 2020. After the evaluation, one was entered in *the Register of the Croatian Qualifications Framework* in 2020, and the remaining 5, after the amendment in early 2021, were entered in *the Register of the Croatian Qualifications Framework* (hereinafter: Registar HKO) with a 5-year validity period. Two more are in the acceptance phase. Based on accepted occupational standards, qualification standards for three new undergraduate study programmes are also being developed. Students of *Textile and Fashion Design* have at their disposal a Laboratory for technological processes of clothing technologies, Laboratory for process parameters, Weaving Studio, Laboratory - workshop for knitting, Weaving workshop, Technological laboratory, Laboratory for colour metrics and Studio for engineering design and design of yarns, woven fabrics, knitted fabrics, technical textiles and nonwovens, computer programs were also purchased for the needs of textile and fashion designers, as well as students of other studies: design and design of various textile structures (DesignaKnit, Diagraph Lonati, Arahne), textile and clothing design and computerized clothing structure (CAD/CAM system Lectra), while software package for computer 2D/3D clothing design (CAD system Optitex) was partially upgraded. Five new teachers were employed at the Department of Textile and Fashion Design in the previous period, teaching most of their classes at the *Textile and Fashion Design*. Within the framework of the project *Development and implementation of professional practice at TTF* - RAST, with the implementation period from 2020 to 2023, the purchase of new equipment is planned for the purpose of teaching and equipping studies,

practices and laboratories (e.g. the purchase of new sewing machines, copying and printing equipment, etc.). In addition, the mobility of students, teaching and non-teaching staff has increased over the past 5 academic years. However, since March 2020, due to the COVID-19 virus pandemic, part of the planned mobility has not been realised. Employees and students are informed by e-mail and publication on the Faculty website on mobility opportunities and announced competitions. At least twice a year, panels on mobility are held. Teaching is continuously performed in English for foreign students, and the number of courses performed has increased.

The *Action Plan for Quality Assurance of the University of Zagreb Faculty of Textile Technology* is also adopted annually, relying on standards and guidelines for quality assurance at the European higher education area (ESG), as well as on the national and university strategies of the science and higher education system. Based on the *Action plan,* the PUK draws up *an Annual report on quality assurance at the University of Zagreb Faculty of Textile Technology* (In Croatian) analysing and citing the reasons for any deviation from the Activity plan. The Action plan and Annual report on quality assurance of the University of Zagreb Faculty of Textile Technology have been adopted by Faculty Council.

In April 2016, a *Self-assessment of the effectiveness of the quality assurance system* was carried out as a part of the internal judgement procedure of the University of Zagreb. The quality management Commission of the University of Zagreb submitted the requested data to the quality Management Committee of the University of Zagreb, which prepared the final Report on Internal assessment of the quality assurance system of the University of Zagreb (In Croatian: pages 520-534). The level of harmonisation and development of the quality system in 13 fields of activity was expressed by an average score of 1 (not defined), 2 (defined), 3 (implemented), 4 (partially effective) and 5 (efficiently), and in the internal judgement procedure of the University of Zagreb for the Faculty of Textile Technology it was:

- ESG area 1.1.1 — 1.1.11 — quality assurance policy — score 4
- ESG area 1.2.1 — 1.2.9 — programming and approval — score 4
- ESG area 1.3.1 — 1.3.15 — student-oriented learning, teaching and evaluation — score 5
- ESG area 1.4.1 — 1.4.5 — student registration and promotion, recognition and certification — score 5
- ESG area 1.5.1 — 1.5.6 — teaching staff — score 4
- ESG area 1.6.1 — 1.6.8 — student learning and support resources — score 5
- ESG area 1.7.1 — 1.7.8 — information management — score 4
- ESG area 1.8.1 — 1.8.9 — public information — score 5
- ESG area 1.9.1 — 1.9.9 — continuous monitoring and periodic review of programmes — score 4
- ESG area 1.10.1 — 1.10.5 — Periodic external quality assurance — score 5
- ESG area 1.11.1 — 1.11.6 — Scientific and Research and artistic activity — score 5
- ESG area 1.12.1 — 1.12.7 — Expert activity — score 5
- ECG area 1.13.1 — 1.13.9 — Mobility and international cooperation — score 5

University of Zagreb Faculty of Textile Technology was in the process of reaccreditation a part of the activities related to the renovation of the postgraduate university doctoral study Textile Science and Technology in 2016. The expert Committee, appointed by the Accreditation Council of the Agency for Science and Higher Education, paid a visit to the Faculty on June 8th 2016. After the evaluation, the expert committee submitted the Report on Revalidation of University Postgraduate Study *Textile Science and Technology* in which it issued a recommendation to the accreditation Council of the Agency to issue a certificate of fulfilment of the conditions for performing a part of the activity. On March 30th 2017, pursuant to the recommendation of the accreditation Council of the Agency, upon

the authority of the Minister responsible for science and education, the Secretary of State issued a certificate of fulfilment of the conditions for performing part of the activities related to the implementation of the study programme for the postgraduate university study Textile Science and Technology.

Based on the recommendations received, an Action Plan (In Croatian) was drafted in order to improve the quality of postgraduate studies Textile Sciences and Technology at the Faculty of Textile Technology, University of Zagreb. The implementation of the drafted Action Plan is monitored every academic year, and the Faculty Council adopts the Report on the achieved results of the Action Plan for improving the quality of the postgraduate university study *Textile Science and Technology*. So far, 3 reports have been prepared on the achieved results of the Action Plan for the accomplishment of this task, 2017/2018, 2018/2019 and 2019/2020 (all in Croatian).

In January 2016, a validation of the undergraduate and graduate university study *Textile Technology and Engineering* was carried out by the Croatian Engineering Federation (HIS MC) in order to be included in THE FEANI INDEX List (today FEANI EED - *FEANI European Engineering Education Database*). HIS is an authorised national partner of the Fédération Européenne d' associations nationales d' Ingénieurs (FEANI) in the evaluation and inclusion of engineering programs onto FEANI EED list. Undergraduate and graduate university study programmes *Textile Technology and Engineering*, based on the conducted evaluation, satisfied the requirements of the European Federation of National Engineering associates (FEANI) for the education of engineers and are included in the FEANI EED, a list of recognized European universities and study programmes. Students who have completed undergraduate and graduate university studies *Textile Technology and Engineering* can apply for an Engineering card, which supports and promotes the mobility of engineers in the European Union and abroad.

1.3. The higher education institution supports academic integrity and freedom, prevents all types of unethical behaviour, intolerance and discrimination.

Elements of the standard

- *The higher education institution supports academic integrity and freedom, upholds the ethical standards and preserves academic integrity and freedom.*
- *The higher education institution effectively uses mechanisms for preventing unethical behaviour, intolerance and discrimination.*
- *The higher education institution carries out activities related to the sanctioning of unethical behaviour, intolerance and discrimination.*
- *The system for managing conflicts and resolving irregularities is functional at all levels of the higher education institution.*
- *The work of employees of the higher education institution, its students and external stakeholders, is based on ethical standards in higher education.*
- *The higher education institution systematically addresses issues of academic dishonesty (plagiarism, cheating etc.)*

In its work, the University of Zagreb Faculty of Textile Technology adheres to moral principles and postulates of professional ethics as defined by *the Ethical Code of the University of Zagreb* (In Croatian). The Code contains moral principles and principles of professional ethics, according to which teachers, associates, students and all the employees of the Faculty should be guided in their professional and public activities. By joining the academic community, its members must adhere to the highest levels of moral integrity, ethics, scientific and professional integrity.

In order to ensure ethical behaviour of all the employees, the Faculty Council has appointed the *Ethics Committee*, and, to ensure appropriate behaviour of the students, a *Committee for student disciplinary responsibility* was established. Students actively participate in the workings of the Committee for disciplinary responsibility of the students, together with Faculty teachers. In March 2015, the Faculty Council also adopted the *Regulations on student disciplinary responsibility* (In Croatian: *Pravilnik o stegovnoj odgovornosti studenata*) which provides for disciplinary proceedings and measures for disciplinary violations, some of which involve violations of the *Ethical Code*.

Also, in 2014, a mailbox was placed on the premises of the Faculty as an anonymous system for submitting remarks and praises on various issues of the Faculty. They are regularly processed by the Quality management committee.

Basic ethical principles and values promoted by the Faculty are: protection of human rights and freedoms, prohibition of discrimination and harassment, respect for laws and legal procedures, academic freedom, principle of professionalism, freedom of public expression, scientific integrity, prohibition of forgery, prohibition of abuse of authority, adherence to ethical principles in relation to the institution of origin and students.

The proceedings before the Faculty Ethics Committee is initiated on the request for the opinion on the conformity of an action or conduct with the principles and rules of the *Ethical Code*. The request for initiation can be submitted exclusively by the Dean on a personal initiative, or at the proposal of other members and/or bodies of the academic community.

After the procedure has been conducted, the opinion is being signed by all members of the Ethics Committee if it has been adopted unanimously and communicated to the applicant for the initiation of proceedings or to the Dean. In the period from the academic year 2015/2016 to the academic year 2019/2020, the Ethics Committee of Faculty received three applications and issued three opinions.

In accordance with *the Regulations on student disciplinary responsibility*, students are obliged at and outside the Faculty, to comply with the provisions of the Statute, Ordinance and other general acts of the Faculty and the University of Zagreb, to regularly fulfil their teaching and other obligations, to adhere to the rules of cultural and decent behaviour towards other students, teachers, associates and other employees of the Faculty and the University, to preserve the assets, reputation and dignity of the Faculty and the University. Any breach of these duties shall be considered a disciplinary offence. Disciplinary offences can be easier and more severe. Examples of serious forms of student violations of the rules of cultural behaviour and decency, provision of false data, falsified presentation, deliberate damage to the assets of the Faculty and destruction of the library fund, forgery of indices, forgery of grades and teacher signatures, presentation of other people's work as theirs, with the intention of misleading the instructor or his associates, with the aim of acquiring, or realising certain rights that do not belong to him/her, illegal provision and receiving assistance during the exam. For committed disciplinary offences, the Committee for Student Disciplinary Responsibility may issue the following disciplinary measures: written warning, a ban on taking an exam for up to 6 months, a warning before being excluded from the study, temporary exclusion from the study for up to two years and permanent exclusion from the study. In the period from academic year 2015/2016 to 2019/2020 the Faculty's Committee for Student Disciplinary Responsibility received 9 cases in which procedures were followed and opinions issued.

The University of Zagreb Faculty of Textile Technology uses the PlagScan software for the authentication of works (from seminar to final, graduate and doctoral). Licenses allow an unlimited number of checks for each of the students enrolled, and the work can be checked by teachers and students, i.e. non-teaching staff, in accordance with the procedures and needs at the higher education institution. The application to the PlagScan software is made using AAI@EduHr electronic identities.

The *Ordinance on the procedure for confiscation of academic or professional title* is currently being drafted. The Ordinance will define the procedure for the confiscation of an academic or professional title if there is a reasonable doubt that it has been acquired contrary to the stipulated conditions for its acquisition, by gross violations of the rules of studies, especially if the doctoral, specialist, final or graduate work is the result of someone else's work, forgery or plagiarism.

In February 2021, in cooperation with the Dean's Board and Faculty student council, an anonymous survey (In Croatian) was conducted aimed at anonymously reporting incidents related to harassment, violation of the principle of gender equality and related forms of discrimination that occurred with the employees or external associates Faculty. Furthermore, a working group was appointed for receiving complaints in cases of harassment, violations of the principle of gender equality and related forms of discrimination at the Faculty (shortened Working Group on Complaints). The members of the Group were appointed in coordination with the representatives of the Faculty Student Council. The establishment of a communication channel for reporting abuse, violating the principle of gender equality and related forms of discrimination and harassment and the appointment of the working group on complaints is of a paramount importance in order to detect and sanction unethical behaviour, intolerance and discrimination.

1.4. The higher education institution ensures the availability of information on important aspects of its activities (teaching, scientific/artistic and social).

Elements of the standard

- *Information on study programmes and other activities of the higher education institution is publicly available in Croatian and at least one world language.*
- *The higher education institution informs stakeholders on the admission criteria, enrolment quotas, study programmes, learning outcomes and qualifications, forms of support available to students.*
- *Information on the social role of the higher education institution is made available to stakeholders.*
- *The higher education institution informs stakeholders about other indicators (e.g. pass rate analyses, graduate employment, drop-out rates, outcomes of previous evaluations, etc.)*

Following the general strategy on the right of access to information, the University of Zagreb Faculty of Textile Technology has been trying to timely inform employees, students and other interested public about all the contents and activities it conducts through various communication channels. Employees and students are informed without delay through various lists with e-mail addresses (so-called mailing lists). Thus, notices on tenders, vacancies, panels, lectures, decisions on teaching, test deadlines, enrolment conditions, adopted new normative acts, etc. are available to all.

Information for employees, students and the general public is available on the official website of the Faculty bilingually, in Croatian and English. The English-language web page contains most of the information from the Croatian page, but it is of a shorter content because it primarily focuses on the interests of foreign users.

The website contains information about the Faculty, documents and forms, information about study programmes and quotas, criteria for enrolment in the first year of study and conditions of enrolment in higher years of study, learning outcomes and qualifications students acquire upon completion of studies (In Croatian), information about scientific research, artistic and professional work.

On the web pages of the Faculty students are offered available information on the curriculum, schedule of hours, test deadlines and consultations, available scripts and faculty teaching literature with prices, information on the student affairs, student council, student activities, faculty library, etc.

Students also communicate via Facebook page and Instagram. In the e-learning system Merlin students have an open e-course by Student Office through which they communicate with the employees of the student office, and in the e-college they have access to regulations related to the study and development of final and graduate papers, protocols and procedures relevant during the course of the study, application forms for final/graduate papers, application forms for the vice-dean for instruction etc.

Various brochures (student Guide) and promotional materials (leaflets for all levels of studies, catalogues of scientific equipment, etc.) are available on the Faculty website. Every year, the Faculty presents itself as one of the constituents at a review of the University of Zagreb. Due to the pandemic caused by the covid-19 virus, the Festival of the University of Zagreb in 2020 was held virtually, so that all promotional materials by our faculty was posted on web pages (In Croatian) as well, and communicated with general public via Facebook and Instagram. In the last five-year period, the Faculty has received a series of recognitions at the University of Zagreb review as follows: 2016 Recognition for the most original presentation, 2017 Recognition for the best decorated exhibition area, 2019

Recognition for the best organized exhibition area, and 2020 Recognition for the most creative (virtual) exhibition site.

In addition to the above-mentioned channels of information for potential students, the Open doors day is also organized in Zagreb and Varaždin, where study programs, laboratories, equipment of the Faculty used in educational, scientific research, artistic and professional work are additionally presented. The Faculty has an employed public relations expert who regularly takes care of the promotion of our faculty in the media and social networks.

The cover of the Faculty website presents various content in the form of news and information, such as invitations to workshops, conferences and panels, announcements on lectures and defences of doctoral works, announcements on scientific, artistic and professional achievements of faculty employees, exhibitions, fashion shows and successes of our students, call lists and other important notices that should be visible to many users. Also, the cover offers links to pages related to the scope of work of the Faculty that might be interesting to students and employees (e.g., University of Zagreb).

The website is divided into eight (8) main units. The first part ***About Faculty*** consists of general data, Dean's word, Faculty history, *Alumni*, Faculty structure, laboratories and workshops, public procurement and documents (Articles of Association, Regulations, Decisions, laws, Financial plans and reports, Annual activity reports, minutes of the Faculty Council sessions, etc.) and forms. The second part ***Study Programmes*** lists and describes all the study programs organised at the Faculty with a list of courses and links to them. The third part ***Research*** describes the areas of research, projects implemented at the Faculty, innovation and technology transfer, research support, congresses organised by the Faculty, scientific papers of employees with high echo factors and a catalogue of scientific equipment. The fourth part ***Quality*** comprehensively presents the long-term continuous work of the Quality Assurance Committee (PUK) and outlines quality policy, mission, internal and external quality assurance, annual reports, as well as action plans, together with a corner for students and other issues. The fifth part is ***Cooperation*** relating to international and interinstitutional cooperation and activities in associations and societies. In the sixth part ***Students*** all the necessary information for students (schedule of hours, test deadlines and consultations, student reference, student choir, student associations, information for students, student papers, etc.) can be found. The seventh unit is ***News*** and there are news and information of general importance to employees, students and general public. The eighth part includes useful links, students (Studomat, Merlin, Erasmus + and CEEPUS), teachers and associates, documents and forms, laboratories, etc.

The Faculty publishes information on student surveys of evaluating studies in which students evaluate their satisfaction with general conditions of studies, study programmes and general assessment of learning outcomes. All the documents on the external evaluation process of the institution conducted in 2015 and documents on external evaluation of the postgraduate university doctoral study Textile Science and Technology carried out in 2016 are also publicly available.

The Faculty will try to be as open as possible when it comes to the availability of information, which implies timely publication of all public data, but also the possibility of accessing those, possibly unpublished, contents through requests for access to information, completing or correcting information and the re-use of information. The web page also offers all the data related to the procedure of exercising the right of access to information in accordance with the provisions of the adequate Law (In Croatian).

1.5. The higher education institution understands and encourages the development of its social role

Elements of the standard

- *The higher education institution contributes to the development of economy (economic and technological mission of the university).*
- *The higher education institution contributes to the development of the local community.*
- *The higher education institution contributes to the foundations of the academic profession and the accountability of teachers for the development of the university and the local community.*
- *The development of its social role is a part of higher education institution's mission (e.g. development of civil society, democracy, etc.).*

University of Zagreb Faculty of Textile Technology contributes to the development of economy by providing support to businesses in textile, clothing, leather and footwear industry, based on signed business and cooperation agreements. It which results in the preparation of expertise, expert opinions and various reports with solutions to problems and proposals for technological improvement of processes. Since 2008, the Faculty has been organizing the Scientific-professional conference Textile Science and Economy in January every year with the aim of connecting companies from textile and leather sectors with the scientific and research community. In the last two years, the Scientific and professional Symposium has been organised as an international forum aimed at connecting businesses and scientists from Croatia and France (TZG 2019) and Croatia and China (TZG 2020). The Faculty of Textile Technology, University of Zagreb, is a co-organizer of professional conference organized by the Croatian Textile Engineering Association (HIST) in December under the title *Textile days* (In Croatian: *Tekstilni dani*). For many years, economic panels/forums have been regularly held for students and faculty employees, where representatives and employees of businesses from textile and leather sectors lecture on their experiences. In addition, the Faculty contributes to its development and the development of the economic sector through cooperation on the application and implementation of projects with the economic sector. The Faculty is currently a partner with the company Čateks d.d., which is the project holder, and is implementing the project *Development of multifunctional non-combustible fabric for dual use* (*Razvoj multifunkcionalne negorive tkanine za dualnu namjenu*), (KK.01.2.1.02.0064 – IRI II) within the framework of the call for proposals *increasing the development of new products and services arising from R & D activities - Phase II (IRI II),* call reference KK.01.2.1.02. Two more projects were submitted to the same call and final evaluation results are expected in the course of 2021 (a project for the development of protective smart clothing of the company HEMCO, KK.01.2.1.02.0112 registered with the company HEMCO d.o.o. and a project for the development of biodegradable non-wovens from natural and renewable sources, KK.01.2.1.02.0270 reported with the company Renotex d.o.o.). If provided financing of these projects is approved, the influence of the Faculty on the economic sector will increase significantly.

The Faculty has drawn up and published a Catalogue of equipment installed and used in scientific, research, artistic, professional and teaching work, in laboratories, practices/studies and centres of the Faculty, in order to make its services transparent and accessible to all the interested companies and the general public.

For more than thirty years, the Faculty, as the only institution of higher education in the field of textile engineering and technology and fashion design, has been integrated into its local community and has

contributed to its development indirectly through its scientific, artistic, professional and educational activities, but also through other forms of participation, both as an institution and through its employees. The result of monitoring trends and the possibility of cooperation with local community is a successful implementation of projects in cooperation with local stakeholders, among which the project *Skrojene budućnosti?* (IN.02.1.03.0043) implemented in partnership with the Technical Museum Nikola Tesla Zagreb (2018-2019) and *Together towards sustainable social dialogue – ZAKOS*, (UP.04.2.1.03.0026) implemented in partnership with Varaždin County, Međimurje County, Koprivnica-Križevci County, Croatian Employers' Association, Union of Textile, Leather and Rubber, and Univresity North.

The Faculty acts as a responsible institution that contributes to society as a whole by raising the level of education and expertise of engineers within the technical field, developing knowledge related to textile, clothing, leather and footwear industries, materials and environmental protection and working in accordance with the academic ethical principles. In this sense, the Faculty carries out its civic role through the participation in numerous activities, such as promotion and presentation of scientific research and artistic work and curricula for high school students and the interested public (TTF open doors day, Festival of Science, Colorina, TSRC Open day, International colour day, PhD day, etc.). The Faculty has been participating in the implementation of the physics and general knowledge quiz about Nikola Tesla for 12 years, organised by the Association "Nikola Tesla – a genius for the future". Every year, the Faculty presents itself at the Festival of the University of Zagreb with students and faculty employees participating in the presentation.

The social role of the Faculty is recognized in the mission and vision of the Faculty described in its Strategy. The Faculty bases its activities on high academic and ethical values and the contribution and responsibility towards society as a whole, aware of its strengths and weaknesses, but ready and willing to solve the difficulties it encounters in its work and development.

A significant contribution of the Faculty is the participation of employees in the workings of various bodies at the University of Zagreb and the community. Faculty teachers are members of *the Central Committee for Chemical Engineering, Mining, Oil and Geological Engineering, Metallurgy, Textile Technology and Graphic Technology, Council of Technical areas, Council of Natural Science, Council of the Artistic area, Senate of the University of Zagreb, Croatian Academy of Engineering, Committee for Innovation and Transfer Technologies of the University of Zagreb, sector Councils IV. Textiles and Leather* I *III: Mining, geology and chemical technology* (appointed presidents and members of 14 sector Councils - HKO), and also members and chairmen of technical committees at the *Croatian standards Institute. Faculty teachers* are active members of professional associations: *Croatian Engineering Association* (HIS), *Croatian Textile Engineering Association* (HIST), *Croatian Leather and Footwear Society* (HDKO), *Croatian Colour Society (HUBO), The Croatian Association of Artists of the Applied Arts (ULUPUH), Croatian Chemical* Society (HKD), *Croatian and European Microscopy Society (HMD), Croatian Vacuum Society (HVU), The Scientific Council for Crystallography of the Croatian Academy of Sciences and Arts – the Croatian Crystallographic Association*. Representatives of the Faculty participate in the workings of 4 Croatian *Competitiveness clusters: The Competitiveness Cluster for textile, leather goods and footwear industry, the Competitiveness Cluster for defence industry, the Competitiveness Cluster for Creative and Cultural Industries* and the *Competitiveness Cluster for automotive sector.*

The Faculty teachers are editors and active members of editorial boards of scientific and professional journals *Tekstil* and *Koža & Obuća*, which have a long-standing tradition of publication and significant impact on the industry and academics, and in scientific journal *Textile & Leather Review.*

1.6. Lifelong learning programmes delivered by the higher education institution are aligned with the strategic goals and the mission of the higher education institution, and social needs

Elements of the standard

- *There is evidence that general goals of the lifelong learning programmes are in line with the mission and strategic goals of the higher education institution.*
- *There is evidence that general goals of the lifelong learning programmes are in line with social needs.*
- *Revision and development of lifelong learning programmes is carried out systematically and on a regular basis.*

In 2004, the Faculty founded Center for Lifelong Learning COBRA which still continues to carry out education in the form of thematic workshops and seminars for users from the teaching staff of the Faculty, textile and leather sectors and general public concerned. Teachers of the Faculty, in agreement with *the Agency for Vocational Education and Training* (ASOO), give lectures for secondary vocational school teachers each year in September, as a part of the *TSRC open day* and in December as a part of the TTF open door days (Faculty) (in Croatian). *TSRC open day* themes are selected in collaboration with the representatives of business (HKKITKO Board of Directors) and following the interest of secondary vocational school teachers. Topics of interest are selected, such as advanced materials, advanced technologies, intelligent clothing, sustainable development, environmental protection, circular economy and climate change.

The Faculty continuously takes care of the improvement of teachers' knowledge, skills and competences, following the concept of lifelong learning.

A series of workshops were held for teachers, related to defining learning outcomes, teaching methods, evaluation and monitoring of students' work in accordance with defined learning outcomes, development of occupational standards and qualification standards, as well as a series of workshops related to the development of e-portfolio and e-colleges of basic and advanced levels in the e-learning system Merlin, all within the framework of the project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology*, HR.3.1.15-0026, in the period from 2015 to 2016. About 40 teachers and associates of the Faculty participated in the programme of training teaching competences, as well as in the work in the Merlin system, through organized workshops and lectures held by external experts.

Within the framework of the project *Internationalization of the doctoral study Textile Science and Technology* in the period from 2018 to 2021, individual consultations of PhD teachers have been held regarding the development of higher-level e-colleges in the Merlin e-learning system, while a part of the employees (teaching and administrative staff) had the possibility of lifelong learning and strengthening their linguistic competences through English learning. Also, a workshop for writing scientific papers in English was held within the framework of the project for the employees of the doctoral board of the University of Zagreb, and a specialized course for the preparation and implementation of scientific projects in English will be organized for teachers and doctoral candidates. In this way, doctoral candidates enrolled in a doctoral study in English and their teachers will acquire language and professional competences necessary for a successful application and implementation of scientific projects on international funding sources (primarily the Horizon programme).

Apart from the activities of the project, the panel “ESI funds and union programmes - opportunities for higher education”, as well as the workshop “Writing bilateral projects” were organized by the Office for projects. Involved were Faculty employees in the field of the project application and implementation in 2019.

The project *Development of the Lifelong Learning Programme at the Faculty of Textile Technology - ProCeSS TTF*, (*Razvoj programa cjeloživotnog učenja na TTF*-u), UP.03.1.03.0058 from the Programme for Development of the Croatian Qualification Framework at the level of higher education (Ref. no. calls 03.1.1.03) was applied in June 2018 with the University of Zagreb (partner), for the purpose of drawing up the Lifelong Learning Programme for experts from textile and leather sectors and society as a whole. The project was positively evaluated but was not financed due to insufficient availability of funds under calls for proposals. The calls and applications of the project proposal in the same manner are expected to reopen in the following period.

On January 1st 2020, Faculty started implementing the project 612248-EPP-1-2019-1-BG-EPPKA2-KU *ICT in Textile and Clothing Higher Education and Business*, financed by the European Commission under the Erasmus+ programme (ICT-TEX Project). Within the framework of the project, and in cooperation with 12 partners from 6 EU member states, the Faculty, as one of the partners, works on the development of curricula for labour market for experts and students active in the field of design and production of textiles and clothing, as well as entrepreneurship, through the application of ICT technology. This will ensure the foundation of lifelong learning for textile and clothing sectors across Europe.

One of key objectives within the framework of teaching activities and cooperation with business is the establishment of a Lifelong learning programme, in accordance with global trends and needs of the labour market and it is included in the document Development Strategy of the University of Zagreb Faculty of Textile Technology for the period 2021-2027. The conditions for the introduction of Lifelong learning programme and the development of Lifelong learning programme as a whole in the period from 2021 to 2027 plan to be created. The programmes will be developed in consultation with external stakeholders: employers, alumni, representatives of professionals and professional associations, so that the competences of the participants at the end of the drafted programmes would be in line with the needs of the labour market. Curricula for lifelong learning in the forthcoming period are planned to be finalized and accompanied by appropriate approvals of the University of Zagreb and the Ministry of Science and Education.

II. Study programmes (ESG 1.2, ESG 1.9)

Study programmes of the University of Zagreb Faculty of Textile Technology are designed, with their content and learning outcomes, to attract young and ambitious people prone to innovations in the field of textile engineering, technology and textile and fashion design, encouraging them to be independent in solving challenges, teamwork and developing and supporting their curiosity, analytical mind and communications in order to become professionals wanted in the labour market.

The justification analysis for conducting study programmes was performed in accordance with the SWOT analysis.

Weaknesses/threats:

- lack of interest in the profession,
- decreased number of enrolled students,
- low level of previous knowledge,
- student mobility during studies,
- attractiveness of studies,
- many courses in study programmes.

Strengths/Opportunities:

- developing new study programmes,
- chance to be included in study programmes of needs expressed by business,
- ability to raise awareness of young people's interest in industry, STEM and STEAM area (challenge, personal development, prosperity),
- encouraging students to apply for student science and research, art and professional projects in the field of textile technologies and interdisciplinary fields,
- encouraging students to be involved in practice,
- encouraging scholarship/student practice/expert visits even more strongly, with an emphasis on modern and innovative production capacities,
- possibility to improve conditions and access to research equipment in faculty laboratories,
- strengthening co-operation and links with business,
- continuous international student exchange.

2.1. The general objectives of all study programmes are in line with the mission and strategic goals of the higher education institution and the needs of the society.

Elements of the standard

- *There is evidence that general goals of all study programmes are in line with the mission and strategic goals of the higher education institution.*
- *The justification for delivering study programmes, with regard to social and economic needs, is provided and includes an analysis of resources of the higher education institution required for delivering study programmes.*
- *If the higher education institution delivers study programmes leading to degrees in regulated professions, it accepts the recommendations of professional organisations that govern their licencing.*
- *The higher education institution produces competitive professionals for national and international labour markets.*

University of Zagreb Faculty of Textile Technology is the only scientific and higher education institution in the field of textile technology and engineering, as well as textile and fashion design in the Republic of Croatia, educating students of all levels. The studies are conducted according to the curriculum harmonized with the determinants of the Bologna process, at the undergraduate level from academic year 2005/2016, and at the graduate level as of academic year 2008/2009.

Education is performed on two undergraduate university studies: *Textile Technology and Engineering* (TTE) and *Textile and Fashion Design* (TFD), of which TTE is divided into 4 branches, while TFD is divided into 2 branches. At the graduate level, 2 studies are organised under the same name, as undergraduate studies (TTE and TFD), of which TTE is divided into five branches and TFD into four. In addition, the Faculty also organises undergraduate professional study in the study unit Varaždin. The Faculty has valid approvals and permits for these studies.

The Faculty also has valid permits for conducting postgraduate university studies, one doctoral (*Textile Science and Technology* - TZT) and 3 specialist studies (*Art with Textile*, *High fashion and Design and Fashion Clothing Technology* - currently not organised).

Strategic goals of the Faculty are listed in the documents the *Development Strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020* and the *Research Strategy of University of Zagreb Faculty of Textile Technology for period 2014-2020)*. New strategies for the period 2021-2027 are being drafted. The conclusions of the strategic documents emphasize the need for reshaping the teaching process (modernisation of the existing and introduction of new study programmes) and cooperation with other higher education institutions. Accordingly, the Faculty established the Committee for study programmes, coordinated by three working groups for drafting new study programmes (In Croatian). The groups are intensively working on the elaboration of three qualifications standards for adopted and registered occupational standards in the Register HKO, and the draft programme for three new undergraduate university studies.

Detailed analyses of the justification for the performance of study programmes are continuously carried out every academic year, as a basis for setting enrolment quotas for undergraduate and graduate university study programmes, as well as for undergraduate professional study in Varaždin, and include the fulfilment of the following criteria: permission for study programme, need for labour market profiles based on data from the *Croatian Employment Service* (HZZ), *Croatian Chamber of Economy* (HGK), Government of Croatia and similar sources, as well as human resources (students).

Registration quotas are proposed by the Faculty Council and confirmed by the Senate of the University of Zagreb. Premises and teaching capacities are continuously checked (Analytic Supplement to Self-analysis: Tables with topic 4 and Table 4.8) and expert reports of business subjects and public institutions of the Republic of Croatia are analysed (HGK, HZZ, AZVO).

The justification for carrying out study programmes and their quality of performance is continuously checked by organising public discussions, the so-called "round table", attended by relevant stakeholders in the field of textile and clothing technology (economists, professional associations, teachers, students) within the framework of scientific-professional conference *Textile Science and Economics* organized annually by the Faculty.

Quality control of the study programme performance is yearly carried out through surveys of completion of the studies. The survey results show that students are satisfied with the quality of the programme.

After completing undergraduate and graduate university studies, students of *Textile Technology and Engineering* have the right to obtain a European engineering card, thus enabling quick proof of competencies and employment in the EU (see point 2.2 above).

2.2. The intended learning outcomes at the level of study programmes delivered by the higher education institution are aligned with the level and profile of qualifications gained.

Elements of the standard

- *The higher education institution has clearly defined the learning outcomes of the study programmes, and they are aligned with the mission and goals of the higher education institution.*
- *The higher education institution checks and ensures that the learning outcomes at the level of courses are aligned with the learning outcomes at the programme level.*
- *Learning outcomes achieved in the study programme are aligned with the CroQF and EQF level descriptors.*
- *In defining learning outcomes, the higher education institution acts in line with professional requirements and internationally recognized professional standards, ensuring that the programme is up to date.*
- *The intended learning outcomes clearly reflect the competencies required for employment, continuing education or other individual/society needs.*

University of Zagreb Faculty of Textile Technology has clearly defined learning outcomes of all its study programmes. They are in line with the strategy of development, mission and goals of the Faculty. The qualification description is explicitly defined in the list of learning outcomes for undergraduate university studies, graduate studies and professional studies. It is available on the website of the Faculty, as well as the information on the courses taught in the course of study programmes. Each course has defined learning outcomes that directly contribute to achieving study programme learning outcomes of the (Analytic Supplement – Table 2). Learning outcomes are in line with basic labour market requirements, general social needs and study programmes of related accredited universities in the EU. In correctly determining the learning outcomes of study programmes, the study levels were considered, having in mind the development of science and technology, which contributes to linking the content of study programmes with recent scientific and artistic development. Additional requirements and characteristics of the profession were also considered through the recommendations of professional associations and employers, labour market needs, respecting economic requirements, and at the same time comparing the programme and learning outcomes with similar studies of the leading European universities, in order to harmonise with their programmes and thus achieve better mobility and higher employability of our students. As a confirmation of acquired competencies for the integration into the labour market and/or continuation of education, it can be noted that undergraduate and graduate university study programmes, such as Textile Technology and Engineering have met the requirements of the European Federation of National Engineering Associates (FEANI - Fédération Européenne d' associations nationales d' Ingénieurs) for the education of engineers and have been included in FEANI EED since 2016. European database on **Engineering** Education **Database** (formerly known as the FEANI Index List).

This enables all undergraduate and graduate students of *Textile Technology and Engineering* to be awarded the so-called *European engineering card*, which enables them to quickly prove the level of education, and which encourages mobility of engineers in the European Union and abroad. On behalf of the Faculty, the Dean awards engineering cards to the best students of the generation. So far, the Faculty has awarded 5 engineering cards to the best students of each generation.

The Ordinance of undergraduate and graduate studies at the University of Zagreb (In Croatian: Pravilnik o sveučilišnom preddiplomskom i diplomskom studiju na Sveučilištu u Zagrebu Tekstilno-tehnološkom fakultetu) regulates the rules of studying at the university undergraduate and graduate studies. The aforementioned Ordinance defines the types of studies at the Faculty, academic titles acquired through the completion of studies, contents of each study programme, curriculum implementation plan, etc. According to the Ordinance, the Faculty Council adopts a teaching curriculum (undergraduate, graduate, professional study) every academic year, in accordance with the Scientific Activity and Higher Education Act, as well as curriculum for courses in English for each semester. The contents of the study programme also contains a list of learning outcomes at the level of all programmes (undergraduate and graduate), as well as a curriculum of each course, with learning outcomes at programme and course level, methods of evaluation and examination, a list of mandatory and additional literature, etc. All learning outcomes at each programme level are harmonised with learning outcomes of the other programmes. The curriculum also specifies ways of checking the adopted learning outcomes.

Students are in the focus of teaching and learning, as can be seen by the teaching processes applied. Learning outcomes (and student competencies) are achieved by solving problems. Teachers use various didactic-methodical ways of achieving learning outcomes when teaching students:

- ERR system (evocation, understanding of meaning, reflection) based on Bloom taxonomy of learning outcomes,
- teaching distance students in the e-learning system Merlin and
- conventional way of teaching students.

Study programmes are implemented in such a way as to enable the fulfilment of the obligations of the enrolled students, in accordance with the rules and decisions on the study and the curriculum. Teachers and associates use appropriate teaching forms (lectures, seminars, exercises, e-learning), and learning sources are useful and available on the Merlin e-learning system. Through the *Ordinance on undergraduate and graduate studies at the University of Zagreb Faculty of Textile Technology*, students are familiarised with the terminology, protocol, rights and obligations of students during the study process. After completing the studies, students take part in the study quality Survey.

Data on the level and content of qualifications, study requirements and learning outcomes, use of qualifications, access to further levels of studies, employment opportunities and professional status are given in *Diploma supplement* of University of Zagreb Faculty of Textile Technology.

The Faculty has been working intensively on the introduction of new study programmes, fully harmonised with the HKO and the EQF, which will significantly improve and revise the teaching process, as described in detail in Chapter 2.4. The Faculty has implemented the project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology* to improve the quality of higher education in the field of textile technology and engineering, textile and fashion design, through the development and implementation of the Croatian Qualification Framework. Within the framework of the project, occupational standards have been developed and entered into *the Register of the Croatian Qualifications Framework* (In Croatian: Registar HKO). One occupational standard in the field of textile and fashion design is discussed after the expert evaluation of the sectoral council and is expected to be accepted and entered into the Registar HKO during 2021, while the occupational standard in the field of footwear at the undergraduate professional study in Varaždin is in the phase of professional evaluation.

2.3. The higher education institution provides evidence of the achievement of intended learning outcomes of the study programmes it delivers.

Elements of the standard

- *The higher education institution ensures the achievement of intended learning outcomes of the study programmes it delivers.*
- *The higher education institution continually revises and improves the teaching process on the basis of evidence on the achievement of the intended learning outcomes (for example, tests, seminar papers, presentations, etc.)*

The University of Zagreb Faculty of Textile Technology ensures and continuously verifies the achievement of learning outcomes during the course of the studies and during the preparation and defence of final/graduate works. Whole completion and graduation papers are available at the DABAR base.

Before defending the undergraduate/graduate thesis, the number of ECTS credits acquired and achievement of learning outcomes for each student are checked. Documents related to the procedure for the application of final and graduate works, instructions to students for writing graduate work/final work and the procedure for the preparation of defence of final and graduate works are available on the website of the Faculty in Croatian (for foreign students application is available in English).

Teachers check the achievement of learning outcomes through different verification mechanisms (colloquiums, seminars, presentations, individual tasks, team tasks, written and oral exams, etc.).

The Faculty, based on the monitoring and evaluation of learning outcomes and in addition to surveys and quality assurance systems, continuously reviews and enhances teaching. Learning outcomes are adjusted to the needs of the profession and harmonised with labour market and social needs. Based on the conducted student surveys, the University of Zagreb and the Quality Assurance Committee of the Faculty perform an analysis and, if necessary, the learning outcomes are revised.

The Faculty monitors and periodically reviews its programmes. The aim of regular monitoring, revision and amendment of study programmes is to ensure their proper implementation and create an efficient environment for student learning and support. This includes the evaluation of programme content in accordance with the latest scientific research in a given discipline, which ensures the program is up-to-date with recent scientific development, with varied needs of the society, workloads, advances, passage and completion of students, effectiveness of student evaluation procedures, expectations, needs and satisfaction of students in relation to study programmes, learning environments and auxiliary services and their purpose for the programme. Study programmes that have been organised since the academic year 2005/2006 have been amended up to 20%. The changes include minor changes in contents, redistribution of classes for different forms of teaching, partial modification of ECTS credits, change of student obligations and ways of evaluating the learning outcomes of particular courses. New electives have also been introduced. The Faculty conducted the last audit of its undergraduate and graduate study programs in the academic years 2014/2015 and 2015/2016, as confirmed by the Quality Management Committee of the University of Zagreb. The revised content of study programmes has been published on the Faculty website, as well as the changes implemented in the teaching process.

Teachers continuously revise and improve their teaching processes and competences, thus further ensuring the achievement of the intended learning outcomes of study programmes. This done by:

- attending didactic-methodical educational workshops,
- attending seminars and workshops in scientific research,
- attending seminars to improve work in the Merlin's e-learning system,
- visiting teachers at foreign universities: ERASMUS+ mobility for training or teaching purposes or CEEPUS mobility for training or teaching purposes and
- attending other professional workshops, seminars and working in expert working groups.

Furthermore, the proof of achieving projected student learning outcomes through study programmes is continuously provided by student activities in scientific, research or artistic activities, professional work and sports activities. Students are active participants in public and cultural life (Rector's prize, technology, economic cooperation, student projects, conferences, seminars, symposium).

2.4. The HEI uses feedback from students, employers, professional organisations and *alumni* in the procedures of planning, proposing and approving new programmes, and revising or closing the existing programmes.

Elements of the standard

- *Development activities related to study programmes are carried out systematically and regularly, involving various stakeholders.*
- *Planning and proposing new study programmes includes an analysis of justification for delivering a study programme, resources and alignment with the strategic goals at the local and regional level, and other needs of society.*
- *The higher education institution provides evidence on the justification for delivering same or similar study programmes within the same university.*
- *The higher education institution publishes up-to-date versions of study programmes.*
- *The higher education institution records the changes to study programmes and analyses their fitness for purpose.*

Development activities related to study programmes involve different stakeholders in the fields of science, technology and art. Knowledge about new materials, new and sustainable technologies, and innovations are included in the teaching units of previous courses of study, and occasionally they are proposed and adopted at the Faculty Council, together with new elective courses.

In this sense, the Faculty regularly performs analyses of study programmes, as well as for the purpose of necessary changes. Elective courses are activated depending on the interests of students, from a group of available courses. If there is no interest in individual cases, the courses are not organized. Once a year, analyses related to the success of the studies are performed.

At the beginning of the academic year, the Quality Assurance Committee submits an annual report to the Faculty Council on the implemented activity plan that includes internal judgement and proposals for improvement discussed at the Faculty Council. Internal judgement includes: analysis of data on the attractiveness of study programmes, analysis of the success of completion of studies, analysis of data on employment, analysis of data on the number of teachers and students, self-evaluation of teachers, etc. Based on the Annual Report, improvement measures are proposed and accepted by the Faculty Council. As a result, and an activity plan is drafted which includes subsequent monitoring and implementation of improvement measures. As stated in the previous chapter, amendments to study programmes up to 20% have been made in the previous period.

Apart from changing existing programmes through annual amendments to curricula, the Faculty also plans and proposes new curricula. Accordingly, in the framework of the project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology* financed by the European Social Fund (ESF), the University of Zagreb Faculty of Textile Technology has developed 7 occupational standards, 6 of which have been approved by the Sectoral Council and entered into the Registar HKO, while 1 is undergoing evaluation. For these occupational standards, three qualification standards are in the final phase, which simultaneously leads to the elaboration of three new undergraduate study programmes. In this way, the new undergraduate university programmes will be fully harmonised with the HKO and the EQF. In the same way, new graduate study programs will be elaborated. The drafting and acceptance of new programs will abandon existing programmes.

The Faculty has excellent capacities for performing teaching, scientific research, artistic and professional activities. When drafting new programmes, the Faculty is guided by strategic goals at the local and national level, and significant sources of information and guidelines have been indicated by employers' surveys, expressing their needs. Foundations of occupational standards have been developed through focus groups within the working groups for the development of individual occupational standards of all the interested parties (representatives of the Faculty, employers, professional associations). Working groups at the Faculty have drawn up proposals for occupational standards and forwarded them to the Sectoral Council for expert evaluation and acceptance. Information was also provided by stakeholders at the scientific and expert conference *Textile Science and Economy* as an additional source of information during the elaboration of occupational standards and qualifications standards.

The proposal for new study programs is accepted after discussion and harmonisation at the Faculty Council and forwarded for evaluation to the Quality Management Committee of the University of Zagreb. The evaluation is carried out by the working group for study programmes, and the final decision is made by the Senate of the University of Zagreb.

2.5. The higher education institution ensures that ECTS allocation is adequate.

Elements of the standard

- *The higher education institution allocates ECTS credits in accordance with the actual student workload, based on the analyses of feedback from stakeholders in the teaching process, or other procedures.*
- *Students are provided with feedback on the results of the analysis of gathered information and the implemented changes.*

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. In doing so, 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.).

ECTS credits are adjusted during study programme revision (Chapter 2.3), considering student feedback. Individual teachers perform student load analyses during the course, for the particular course. Analysis performed indicate a harmonised student workload with the number of ECTS credits on selected courses.

All courses at the undergraduate and graduate studies last for one semester.

The Faculty has a developed system of continuous communication among students, mentors, students' choir and administration, with the aim of supporting the effort to solve dilemmas during the course of the study and obtaining information about the teaching process, including the workload on students. Students assess, through surveys, among other things, the structure of teaching and the rationality of used teaching time, i.e. teachers.

The Faculty is currently working intensively on drafting new study plans and programmes at the undergraduate level, where one of the guidelines and proper calculation of student workload is the compliance of ECTS credits with the actual student workload.

Examples of some improvements and reviews of student workload, according to ECTS credits, verified by the Quality Management Committee of the University of Zagreb, can be found.

2.6. Student practice is an integral part of study programmes (where applicable).

Elements of the standard

- *The higher education institution allows for learning and obtaining new skills through student practice, where applicable.*
- *Where applicable, student practice is an integral part of study programmes and is organised outside the higher education institution, in cooperation with the labour market.*
- *Student practice is carried out in a systematic and responsible manner, ensuring the achievement of intended learning outcome regarding student practice*

Professional practice at the Faculty is regulated by *the Ordinance on professional practice at the undergraduate professional study* of *Textile, clothing and footwear technology* in Varaždin. The Ordinance consists of 7 articles which prescribe the following elements: I. General provisions, II. Obligations of students, III. Report on conducted professional practice and IV. Final provisions.

Professional practice at the undergraduate professional study is conducted as an obligation throughout the semester in two forms: at the Faculty and/or in a company with which the Faculty has long-term cooperation and has concluded cooperation agreements/ contracts. Each course of practice offers 10 ECTS credits. It is conducted to a lesser extent through seminars (1-2 hours per week), and to a larger extent through practical exercises (8 hours per week). Professional practice is an obligatory part of teaching for students of all branches in the 5th and 6th semesters of studies and represents an important component of education of future experts, with theoretical knowledge acquired during studies associated with practical knowledge in companies from the textile and leather sectors.

After the completion of the internship, students are obliged to write a “Report of Professional Practice” for which they receive a grade from the professional person who organises practice. When assessing student’s work, the teacher concerned consults with the manager/manager of the economic entity in order to get feedback on his satisfaction with the work of a particular student.

The practice is limited by the current needs in industry, so that in recent year students mostly work in several companies in Varaždin and its surroundings (Table 2.6.1). Also, a considerable proportion of the students are employed in businesses in which they have practice. It has been shown that students acquire additional knowledge from the real sector through professional practice and under real production conditions, making it easier to acquire theoretical knowledge in classrooms. Since the number of students is relatively small, there is no systematic monitoring of the employability of the students and their satisfaction with the practice performed, and it is mainly done by a direct contact and feedback given by students to the head of practice. Table 2.6.1 lists the number of students who have practised in the last few years, with a list of businesses where the practice was done.

Table 2.6.1 *The number of students who completed their professional practice in the period from academic year 2015/2016 to 2009/2020/2011*

Study	Acad. year	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Clothing technology	Number of students	6	6	5	11	0 *
	Companies	Varteks d.d., Varaždin Comprom plus d.o.o., Varaždin	Comprom plus Ltd., Varaždin	Varteks d.d., Varaždin Comprom plus d.o.o., Varaždin	Varteks d.d., Varaždin Comprom plus d.o.o., Varaždin	-
Footwear design	Number of students	5	6	9	5	0 *
	Companies	MIDAL Ltd., Varaždin Ivančica d.d., Ivanec	MIDAL Ltd., Varaždin	MIDAL Ltd., Varaždin Ivančica d.d., Ivanec Production PG d.o.o., Prelog MOD-DIZ-FOOTWEAR Ltd. Varazdin Jelena Professional d.o.o., Čakovec	MIDAL Ltd., Varaždin Ivančica d.d., Ivanec LORENZ Shoe Group d.o.o., Varazdin MEISO d.d. Goričan	-
Textile technology — Chemical Technology	Number of students	0 *	0 *	0 *	0 *	1
	Companies	-	-	-	-	YTRES d.o.o. Lower Kneginec

****** There were no students enrolled at the 3rd year of study*
(source: head of traineeship at the undergraduate professional study)

The project for *Development and implementation of professional practice at TTF - RAST* (HR.03.1.04.0024), financed by the European Social Fund ESF (85%) and the budget of Ministry of Science and Education - MZO (15%), started in March 2020. Within the framework of this project, a Centre for Career and Professional Practice was established in July 2020, which will support students and help them achieve the competencies necessary for completing studies and early career development. The *Centre for Career and Professional Practice* will take care of the implementation of professional practice at the undergraduate and graduate university studies.

Due to the importance of professional practice during the implementation of the project, the growth will introduce the optional course expert practice for university undergraduate and graduate studies, thus enabling students to develop professional and practical skills. The implementation of the project will develop models of professional practice, increase the competences of teaching and non-teaching staff and enable higher employability of students by gaining work experience during the implementation of professional practice. For this purpose, the Faculty Council adopted the Ordinance on the professional practice of undergraduate and graduate students and the necessary documents have been prepared (e.g. Report of work, evaluation forms, etc.).

It should be noted that several courses include field classes in companies in the Republic of Croatia and abroad. This also ensures the systematic achievement of the intended learning outcomes related to the particular course.

Although student practice is a part of the curriculum only at the undergraduate professional study in Varaždin, many undergraduate and graduate university students decide on internship in companies abroad as Erasmus+ mobility for traineeship. Upon completed practice, it is entered in the *Diploma supplement*. In the period between the academic years 2015/16 and 2019/2020, there were 13 students in 10 countries on Erasmus+ mobility for traineeship/practice (E+ SMP).

III. Teaching process and student support (ESG 1.3, ESG 1.4, ESG 1.6.)

3.1. Admission criteria or criteria for the continuation of studies are in line with the requirements of the study programme, clearly defined, published and consistently applied.

Elements of the standard

- *The criteria for admission or continuation of studies are published.*
- *The criteria for admission or continuation of studies are consistently applied.*
- *The criteria for admission or continuation of studies ensure the selection of candidates with appropriate prior knowledge, which is aligned with the requirements of the study programme.*
- *The higher education institution has effective mechanisms for recognising prior learning.*

All the relevant information related to application for study programmes, enrolment quotas, study plans and programmes, study rules, acquisition of input competencies necessary for vertical mobility, etc. are available to potential students on the university website (see 1.4). The conditions for enrolment and enrolment quotas for the 1st year of undergraduate university and professional studies can be seen through the application "become student" of the National information system of application to higher education institutions (NISpVU), as well as in the general or special part of the text of the call for student enrolment in the 1st year of undergraduate and integrated undergraduate and graduate studies of the University of Zagreb, published for each academic year and on the website of the University of Zagreb.

Information related to courses of a particular level of study (undergraduate university study *Textile Technology and Engineering*, undergraduate university study *Textile and fashion design*, graduate university study *Textile Technology and Engineering*, graduate university study *Textile and Fashion design*, undergraduate professional study of *Textile, Clothing and Footwear Technology* and postgraduate university study *Textile Science and Technology*), students can see all the necessary outcomes on web pages. Other information related to the rules of study, the rights and obligations of students, student standard and the like are available on the website of the Faculty under the title "Students".

In addition, the Faculty presents itself to potential students through brochures for freshmen, and every year at a university review aimed at high school graduates, where various information about study programmes can be obtained. In December each year, the Faculty also organizes *Open doors* days for high school and high school students of the Republic of Croatia, primarily graduates, in order to get them interested in the enrolment at the Faculty. Given the current epidemiological situation, information is available on the web pages of the Faculty for future students in virtual form.

In the middle of each academic year, the member institutions are invited by the University of Zagreb to submit their proposals for enrolment quotas, as well as the conditions for enrolment into the 1st year of undergraduate university, graduate university and undergraduate professional study for the next academic year, which is then published in a special part of the text of the announcement for enrolment of students in the 1st year of undergraduate and integrated undergraduate and graduate studies of the University of Zagreb.

Enrolment quotas for the 1st year of the undergraduate study are determined on the basis of several criteria: a valid permit, the need for labour market profiles, human resources (teachers), premises capacity, a positive student assessment and a positive result of external revalidation. The Faculty Council adopts the proposals of enrolment quotas and the proposals of the enrolment criteria for study programmes (undergraduate, graduate and professional) and makes a final decision on them, which is confirmed by the Senate of the University of Zagreb. The conditions of enrolment and enrolment quotas in accordance with the text of the announcement for enrolment of students in the 1st year of undergraduate studies are entered into the NISpVU system.

In the text of the call for enrolment of students to the first year of undergraduate studies and in the NISPVU system, the criteria for evaluation are clearly defined for each academic year (success in secondary school, state graduate exams – mandatory and electoral, additional achievements), together with the process of additional verification of knowledge and skills, i.e. the points of the verification results for enrolment to undergraduate university study *Textile and Fashion Design* and undergraduate professional study *Textile, Clothing and Footwear Technology,* branch *Footwear design*. The application for undergraduate studies is done exclusively through the NISpVU system.

The text of the student enrolment announcement for the 1st year of graduate studies clearly defines the enrolment quotas, the manner of application (applications are not carried out through the NISpVU system, but by submitting the required documentation to the Faculty), the classification procedure and the score, the portfolio of works for the candidates registered for the study *Textile and Fashion Design*, the evaluation of success at the undergraduate level of studies and the duration of the undergraduate study, the submitting procedure, as well as the right of direct enrolment to the study programme.

The Faculty also offers students from other faculties to pass specific examinations for the purpose of enrolling in graduate university studies. This ensures vertical mobility to students from other faculties as well as undergraduate professional students from *Textile, Clothing and Footwear Technology*. The Faculty *Committee for student transfers and register of equally valued courses* proposes to the Faculty Council the courses of differences for each individual student and adequate decision is brought. The assigned courses differences are used for the equalisation of input competencies and do not fall into the total number of ECTS credits obtained at the graduate study. Depending on the number of courses assigned (ECTS credits) students may enter a year of differences or enrol in the 1st year of the selected graduate university study, during which they must pass the assigned courses of the difference.

The horizontal mobility for students is allowed, that is, enrolment and placement of elective courses at another higher education institution. Such students are obliged to apply for approval of enrolment of an elective course at another higher education institution and a signed certificate of the higher education institution where the course is performed, with the following information: course name, course holder, content, hourly rate and ECTS credits. The application is approved by the dean for instruction at the proposal of the ECTS coordinator. Upon passing the exam at another higher education institution, the student delivers evidence of the passed exam to the student office and the assessment from the elective course is entered into the ISVU system.

Achievements at foreign institutions within the framework of international exchange programmes are recognized to students in accordance with the study Agreement. Upon approval of the ECTS coordinator, data are being entered into the ISVU system.

Student achievements gained within the framework of extracurricular activities, upon student's request and with the approval of the Vice-dean for Education, are entered in the *Diploma supplement*, and after the approval of the working group on ECTS credits of the University of Zagreb, in accordance with the Ordinance on the allocation of ECTS credits for extracurricular activities (In Croatian).

3.2. The higher education institution gathers and analyses information on student progress and uses it to ensure the continuity and completion of study.

Elements of the standard

- *Procedures for monitoring student progress are clearly defined and available.*
- *The information on student progress in the study programme is regularly collected and analysed.*
- *The higher education institution ensures adequate mechanisms for analysing student performance and pass rates, and initiates necessary actions accordingly.*

University of Zagreb Faculty of Textile Technology provides clear and exact data on students' progress, success and passing through the data available in ISVU system and their systematic analysis. The analysis is presented and the data on passing through study programmes from the first to the second year of study have been interpreted only for undergraduate study programmes in the last 5 academic years, as well as the completion on study programmes.

Table 3.4. (Analytic supplement) for the progress in the study from the the first to the second year of study in the last five academic years from 2015/2016 to 2019/2020, for the number of students enrolled and ECTS credits achieved, specifies the arithmetic mean, minimum and maximum values (Table 3.2.1).

Table 3.2.1 Progress in the study from academic years 2015/2016 to 2019/2020 for undergraduate university studies *Textile Technology and Engineering (TTE)* and *Textile and Fashion Design (TFD)* and undergraduate professional study *Textile, Clothing and Footwear Technology (TCFT)*

Number of students	TTE			TFD			TCFT		
	mean	min	max	mean	min	max	mean	min	max
Entered	84.4	43	147	72.6	56	86	19.4	5	39
Achieved 18 to 29 ECTS	8.27%	2.33%	21.54%	2.55%	1.16%	7.14%	7.88%	0.00%	16.67%
Achieved 30 to 54 ECTS	29.47%	22.45%	36.79%	15.20%	6.98%	23.19%	6.20%	0.00%	20.00%
Achieved 55 to 59 ECTS	4.98%	3.28%	6.98%	22.26%	13.41%	36.05%	8.47%	0.00%	20.00%
Achieve at least 60 ECTS	10.88%	3.77%	23.13%	45.29%	28.57%	71.95%	24.83%	0.00%	50.00%

The number of students enrolled at **the undergraduate university study *Textile Technology and Engineering*** for these 5 academic years was continuously decreasing. However, it should be noted that the number of students enrolled in this year increased, among other things due to a larger number of promotional activities. The largest number of students achieved on average 30 to 54 ECTS.

From Table 3.2.1 illustrating passage from the academic year 2015/2016 to 2019/2020, at the **undergraduate university study *Textile and Fashion Design***, it can be seen that the number of enrolled students was decreasing. However, due to the high motivation of students for this study, the largest number of students achieved 55 to 59 ECTS.

The number of students enrolled in period from 2015/2016 till 2019/2020 at the **undergraduate professional study *Textile, Clothing and Footwear Technology*** was in a decline. However, high throughput is confirmed by the largest number of students who achieved an average of 55 to 59 ECTS.

Table 3.5. (Analytic supplement) for the completion of studies in the academic years 2009/2010 to 2016/2017 for **undergraduate studies** is shown arithmetic mean and minimum and maximum values (Table 3.2.2).

Table 3.2.2 Completion of studies as of academic year 2015/2016 to 2019/2020 for undergraduate university studies *Textile Technology and Engineering (TTE)* and *Textile and Fashion Design (TFD),* and undergraduate professional study *Textile, Clothing and Footwear Technology (TCFT)*

Number of students	**TTE**			**TFD**			**TCFT**		
	mean	min	max	mean	min	max	mean	min	max
enrolled in the generation *	168.13	67	214	102.75	81	121	43.25	25	71
graduates from the generation *	23.96%	4.48%	36.22%	53.71%	19.75%	69.16%	24.35%	4.08%	33.80%
who are still studying from generation *	4.35%	0%	22.39%	10.50%	0%	58.02%	3.49%	0.00%	15.15%
who have lost their right to study from generation *	71.69%	55.91%	83.22%	35.79%	22.22%	41.28%	72.16%	56.76%	95.92%
Average study duration	3.52	3	4.1	3.68	3	4.1	3.46	2.9	4.0

Table 3.5. in Analytic supplement and Table 3.2.2 for completion at **the undergraduate university study *Textile Technology and Engineering*** show that the average duration of study decreases over the years, which represents a positive trend. It is also evident that an average large number of students from the generation lose their right to study or give up their studies.

Table 3.5. in Analytic supplement and Table 3.2.2 for completion at **the undergraduate university study *Textile and Fashion Design*** show that the average duration of study decreases over the years, which represents a positive trend. The data show that the mean percentage of graduates from the generation (53.71%) is relatively large, which is a positive progress. However, it can be observed that the number of graduates of the same generation decreases year after year due to a smaller number of enrolled students.

Completion data for the **undergraduate professional study *Textile, Clothing and Footwear Technology*** are given in Table 3.5. Analytic supplement and Table 3.2.2 show that the average study time decreases over the years, which represents a positive trend. A greater number of students who lost their right to study from the generation (72.16%) can be noticed, which can be explained by the fact that students lose interest in study due to unfavourable market trends in the economic sector.

Based on the conducted analyses and determined lower throughput from the first to second year of the study, the registration criteria have been changed, so-called “difference” courses are enrolled into the graduate study from undergraduate professional study and studies from other faculties. Mentoring is continuously conducted with students from enrolment to the first year of study and year leaders have been appointed who communicate with the students and help them.

Table 3.5. (Analytic supplement) for the completition of graduate university studies in the academic years 2009/2010 to 2016/2017 include arithmetic mean and minimum and maximum values (Table 3.2.3).

Table 3.2.3. Completition of study in academic years 2015/2016 to 2019/2020 at graduate university studies *Textile Technology and Engineering (TTE)* and *Textile and Fashion Design (TFD)*

	TTE			TFD		
Number of students	mean	min	max	mean	min	max
enrolled in the generation *	43.89	24	84	77.00	46	174
graduates from the generation *	78.75%	41.79%	96.15%	77.23%	26.92%	91.38%
who are still studying from generation *	6.32%	0%	47.76%	9.67%	0%	66.67%
who have lost their right to study from generation *	14.93%	3.85%	34.38%	12.94%	4%	21.74%
Average study duration	2.68	2	3.2	2.58	1.9	3.3

Table 3.5. Analytic supplement and Table 3.2.3 for the completion of studies from the academic years 2009/2010 to 2016/2017 **graduate university study *Textile Technology and Engineering*** shows that the average study time decreased over the years, which represented a positive trend. There was a visible increase in the number of graduates from the generation (78.75%) and a relatively small number of students who lost their right to study (14.93%).

Completion of study in the academic years 2009/2010 to 2016/2017 at the **graduate university study *Textile and Fashion Design*** presented in Table 3.5. Analytic supplement and Table 3.2.3 show that the average study time decreased over the years, which represented a positive trend. There was a relatively large number of graduates from the generation (77.23%) and a relatively small number of students who lost their right to study (12.94%). It can also be noted that the number of graduates from the generation was rather consistent over the past few years.

3.3. The higher education institution ensures student-centred learning.

Elements of the standard

- *The higher education institution encourages various modes of programme delivery, in accordance with the intended learning outcomes.*
- *Various teaching methods are used that encourage interactive and research-based learning, problem solving and creative and critical thinking (for example, individual and group projects, cooperative learning, problem-based learning, field work and other interactive methods).*
- *The HEI continually evaluates and adapts teaching methods and different modes of programme delivery.*
- *Teaching methods are adapted to a diverse student population (non-traditional student population, part-time students, senior students, underrepresented* and vulnerable groups** etc.).*
- *The higher education institution ensures the use of state-of-the-art technologies to modernise teaching.*
- *Available and committed teachers contribute to the motivation of students and their engagement.*
- *The higher education institution encourages autonomy and responsibility of students.*

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.

All forms of study at the Faculty support and actively encourage e-learning, which is the goal of the e-learning Strategy of the University of Zagreb (In Croatian) i.e. the application of information and communication technology in e-learning and teaching at all levels of university education. The Centre for e-learning has been active at the Faculty since 2007, and every year the best e-course is awarded during the celebration of the Faculty day.

If we classify forms of learning according to the way and intensity of use of information and communication technologies (ICT), we usually talk about four basic forms:

a) conventional teaching (classroom, face to face),
b) ICT supported teaching,
c) mixed (hybrid) teaching (combination of conventional and ICT supported teaching) and
d) distance teaching (learning and teaching are fully carried out with the help of ICT).

The Faculty uses mostly conventional and mixed (hybrid) classes, i.e. a), b) and c) forms. The choice of e-learning form and intensity is left to the teachers, who recognize and apply that form of e-learning appropriate to the field of education, i.e. a concrete study, branch and course. In the academic years 2019/2020 and 2020/2021 due to a pandemic caused by the COVID-19 virus, a d) form is also implemented.

By introducing and actively applying e-learning, the Faculty implements the following strategic goals based on the e-learning Strategy of the University of Zagreb:

- improves the quality of university education,
- enables teachers and students to play new roles in the educational process,
- increases the competitiveness of faculties and study programmes and
- trains students to use modern lifelong learning technologies.

The Faculty implements the activities listed in the e-learning Strategy: improving the formal, legal and organisational environment; ensuring the sustainability of e-learning systems; supporting teachers and students; developing educational content and developing basic and specific infrastructure.

The Strategy does not impose particular teaching models, nor the e-learning systems to be used, nor does it limit the autonomy of teachers themselves to decide on the optimal form of teaching, which contributes to the creation of a positive and stimulating environment for the development and systematic application of e-learning at the Faculty. Using different teaching methods and ways of teaching stimulates interactive and research learning, while students solve the problems by using and developing creative and critical way of thinking. Using advanced technologies in teaching, faculty teachers contribute to the modernization of teaching and raising the quality of teaching.

Since the introduction of e-learning, teachers have been upgrading their knowledge and improving their competences in this type of teaching at different workshops and courses (e.g. Basics of making of e-course, Advanced level in the system Merlin - basic work, learning outcomes, questions and tasks, user administration, Creating of Virtual lectures - webinars, Creating e-portfolio). Some of the courses were organized and held on the premises of the Faculty. As part of the development of new undergraduate programmes and project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology* (HR.3.1.15-0026), teachers of the Faculty were participated in the Programme for improving teaching competences, which included 1 lecture ("Learning outcomes – an introduction to the concept") and 5 practical workshops ("Learning outcomes in the context of the European and Croatian qualification Framework", "Defining of learning outcomes for new undergraduate study programms", "Learning and teaching methods for defined learning outcomes", "Evaluation and monitoring of student twork according to defined learning outcomes" and "Evaluation and continuous improvement of teaching quality". In order to consolidate their own teaching work, teachers have the possibility to synthesize their own findings by filling in an appropriate form that includes three aspects of teaching: teaching skills, motivation and communication, together with preparation and organization (In Croatian: Development of a method and plan for the implementation of self-determination of teaching work of teachers and Self-assesment of teaching work).

The analysis of the surveys and the evaluation of teachers by students, conducted at the University of Zagreb, indicated that a large number of teachers could be awarded excellent and very good grades, meaning are competent and available to students, which additionally motivates and increases students' involvement in learning and their participation in the teaching process through demonstrations and their inclusion in scientific, artistic and professional work, with additional motivation of rewards (Rectors' Award, AMCA TTF Award, TSRC Award). This also encourages the independence and accountability of students. Students are involved in the workings of the student organisation of the Faculty and participate each year at *Tehnologijada* - Science and Sports competitions defending the colours of the Faculty.

Students of the University of Zagreb Faculty of Textile Technology are engaged in volunteering as well. Students are registered with the volunteer booklet of the *Volunteer Centre Zagreb.* In addition, student achievements gained in the framework of extracurricular activities are recorded, with the approval of the University of Zagreb, in the *Diploma supplement*.

3.4. The higher education institution ensures adequate student support.

Elements of the standard

- *The higher education institution provides guidance on studying and career opportunities to students (for example, tutors, supervisors and other advisers as a support in student learning and progress).*
- *The higher education institution has established functional procedures for student career guidance, psychological and legal counselling, support to students with disabilities, support in outgoing and incoming mobility, and library and student administration services, at university or faculty level and students are informed about them.*
- *Student support is tailored to a diverse student population (part-time students, mature students, students from abroad, students from underrepresented and vulnerable groups, students with learning difficulties and disabilities, etc.).*
- *The higher education institution employs an adequate number of qualified and committed professional, administrative and technical staff.*

Consultations related to study are available to the students of all study programmes, both from teachers and from other persons involved in the instruction. In addition, students at the 1st year of undergraduate studies can turn to allocated mentors for TTE studies and allocated mentors for TFD studies, as well as to other teachers through consultations and ultimately to the Faculty Dean's Board. The list of mentors is published on the website (Croatian) of the Faculty as well as the terms of consultation.

Study year leaders have been appointed at the Faculty – teachers who are in charge of direct communication with students and mediate between teachers in charge of solving a particular problem and students.

In order to support students with disabilities, as well as students with certain difficulties in mastering materials and studies, the Faculty has appointed a coordinator for students with disabilities. The coordinator is also in constant contact with the Office for disabled students of the University of Zagreb. She/he advises students with disabilities and learning difficulties, gathers documentation, analyses it and notifies teachers and professional services of the Faculty about it. At the request of the student and with the confirmation of the student doctor assigned to the students of the Faculty, the Students office with disabilities of the University of Zagreb sends a recommendation for adjusting the teaching process and taking exams to the vice-dean for education. Based on the recommendation of the Office, the medical confirmation of the student doctor and, if necessary, additional consultations with competent student doctor, the vice-dean for education decides on possible adjustments and the duration of the adjustment.

University of Zagreb Faculty of Textile Technology supports internal mobility of students in terms of horizontal and vertical mobility, as well as international mobility. International mobility is realised under ERASMUS+, CEEPUS, academic mobility and bilateral interuniversity student exchanges. The students receive mobility advice from the International Relations Office of the Faculty (IRO TTF), the ECTS Coordinator and vice-dean for Interinstitutional and International Cooperation. IRO TTF puts special emphasis on continuous communication on student mobility competitions, teaching and non-teaching staff. IRO TTF organises competitions, international exchange of students, teaching and non-teaching staff, cooperates with the International Relations Office of the University of Zagreb, agencies and ministries competent for the implementation of mobility programmes. All IRO TTF notifications

are published on the website and social networks of the Faculty, and during the validity of the announcement additional public panels are organised in order to inform all the interested parties about it, as well as about selection criteria.

For the issues concerning traineeship and career after graduation, students can contact the head of the *Centre for Career and Professional Practice*.

For technical issues related to the ISVU system, computer classrooms etc. students can contact the ISVU coordinator or CARNet coordinator. User account AAI@EduHr is opened, as well as user e-mail account for every undergraduate/graduate student before enrolling in the academic year, through the ISVU system, which CARNet coordinator takes care of throughout the course of the studies.

Students are introduced with the services available through Student's Office (e-course REFERADA) and through the contacts available on the Faculty website (Dean's Office, Student's Office, Library, etc.).

Upon enrolment in the 1st year of the undergraduate study every academic year, an introductory lecture for freshmen is held, where students are informed of the rules of study (general acts of the Faculty and the University, students' rights and obligations, etc.). The students are presented with the Faculty Management Board, administrative employees, teachers, assistants, mentors, year leaders, SRCE representatives, school medicine doctors, etc.

Library of the University of Zagreb Faculty of Textile Technology offers its services, scientific and professional resources primarily to students and academic staff of the Faculty. The fund of the Library and services are also available to all the other members of the scientific, academic and business communities and citizens with the interest in the scientific disciplines for which it is specialised. The library fund has about 8,000 units of material and 100 titles of domestic and foreign professional and scientific journals as well as a collection of doctoral, master's, graduate and final theses. The library fund can be searched through the library catalogue, and through the electronic resources portal for the Croatian academic and scientific community, where a large number of databases and collections of journals and books are available to users.

There is a reading room as a part of the Library, equipped with several personal computers that students can use freely. The Library head is available every day to help students find relevant sources of information. Information related to the workings of the library and reading room is published on the Faculty website.

The Faculty employs qualified and dedicated professional, administrative and technical staff. All employees are provided with professional training, courses, mobility, etc.

Every year students and employees of the Faculty fill in a survey on satisfaction with the work of administrative and technical services and the Faculty Management Board under ISO 9001:2015. The results of the conducted surveys are publicly presented at the Faculty Council.

3.5. The higher education institution ensures support to students from vulnerable and underrepresented groups.

Elements of the standard

- *The higher education institution monitors various needs of students from vulnerable and under-represented groups.*
- *Teaching process is adjusted to the individual needs of students from vulnerable and under-represented groups.*
- *The higher education institution invests resources in the support to students from vulnerable and under-represented groups.*

Since the establishment of the Office for disabled students at the University of Zagreb (Ured za studente s invaliditetom), the University of Zagreb Faculty of Textile Technology has been systematically taking care of students with disabilities and learning difficulties, with the help of the coordinator for students with disabilities. At the Faculty, the teaching process is adjusted to individual needs of students of vulnerable and underrepresented groups, in accordance with The procedure for making recommendations for adjusting the teaching process and taking exams (In Croatian) that has been active at the University of Zagreb since its entry into force.

Data on students are kept in accordance with the General Data Protection Regulation (GDPR). Consent of students is sought to enter data into the ISSP system in order to obtain scholarships for the STEM field, and the required adjustments for individual students are known only to the teachers and assistants involved in the teaching process of the students in question. Students with disabilities are free to adjust to the teaching and testing process according to their needs.

For the purpose of easier access of students with disabilities to the students' office, which is located in the halfway floor and cannot be reached by elevator, a device was purchased to overcome architectural barriers. Students are also encouraged to enrol elective courses related to the equalisation of conditions of studying for the persons with disabilities. The university course "Peer support for students with disabilities" („Vršnjačka potpora studentima s invaliditetom") of the University of Zagreb and an expert from the University of Zagreb Faculty of Education and Rehabilitation of the are being offered as an assistance to students at the Faculty. Students enroll a course at the home Faculty at all levels of their studies. The course is held in two parts: the first part refers to the preparatory workshop and the second to the provision of peer support, regular group consultations (monitoring) and evaluation. It lasts for one semester and awards 5 ECTS credits. The conditions for enrollment include knowledge of a student with disabilities, a student with impaired vision, hearing or motor disorder in need of peer support, who agrees to receive support from the student enrolling the course ("pair"). It is also necessary for the couple to be from the same study programme and the same study year.

According to the MZO recommendation, the Faculty Council decided to exempt students from the earthquake affected area of Sisak-Moslavina County from paying tuition fees.

3.6. The higher education institution allows students to gain international experience.

Elements of the standard

- *Students are informed about the opportunities for completing part of their study abroad.*
- *The higher education institution provides support to students in applying for and carrying out exchange programmes.*
- *The higher education institution ensures the recognition of ECTS credits gained at another higher education institution.*
- *The higher education institution collects information on student satisfaction with the quality of HEI's support regarding practical matters of student mobility.*
- *Students gain competencies required for the employment in an international environment.*

The University of Zagreb Faculty of Textile Technology is continuously enables international cooperation and mobility programmes. 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.

The Faculty encourages students to move from the first day of their studies. When accepting students, the vice-dean for interinstitutional and international cooperation points out to the possibility of horizontal mobility, which includes study abroad, and underlines the importance of international stay. Student exchange is continuously encouraged, which implies the realization of a part of the study programme (semester, academic year) at a foreign university, and/or the completion of traineeship/ practice at a foreign institution/company. Student exchange contributes to the academic and personal development of a particular student, contributes to the quality of the educational system and building of a knowledge-based Europe.

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”. At the forums, students are informed about the entire mobility process (from preparation to implementation) and the help

that the Faculty can provide when applying for the competition. Both, incoming and outgoing students who have spent part of their studies abroad are regularly invited to the panel, as are incoming students at our institution who transfer their experiences to the potential outgoing students. In the past period, the representatives of the International relations of the University of Zagreb and the representatives of the Erasmus Student Network (ESN) Zagreb participated at the panel. The members of the IRO TTF are always available for discussions with students, consultations and assistance in making decisions regarding choosing the appropriate faculty, study programme and/or individual course.

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. Every year a new network is registered, which is the continuation of several years of successful mobility realization, and the coordinator at the moment is the University of Maribor, Faculty of Mechanical Engineering, Slovenia. Students for mobility are registered by the CEEPUS coordinator of the Faculty, who helps all students fill in the required documentation. Upon returning from mobility, CEEPUS mobility is registered with the ISVU and is listed in the Diploma supplement whilst 3 ECTS credits are awarded for CEEPUS Winter school Design week. Eleven members from 8 countries participated in the CEEPUS network in 2015/2016 and short-term mobility of 19 students was achieved through short time Excursion and CEEPUS Winter school. In the academic year 2016/2017, short-term mobility of 30 students of the Faculty was realised. The mobility of 24 students took place in 2017/2018. A short-term mobility of 16 students was realised within the framework of the 2018/2019, while 3 students received a scholarship for a 3-month stay at a foreign institution. In 2019/2020, despite the Covid-19 pandemic, 13 university students realised short-term mobility. Summarised, short-term mobility of 102 university students and 3 three-month stays abroad was achieved within the CEEPUS networks in the period from 2015/2016 to 2019/2020.

For longer stay abroad students mostly use Erasmus+ EU programme for education, training, youth and sport for the period 2014-2020. 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 of study stay (may also include the drawing up of final/graduate theses) and/or professional practice. The exchange of students for the purpose of study stay is done exclusively on the basis of interinstitutional agreements concluded between faculties/academia and foreign institutions, while Erasmus+ traineeship 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. The receiving institution must be located in one of the programme countries, namely EU Member States, Iceland, Norway and Liechtenstein. Since the beginning of Erasmus+ programme, the Faculty has signed 32 interinstitutional agreements for student exchange and 2 for teacher exchange. The list of foreign universities with which the agreement has been concluded is published every year in addition to the announcement of vacancy, and it is available throughout the year on web pages and at the IRO TTF.

Students apply once a year for a competition called by the University of Zagreb for the next academic year. When applying and implementing exchange programmes, students have the support of ECTS and Erasmus coordinators and members of the 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. The aim is 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.

Upon returning from mobility, all the courses (except pre-arranged) are recognised as elective courses for the student. In case the professional practiceis not a part of the study programme, it is entered in the ISVU and in the *Diploma supplement*. The selection procedure is carried out by the Committee at the Faculty level, according to previously defined criteria – motivational letter, academic success and knowledge of foreign languages. Upon evaluation, the ranking lists are submitted to the University of Zagreb, which then allocates a possible number of Erasmus+ scholarships depending on the prescribed quotas for each Faculty. The Ordinance on International Mobility regulates, among other things, the basic principles of mobility of incoming and outgoing students at the University of Zagreb, the rights and obligations of students, the role of ECTS coordinators at the University and its components, as well as other issues related to the implementation of mobility programmes.

Each student must sign a Learning Agreement (LA), a basic document for the recognition of ECTS credits acquired abroad, signed by students, faculties of origin and institutions abroad. Upon the student's return the recognition of success for completed activity during the period of student exchange is carried out according to LA. The LA may be amended with the consent of all signatories, no later than 30 days after the arrival at a foreign university. Upon completion of the programme, students submit the *Transcript of Records* with earned ECTS credits to the ECTS coordinator, who, based on the programme, evaluates the achieved success at the institution abroad. The ECTS coordinator and the IRO TTF further inform students about the selection of courses, the recognition of mobility periods, which, due to a transparent procedure for the entire duration of the Erasmus+ programme, proved positive in terms of the recognition of all the courses provided in the LA. The recognition of traineeships is defined in the contract on the implementation of Learning Agreement for Traineeship (LAT), which clearly states the recognition of student practice. Since student practice is not yet an integral part of university undergraduate and university graduate programmes, the Faculty enters the data on completed practice into the *Diploma supplement*.

According to outgoing mobility data (Table 3.6. Analytic Supplement), there have been 7 students on Erasmus+ exchange over the past 5 years on two-month student practice and 42 students on one-semester study stay or longer professional practice. The University of Zagreb collects data on students' satisfaction with the quality of support provided by the higher education institution on practical issues related to student mobility through an anonymous survey and submits data accordingly to the Erasmus programme's report on realised mobility. Students at the Faculty present their experiences by e-mail to the IRO TTF and some at the panel/forum. Students acquire competences required to work in an international environment and several students, who have obtained the right to exchange through study stay and practice, have been employed abroad or have been assisted by international experience in finding employment in the Republic of Croatia.

Erasmus+ pays particular attention to guidance, acceptance, physical accessibility, pedagogical and technical support and in particular to financing additional costs for students whose physical, mental or health circumstances are such that their participation in the programme would not be possible without additional financial support. Students can be informed via websites about accessibility of higher education institutions and their services to students with special needs Exchange Ability and EIAE Platform Access and diversity.

Erasmus+ exchange students receive financial support covering part of their living costs. The funding for the implementation of the Erasmus+ programme is provided by the Agency for Mobility and Programmes of the European Union, i.e. the European Commission. Students can go to Erasmus+ exchange at their own expense, i.e. without financial support (zero-grant), and exercise the same rights and obligations as those students who have been granted financial support.

Since 2015, it is necessary to conduct language assessment testing for the Erasmus+ programme. The University of Zagreb allows online foreign language placement through the Erasmus+ Online Linguistic support (OLS) platform. Language evaluation and language course are possible, about which selected students for exchange have been informed personally and through the announcement on web pages. The language assessment and the test result do not affect mobility and the test is carried out again at the end of the mobility. During the first two years of their studies, Faculty students take mandatory courses in German or English.

Faculty students apply for places related to bilateral exchange programmes. They are supported by the Office in the application and in the fulfilment of the study agreement, but mobility is decided exclusively by the University of Zagreb. According to transcripts of ratings from a foreign institution, the ECTS coordinator makes a recommendation on the recognition of ECTS credits obtained. In the period between the academic years 2015/2016 and 2019/2020, mobility in Japan and South Korea was achieved by 5 students of the University of Zagreb Faculty of Textile Technology for the duration of one semester.

In addition, University of Zagreb Faculty of Textile Technology supports the internal horizontal mobility of students. During the last five-year period, 155 students of the Faculty listened to one elective course at 7 faculties of the University of Zagreb within the framework of horizontal mobility.

Considering all mobility opportunities, the total outgoing mobility over the past 5 academic years was 409 students, out of which 109 shorter and 48 cases of mobility longer than 3 months were exchanged internationally, together with 155 instances of horizontal mobility.

Guest foreign teachers and experts at the Faculty hold workshops, exhibitions and open-type lectures in English. They represent their institutions and students, and our students can thus obtain more detailed information on mobility opportunities in these institutions.

Some students participate in the implementation of international scientific symposiums, and some even actively participate in international scientific and professional conferences by presenting papers co-authored with teachers.

3.7. The higher education institution ensures adequate study conditions for foreign students.

Elements of the standard

- *Information on the opportunities for enrolment and study is available to foreign students in a foreign language.*
- *The higher education institution provides support to foreign students in enrolment and study at the Croatian higher education institution.*
- *The higher education institution collects feedback on satisfaction and needs of foreign students.*
- *Foreign students have the opportunity to attend classes delivered in a foreign language (English).*
- *Croatian language courses are delivered for foreign students at the level of the university or university constituent.*

University of Zagreb Faculty of Textile Technology provides favourable conditions of studying for foreign students. Foreign nationals may enrol in studies in Croatia within the previously defined quotas for foreign students. EU students are not considered foreign students. Within the enrolment quotas for undergraduate and graduate university studies and undergraduate professional studies, it is possible to enrol foreign students in undergraduate university studies *Textile Technology and Engineering* - 15 foreign students; undergraduate university studies *Textile and Fashion Design* - 10; undergraduate professional study *Footwear Design* – 5; graduate university studies *Textile Technology and Engineering* – 10; graduate university studies *Textile and Fashion Design* – 5; total: 25 undergraduate university study, 5 undergraduate professional and 15 graduate university studies. In the period between the academic years 2015/2016 and 2019/2020, four foreign nationals enrolled in the undergraduate study *Textile and Fashion Design* and one in the *Textile Technology Engineering,* one of whom completed the study. One foreign citizen enrolled and completed graduate studies in *Textile and Fashion Design.*

Students from other language areas can find information on studies available in English on the website of the University of Zagreb and the Faculty.

Incoming student mobility takes place through ERASMUS+, CEEPUS and university bilateral agreements for the purpose of study stay, traineeship or short time excursion.

Within the framework of the CEEPUS programme, the largest number of students come from the University of Maribor, Faculty of Mechanical Engineering, Slovenia for a short stay in order to get acquainted with research equipment, artistic work and instruction in design and creation of textiles and clothing. They are taken care of by CEEPUS co-ordinator and members of the IRO TTF. During the last five-year period, 32 students came to the Faculty for shorter mobility and 1 for a semester study exchange.

The IRO TTF continuously carries out the necessary activities related to the incoming mobility of students under the Erasmus+ programme and bilateral interuniversity agreements, providing all necessary support and assistance to incoming students before, during and after the mobility, through coordination and negotiation of all information and documents related to mobility, such as the preparation of Learning Agreement, organisation of student mentoring, organisation of school curriculum and residence plan, etc. Incoming students consult regularly with the ECTS coordinator or Erasmus coordinator, which offers them necessary assistance in drawing up the Learning Agreement and changing the courses possible in the first month of the exchange. Student's Office obtains

necessary documents, particularly for enrolling semesters, issuing certificates of arrival and issuing final transcription of evaluations certified by the Dean of the Faculty.

The information package for foreign students is provided by the University of Zagreb, and the Faculty contributes to promotional materials in English. For the incoming Erasmus + students, the University of Zagreb organizes a Welcome week program with lectures on Croatian culture, history, the way of studying with an organized concept, visits to museums and a tour of the city with a professional guide.

For incoming students, the IRO TTF organises a reception presenting the Dean, the vice-deans, the teachers who will teach the students and the members of the Office. Students are introduced to the structure and scientific, research and artistic work at the Faculty.

Teaching courses in English is a part of our long-term practice for incoming students. Today, there are 30 courses of undergraduate and graduate studies taught in English. Teachers suggest courses that can be held in English during that academic year each year. Foreign students are also allowed to make final and graduate theses. The offered courses of undergraduate and graduate university studies conducted in English are continuously updated per semester. The project *Internationalization of the doctoral study Textile Science and Technology* (UP.03.1.1.02.0022) has the aim to introduce teaching in English. Within the framework of this project, it was made possible to improve the English language of the teachers at the doctoral and doctoral students who expressed their interest in this. The English language skills were taught to 17 teachers, 11 doctors' students, 8 of whom were assistants. In addition, 3 foreign students and 8 domestic students attend a postgraduate study on *Textile Science and Technology* in English.

Croatian language teaching for foreign students is available at the University of Zagreb through two programmes: *Croaticum - Centre for Croatian as a second and foreign language and University school of Croatian language and culture*.

All incoming students attend English-language classes. In the last five-year period, 37 incoming students from 11 countries with 14 institutions and 5 students through bilateral agreements have visited their study residence through Erasmus+ programmes.

The University of Zagreb Faculty of Textile Technology offers both scientific research and artistic work to the incoming students. All support and assistance with the stay and necessary documentation is provided to foreign students by IRO TTF. As part of Erasmus+ SMP (mobility for traineeship/student practice) 12 foreign students have stayed at the Faculty in the last 5 years. Due to a pandemic caused by the Covid-19 virus, 7 previously agreed student practices have been cancelled.

Short mobility was realised by 4 incoming student representatives of the student Council through the Erasmus+ partnership agreement.

Horizontal mobility has also taken place and teaching organised at the Faculty for 11 students from other members of the University of Zagreb.

3.8. The higher education institution ensures an objective and consistent evaluation and assessment of student achievements.

Elements of the standard

- *The criteria and methods for evaluation and grading are clear and published before the beginning of a course.*
- *The criteria and methods for evaluation and grading are aligned with the teaching methods used.*
- *The higher education institution provides support to the assessors in the development of skills related to the testing and assessment methods.*
- *The higher education institution ensures objectivity and reliability of grading.*
- *If possible, the higher education institution carries out the evaluation of grading.*
- *The evaluation procedures take into account special circumstances of certain groups of students (modifying examination procedures to suit e.g. students with disabilities), while at the same time ensuring the achievement of intended learning outcomes.*
- *The students receive feedback on the evaluation results, and if necessary, guidelines for the learning process based on these evaluations.*

In the introductory lecture of each course, the teachers present criteria and methods for evaluating students' work. Students can find information about this on the web pages of individual courses on the e-learning system Merlin.

Methods of evaluating students are defined by the *Statute of the University of Zagreb Faculty of Textile Technology*, the *Ordinance on undergraduate and graduate studies*, the *Ordinance on the undergraduate university studies final theses*, the *Ordinance on graduate university studies final theses* and the *Ordinance on the undergraduate professional studies final theses*, as well as by the relevant acts of the University of Zagreb and the University of Zagreb Faculty of Textile Technology (all in Croatian: Statut Sveučilišta u Zagrebu Tekstilno-tehnološkog fakulteta, Pravilnik o sveučilišnom preddiplomskom i diplomskom studiju, Pravilnik o završnom radu na preddiplomskom sveučilišnom studiju, Pravilnik o diplomskom radu na diplomskom sveučilišnom studiju and Pravilnik o završnom radu na preddiplomskom stručnom studiju).

Testing of knowledge, skills and competences, i.e. learning outcomes, is performed continuously for individual courses and/or on a exam consisting of a written and/or oral part. Continuous verifications are of different character, depending on the teaching methods used and the learning outcomes of courses: colloquia, seminar papers and presentations, projects, evaluation of student work. Alternatively, some teachers use the e-learning system Merlin.

The teacher is obligated to inform students about the success achieved on the exam, and at the request of the student provide an insight into the written part of the exam.

In accordance with the *Statute* and the *Ordinance on undergraduate and graduate studies*, in case the student is not satisfied with the grade on the exam, he/she has the right, based on the application form to the Dean of the Faculty (In Croatian), to request that the exam be organised with three-member committee. If the exam consists of a written and oral part, the teacher has to give her/his written exam to the committee. The committee decide on grade by a majority vote.

Students with disabilities can adapt teaching and examination process in accordance with the procedure for making recommendations for adjusting the teaching process and taking exams, adopted by the University of Zagreb.

Through student surveys, the Faculty analyses and assesses, and the Faculty's Board continuously monitors, percent of passing exams, in cooperation with the Students Office.

Teachers are stimulated to attend workshops related to the achievement of learning outcomes, i.e. evaluation and evaluation methods. For example, as already mentioned in Chapter 3.3 above, in the framework of the project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology* (HR.3.1.15-0026), Faculty teachers also participated in the *Programme for improving teaching competences*, which included workshops “Defining learning outcomes” and “Evaluating and monitoring students' work in accordance with defined learning outcomes”.

3.9. The higher education institution issues diplomas and Diploma Supplements in accordance with the relevant regulations.

Elements of the standard

- *Upon the completion of their studies, students are issued appropriate documents (diploma and Diploma Supplement).*
- *Diplomas and Diploma Supplements are issued in accordance with relevant regulations.*
- *The higher education institution issues the Diploma Supplement in Croatian and English, free of charge.*

After completing undergraduate university studies, graduate university studies and undergraduate professional studies, students receive an appropriate diploma and *Diploma Supplement*.

In the ISVU system the legal status of a higher education institution, the legal status of studies, the language of conducting studies, the required educational level for enrolment into the study, the foreseen duration of studies and the level of qualifications of studies are listed.

Pursuant to Article 8 of the *Ordinance on undergraduate and graduate studies of the University of Zagreb* and Article 72 *of the Ordinance on undergraduate and graduate studies of the University of Zagreb Faculty of Textile Technology*, (In Croatian) the *Diploma Supplement* is a public document in Croatian and English, enclosed with a certificate/diploma on completed undergraduate/graduate study in order to provide detailed insight into the level, content of studies and the system and rules of studies at the Faculty. The content of *the Diploma Supplement* is established by the Minister, and its form is determined by the Senate of the University of Zagreb.

Diploma Supplement at the University of Zagreb Faculty of Textile Technology is issued in accordance with the *Zakon o znanstvenoj djelatnosti i visokom obrazovanju* – Act (NN 123/03, 105/04, 174/04, 02/07 Decision of the USRH, 46/07, 45/09 and 63/11), Article 84, paragraph 5, compliyng with the instructions drawn up by the Ministry of Science and Education of the Republic of Croatia. It is issued when promote student and is free of charge. In the case of issueing of copy it is charged.

In accordance with the above, the *Diploma Supplement* of the University of Zagreb Faculty of Textile Technology contains: data on the graduate holder, data on the qualifications acquired, data on the qualification level, data on the contents and results of the qualifications obtained, data on employment possibilities or inclusion in further study programmes, additional information (awards, etc.), certification of the diploma supplement and data on the higher education system in the Republic of Croatia.

3.10. The higher education institution is committed to the employability of graduates.

Elements of the standard

- *The higher education institution analyses the employability of its graduates.*
- *Admission quotas are aligned with social and labour market needs and available resources.*
- *The higher education institution informs prospective students about the opportunities to continue education or find employment after graduation.*
- *The higher education institution provides students with support regarding future career planning.*
- *The higher education institution maintains contacts with alumni.*

The University of Zagreb Faculty of Textile Technology continuously monitors and analyses the employability of students who have finished their studies by contacting teachers and former students and analysing the data available at the *Croatian Employment Service* (HZZ). Within the framework of the international scientific-professional symposium *Textile Science and Economy*, which is held annually, a round table is organized to analyse issues such as trends in the profession, the need for new curricula in the field of profession, employability of graduated students, etc. In order to strengthen contact with former students, the Faculty founded the alumni association, *Almae Matris Croaticae Alumni – Tehnologiae Textilis Facultatis* (AMCA TTF) in 2004. The alumni association is a member of the AMCA/AMAC Association of the University of Zagreb. It continuously works on linking former and current students, monitors their employability and represents at its annual assembly and at Glasnik AMCA TTF its successful former students.

Data in Table 3.7 of Analytic Supplement refers to the number of registered unemployed persons in the last 3 calendar years. Data are presented by study programmes and previous work experience and are presented according to educational programmes of the National Standard Classification of Education (NSKO, NN 105/01), which is harmonised with the international classification of education ISCED-97 (*International Standard Classification of Education*), and includes programmes completed according to the Bologna process of education. There is a slight increase in the number of unemployed in the last year, which can be explained by the crisis caused by the Covid-19 virus pandemic. Nevertheless, following the number of unemployed over several years, it can be seen that the number of unemployed is almost constant, which points to the fact that there is a need for experts who graduate from the Faculty.

Enrolment quotas for undergraduate and graduate university studies and undergraduate professional studies are adopted at the Faculty Council in accordance with the procedure for accepting enrolment quotas and criteria for proposing enrolment quotas adopted by the Senate of the University of Zagreb for each academic year.

The quota acceptance procedure complies:

- the Act on Quality Assurance in Science and Higher Education,
- the Ordinance on the evaluation of undergraduate, graduate, integrated study programmes of the University of Zagreb,
- the Ordinance on the content of the permit and the conditions for issuing the licence for performing the activities of higher education, conducting the study programme and recrediting of higher education by Ministry.

When proposing the enrolment quotas, the following criteria should be confirmed:

- the licence for the study programme,
- the need for labour market profiles, based on the data of HZZ, HGK, Government of the Republic of Croatia etc.
- human resources (teachers) — expressed by student/teacher ratio,
- spatial capacities of the premises,
- positive student assessment of the study programme/faculty,
- positive results of external reacreditation and
- at university level, the total enrolment quota for full-time students may increase by up to 5%.

By long-term analysis of these criteria, the Faculty harmonises enrolment quotas as well as enrolment criteria for students at all levels of studies.

By decision of the Faculty Council of July 2020, a *Centre for Career and Professional Practice* was established which, besides organizing professional practice for undergraduate and graduate studies, has the task of establishing an early career for students of the Faculty and their employment after the completion of the studies.

IV. Teaching and institutional capacities (ESG 1.5., ESG 1.6.)

4.1. The higher education institution ensures adequate teaching capacities.

Elements of the standard

- *The number and qualifications of teachers* are appropriate for the delivery of study programme and achievement of the intended learning outcomes and performing scientific activity.*
- *The ratio of students and full-time teachers at the higher education institution ensures a high quality of study.*
- *Teacher workload is in line with relevant legislation and policies, regulations of competent bodies, collective agreements, etc.*
- *Teacher workload ensures appropriate distribution of teaching, scientific/artistic activities, professional and personal development and administrative duties.*
- *Teachers are qualified for the course/courses they deliver.*

The University of Zagreb Faculty of Textile Technology has employed enough teachers with appropriate qualifications for the implementation of educational goals and the maintenance of study programmes (analytical supplement - tables 4.1.a, 4.3 and 4.4). The number of teachers is sufficient for the realization of study programmes, and their qualifications, confirmed by the elections in scientific-educational, artistic-educational and educational titles, are appropriate for achieving the expected learning outcomes of students in the educational process, as well as for carrying out scientific, artistic and professional activities.

In the academic year 2019/2020, the ratio of students to teachers was 6.5; and if external associates included it was 5.3. These ratios meet the necessary requirements according to the *Ordinance on the content of the permit and the conditions for issuing the permit for performing the activities of higher education, conducting the study programme and recrediting higher education institutions*.

Teaching workloads are regulated under the collective Agreement for Science and Higher Education. Although a new collective Agreement for Science and Higher Education (NN 9/2019) was adopted in December 2018, the Article 57-88 has been in effect since October 2019/2020. The system has not yet been set to calculate contact hours instead of standard hours as before for workload. For this reason, see Table 4.3. (Analytic Supplement) presents the workload of teachers in accordance with the Article 33 of the 2010 collective Agreement for Science and Higher Education (NN 142/2010), as MOZVAG2 calculates the standard houres as workload.

In last few years it has been tried to the equalize the workloads, so in past two academic years new teachers and associates have been employed on courses where teachers had a great workload or external associates were hired.

Currently, 20 external associates are involved in teaching. External associates are mostly engaged in the study *Textile and Fashion Design* at the graduate level, where there is more specialization in the courses of *Costume Design* and *Theory and Culture of Fashion.*

4.2. Teacher recruitment, advancement and reappointment is based on objective and transparent procedures which include the evaluation of excellence.

Elements of the standard

- *Teacher appointment (recruitment) procedures arise from the development goals of the higher education institution and they are aligned with the legislation and internal regulations in effect.*
- *In selecting, appointing and evaluating teachers, the HEI takes into account their previous activities (teaching activity, research activity, feedback from students, etc).*
- *The higher education institution has adequate methods for the selection of the best candidates for each position and, in addition to the prescribed national minimum conditions for each position, it has prescribed competitive criteria ensuring the selection of excellent candidates.*
- *Promotion of teachers into higher grades is based on the evaluation and rewarding of excellence and the HEI takes into account important achievements (such as international contribution to the scientific discipline, high-impact publications, significant scientific discoveries, successful projects, success in securing additional funds, supervision of final and graduation theses, authorship of textbooks / study materials, popular lectures, etc.).*
- *Indicators of excellence include scientific/artistic, teaching and professional work and contribution to the development of the higher education institution.*
- *Additional criteria for the promotion of teachers into higher grades reflect the strategic goals of the higher education institution.*

The Faculty takes special care of human resources. In the reported period, the Faculty made possible the promotion of all the employees in scientific-educational, artistic-educational and educational statuses, who fulfilled the conditions, into higher ones. New jobs and promotions depend on the coefficient of staff who leave the system.

The Faculty Management Board (dean and vice-deans) and the Dean's Board (dean, vice-deans and heads of departments) are primarily responsible for human resource policy. The selection procedures are carried out by the Faculty Council, upon the proposal of the Professional Committee, with the verification of reports by the Commission for pre-assessment and unification of professional reports for teacher advancements. Professional and administrative assistance to these bodies is provided by the Secretariat of the Faculty.

The needs for new employment has to be examined and the departments prove the needs for new teachers by filling in the workload table for all the teachers and associates in the department and submitted the form to the Faculty Management. In case of sufficient workload, the Faculty management consults the Dean's Board and drafts a proposal for the Faculty Council on the decision to advertise a vacancy, for which it previously obtains the consent of the University of Zagreb.

The Dean's Board, together with the department proposes the Professional Committee for the selection and evaluation the demonstration lecture. At least one proposed member of the Professional Committee should not be a Faculty teacher. The proposal of the Professional Committee is adopted by the Faculty Council.

In case the applicants do not meet the conditions for promotion to a higher grade or the Faculty does not currently have enough coefficient, a re-election procedure is initiated.

The announcement of vacancy is published in the Narodne novine, daily newspaper, on THE EURAXESS portal and on the Faculty website. It should open for 30 days, and the applicants are expected to meet all the requirements prescribed by the law, as well as the requirements of the Rector's Council and special conditions adopted by the Faculty Council at the proposal of the department.

The Professional Committee draws up a report on the applicants and a proposal for the selection of candidates, ranked according to scientific work, involvement in teaching, professional work, institutional contribution and other achievements. The Commission for pre-assessment and unification of professional reports for teacher advancement checks that the report is complete and written in accordance with the recommendations of the *Matični odbor* for selection in scientific status. The reports are sent to the Faculty Council that selects a candidate, and the final confirmation is given by the Senate of the University of Zagreb (for full professors and full professors with tenure), that is, by the appropriate Council of the University of Zagreb (for associate professors, assistant professors and other teachers).

The evaluation of assistants and post-doctoral staff is done in accordance with the Law of Scientific Activity and Higher Education, Article 43a. The procedure is conducted by the Scientific Research and Artistic Board, and the evaluation is confirmed by the Faculty Council.

The Minutes of the Dean's Board meetings are kept in written form at the Faculty (Archive of the Faculty Council).

The Minutes of the Faculty Council meetings are kept in written form at the Faculty (Archive of the Faculty Council) and are also available on the Faculty website.

4.3. The higher education institution provides support to teachers in their professional development.

Elements of the standard

- *The higher education institution provides opportunities for the improvement of teaching competencies at the level of the university or university constituent.*
- *The higher education institution encourages the assessment and improvement of teaching competencies based on the peer-review recommendations and the results of student satisfaction surveys.*
- *Teachers participate in international mobility programmes, projects, network, etc.*

The University of Zagreb Faculty of Textile Technology provides support to teachers in the field of training and teaching competences through organising workshops at the Faculty and encouraging participation in workshops outside the faculty or within the Centre for the improvement of teaching competencies of the University of Zagreb (in Croatian: Centar za unapređenje nastavničkih kompetencija, CeZaN).

At the department level, the teachers concerned lead teaching associates and newly employed teachers, with the aim of developing and improving the necessary competences for teaching through consultations with teachers and associates in the preparation of particular teaching units.

When selecting or reselecting teachers in scientific-educational, artistic-educational or educational status, each teacher shall attach a certificate of institutional research on the quality of his/her teaching work, and during the (first) election in the scientific-educational, artistic-educational or educational status, the applicant should have a demonstration lecture in front of students, Faculty teachers and Professional Committee (three teachers in the scientific-educational, artistic-educational or educational status, one of which is not an employee of the Faculty).

The Centre for e-learning was established at the Faculty in June 2007, providing assistance to teacher in creating e-courses.

The Faculty, in cooperation with the partner University of Zagreb CeZaN (in the period from January 19th 2016 to February 16th 2016), organised "Teacher skills improvement programme" for Faculty teachers within the framework of the project *Development of qualification standards and undergraduate study at the Faculty of Textile Technology* (HR.3.1.15-0026). It included a lecture entitled "Learning outcomes – introduction to learning", as well as a series of workshops on "Learning outcomes in the context of European Qualifications Framework". Participant teachers were awarded a certificate of teacher competence training. In addition, workshops for Faculty teachers entitled "How to start creating an e-course?", "Merlin working basics", "Advanced work in the Merlin system – User Administration", "Why do I need an e-portfolio and how to create it", "Advanced work in the Merlin - questions and tests system", "Preparation of virtual lectures – webinars", "Advanced work in the Merlin - learning system" and "Creating of the e-courses of third level in Merlin system" were also organized. Teachers were awarded the certificate on the training of teaching competences for Merlin. In total, about 40 teachers participated in the workshops and they were able to apply the acquired knowledge in defining and realising learning outcomes, evaluating students' work and contributing to increasing the number and level of e-courses in the following years. As a part of the above-mentioned project, the Faculty has become an institutional user of Merlin, thus facilitating the opening of e-courses and monitoring work in Merlin.

One of the main objectives of the *Internationalisation of the Doctoral Study Textile Science and Technology* (UP 03.1.02.0022) project is to strengthen language competences of the students and faculty teachers and employees have improved their knowledge of English within this project.

During the last five-year period, two projects from the Erasmus+ Lifelong Learning Programme (Teaching Creativity in Engineering - TECRINO, 538710-LLP-1-2013-1-CY-LEONARDO-LMP; Grading Soft Skills – GRASS, 543029-LLP-1-2013-1-RS-KA3-KA3MP), have been implemented at the Faculty, aimed at strengthening teachers' competences. Within the project TECRINO, e-learning materials covering educational creativity and innovations in engineering have been developed, from recognizing creative products and creative persons to presenting the most popular methods for encouraging creativity, influencing the environment on creativity and presenting some computer tools that help creative process, from mind mapping to “creative” games. The GRASS project focused on developing innovative pedagogical approaches with ICT tools and services that support continuous development, measurement, evaluation, integration and recognition of skills, competences and achievements in educational practices at all educational levels in a quantitative, measurable way, in order to make these skills subject to formal validation and recognition.

The evaluation and improvement of teaching competencies is carried out based on the results of student surveys on the work of teachers, and highest rated teachers were awarded the Dean's Award.

Teaching and non-teaching staff has the opportunity to attend educational workshops, consultations and seminars related to their field of activity, organised by the University of Zagreb, the Agency and adequate ministries. The Faculty offers possibilities for improving competencies and organising educational workshops, seminars, consultations and forums attended by teachers and other Faculty employees. Numerous educational workshops were organized at the Faculty related to the work on new measuring devices, instruments and equipment.

The University of Zagreb Faculty of Textile Technology supports the mobility of university employees as a particularly important form of internationalization of the University of Zagreb. It includes various aspects of international activities. For the purpose of monitoring all the aspects of international cooperation, the University of Zagreb has introduced a record of international cooperation at the University of Zagreb (In Croatian Evidencija međunarodne suradnje Sveučilišta u Zagrebu). The Faculty provides support in the application and implementation of projects, the guest appearance of our teachers at foreign universities, as well as guest teachers at the Faculty.

Mobility of teaching and non-teaching staff takes place through the CEEPUS network, Erasmus+ programmes, bilateral exchanges, academic mobility, bilateral agreements, projects, etc. IRO TTF, organises panels intended for faculty teaching and non-teaching staff, as well as for students, with the aim of getting acquainted with and informing about the possibilities of achieving mobility. In addition to the panels, the IRO TTF carries out mobility contests for teaching and non-teaching staff; competitions for academic mobility of teaching staff, doctoral students and announcements of incoming mobility, as well as all mobility activities under Erasmus+ and CEEPUS, which are within the agreed quotas for each calendar year. Funding sources include scholarships, projects, CEEPUS, ERASMUS+, foreign higher education institutions and our own resources. Mobility usually includes shorter stays abroad.

According to data in the records of international cooperation (Table 4.5 Analytic Supplement), 1 scientific research stay of longer than 3 months and 146 shorter scientific mobility of faculty teachers were realized, 38 for scientific research work, 2 for other research, 19 within cooperation agreements, 25 were project meetings, and 62 participations in international conferences held outside the Republic

of Croatia, and one short artistic stay. Participation in international conferences organized in the Republic of Croatia was not recorded.

As a part of the exchange, the Faculty encourages its employees to participate in teaching at foreign universities and to use mobility for establishing new agreements to improve teaching skills at all levels of studies. For this reason, an increasing number of teachers decide to accept teachingl mobility. In the last five-year period, the Faculty had 35 shorter teaching mobilities and 5 longer mobilities for one semester (one person for two semesters in 2019/2020). One teacher is a co-holder of a course at a foreign partner institution teaching a two-semester course "Finishing Textiles".

Mobility for the purpose of learning and training at all levels of study is also encouraged. In the last five years, 46 shorter mobilities were realised for the purpose of training.

Mobility of all employees, including non-teaching staff, is also encouraged. In the previous period, 1 shorter mobility of a non-teaching staff was realised (Table 4.6 Analytic Supplement).

The University of Zagreb Faculty of Textile Technology managed to achieve international recognition by continuous work, from scratch by individual cooperation of teachers, then by joining associations and networks, and in recent years by numerous mobilities. This also resulted in foreign teachers choosing our institution for their scientific, research, artistic, teaching and professional stay, usually for one week. According to the Records of international cooperation (*Evidencija međunarodne suradnje*) in the last 5 years 9 scientific, 1 artistic, 22 teaching and 4 professional mobilities shorter than 3 months were realised. It should be noted that in the past period 2 non-teaching employees of foreign institutions visited the Faculty for the purpose of training.

4.4. The space, equipment and the entire infrastructure (laboratories, IT services, work facilities etc.) are appropriate for the delivery of study programmes, ensuring the achievement of the intended learning outcomes and the implementation of scientific/artistic activity.

Elements of the standard

- *The higher education institution plans and improves the infrastructure development, in line with the strategic goals.*
- *The space, equipment and the entire infrastructure (laboratories, IT services, work facilities etc.) are appropriate for the delivery of study programmes and ensuring the achievement of the intended learning outcomes.*
- *The space, equipment and the entire infrastructure (laboratories, IT services, work facilities etc.) are appropriate for the implementation of scientific/artistic and professional activities.*

The University of Zagreb Faculty of Textile Technology performs its activities in five buildings divided into three locations in two cities: Prilaz baruna Filipovića 28a, Zagreb (building A), Prilaz baruna Filipovića 30, Zagreb (building B), Prilaz baruna Filipovića 30, Zagreb (building C), Savska cesta 16/9, Zagreb and Hallerova aleja 6a, Varaždin, with a total of 7707.4 m^2. Main building A (2848.4 m^2) was built in 2005, building B (which in addition to the Faculty also houses two secondary schools: *School of fashion and design* and *Administrative school*) was built in the 1960s, additionally upgraded on two occasions in 1971 - the third floor, and in 1993 – attic, building B (2998.00 m^2), building C (30.00 m^2) from the base in 1996, and building in Savska 16/9 (728 m^2).

After the construction of the new building A and the reconstruction of building C, in the period 2019/2020 the building of the Faculty in Savska 16/9 was adapted, within the framework of the project *Modernisation of Infrastructure of the Textile Science Research Centre*, MI-TSRC (K.01.1.02.0024), co-financed by the European Regional Development Fund. A modern, interactive and functional air-conditioned space, intended for offices (77 m^2), fulfilled all the needs of assistants and PhDs. The entire building is air-conditioned, equipped with IT communication network, computer equipment, lit in accordance with occupational safety regulations, and possesses new and functional office equipment and a heating system. Storage room was completely adapted in the basement, and a part of it was reconstructed into a functional laundry with the size of 22 m^2. This adaptation gave the Faculty a renovated and functional space that meets all the requirements of applying modern science and technology through 5 fully equipped laboratories with the latest scientific and research equipment (Table 4.9. Analytic Supplement). This creates the preconditions for initiating the accreditation procedure for certain testing methods.

The Faculty also owns premises (building D) with the surface area of 78 m^2, which houses weaving studio/workshop and activities related to *the Centre for Creative Weaving.* In accordance with the signed agreement with the secondary *School for fashion and design*, a new area-defined practice will be built during the construction of a new part of school. No major reconstructions were made on other facilities, but efforts were made to modernize the area with adequate repairs and interventions in terms of installation of the information communication network, new carpentry, air conditioning, laboratory space refurbishment, heating renovation, etc.

The Faculty has 16 lecture halls with a total area of 1199.4 m^2. On average, spatial conditions meet the size and timetable. The number of lecture halls and laboratories (the Faculty has 40 teaching and scientific research laboratories/practices with a total area of 1880.2 m^2) corresponds to the number of enrolled students (currently about 600 students) and to the Faculty teaching and scientific-research needs. Teaching is organised in larger groups of students. It should be noted that there are differences in the level of equipment of laboratories in Zagreb and Varaždin. In accordance with the level of equipment, laboratories are mostly suitable for teaching and scientific research needs, and in addition to new modern laboratories (Savska 16/9), the needs of the Faculty for cooperation with business and technology transfer will be largely met. It should be noted that by the new level of function of the existing capacities in the scientific equipment of the Faculty, cooperation with companies can be significantly improved, and thus Faculty incomes increased.

Computer classrooms (2) are well equipped and meet the teaching needs. The Faculty is equipped with two practical facilities equipped with modern computer equipment (B-002, B-309), which enables the work on computer design and design of textiles and clothing. The libraries of the Faculty have a significant fund of books (Table 4.10. Analytic Supplement) and journals, are equipped with air-conditioning and computers and provide good conditions for students' work. Library also posses' rare copies of the most important periodicals in the field of textiles (*Textile Research Journal* and *The Journal of Textile Institute*). Students are also provided with a reading room that is well lit, air-conditioned and equipped with computer equipment for searching databases. Computer equipment in the reading room is somewhat older and it is necessary to invest in the reconstruction of the same in the long run. Teachers' personal computers are mostly financed by funds secured by projects and, to a lesser extent, from the Faculty's own income. Computers for student needs are financed from the budget of the Faculty, and computer equipment of administrative expert services partly from the budget and partly from the Faculty's own income.

There are many computers at the Faculty (345), distributed in computer rooms, classrooms and individual laboratories and practices for the purpose of teaching and research work. The coverage of the Faculty premises by wireless network (Eduroam) reduced the observed shortcomings. Capital or secondary laboratory research equipment and related computer programs are equipment, with the permission of the head of the laboratory, available in the days when there is no instruction, especially for the purpose of student's scientific and/or professional work.

Computer equipment is relatively outdated (40% of equipment is under six years of age), although within the framework of the Faculty financial abilities it is regularly renewed. In addition, particular problem is the acquisition of appropriate licensed and specialised programmes, which are largely financed by the Faculty own funds.

On October 25th 2019, a student restaurant was opened on the ground floor of the building A. Although spatially small, it resulted in raising the quality of students' life and, according to the available information, students are satisfied with its opening and services of food and drinks.

The Faculty continuously pays special attention to health and physical activities of students. The Faculty rents the capacity in sports facilities (sports halls in Zagreb and Varaždin) for teaching purposes, and continuously rents the sports hall for the needs of the TTF Sports Association.

The Faculty has 59 teaching cabinets for 102 teachers and associates. There is a great disproportion in capacities intended for teachers and associates at certain locations. On the location of Savska 16/9, after the building attic was adapted with project funds, the premises for permanent employees have been satisfactorily organised. The largest number of teaching cabinets (43 out of 59) is located in

buildings A and B, Prilaz baruna Filipovića 28a and 30, Zagreb. In addition, the opening of new laboratories reduces the space available to the teachers because it is impossible to expand the area without significant investments in the location Prilaz baruna Filipovića 28a and 30 (buildings A and B), which would include, in addition to the construction of new spaces for the employees, a smaller, adaptable, common workspace that could be used for joint project activities, etc.

All the offices have appropriate power connections, telephone connection, fixed internet connection and a personal computer. More than 85% of the offices are equipped with air conditioning, which makes it much easier to work during warm summer months, especially if the premises are shared by several teachers or associates.

Unfortunately, despite the efforts to improve the quality of workspace, we are limited with finances, since teachers' offices are maintained exclusively from the Faculty's own incomes.

The earthquake that hit the city of Zagreb on March 22nd 2020 caused major damage at the Faculty buildings on Prilaz baruna Filipovića 28a and 30. In August 2020, the building A was flooded, with a significant damage to floors, walls and scientific and research equipment. The damaged parts of the building A expected be repaired soon, as some of the funds have been already transferred from the insurance company. In the forthcoming period, it will be necessary to repair damage in these buildings, which will be possible only upon the application for a public call for reconstruction from earthquakes and approval of financing.

4.5. The library and library equipment, including the access to additional resources, ensure the availability of literature and other resources necessary for a high-quality study, research and teaching.

Elements of the standard

- *The library and library equipment, including the additional resources, meet the conditions for a high quality of study.*
- *The library and library equipment, including the additional resources, ensure a high quality of scientific-teaching / artistic-teaching activities.*

Since the Faculty operates at several locations, it has two libraries (one in Varaždin, 26 m^2 and one in Zagreb, 122.4 m^2). The Faculty Library at the location of Prilaz Baruna Filipovica 28a in Zagreb (building A) consists of three rooms that fully meet the needs of their users for various purposes.

The interactive lobby (14.45 m^2) is situated between the student reading room (61.2 m^2) and the library itself (61.2 m^2). The interactive lobby offers a relaxed atmosphere in which users meet informally and exchange information among themselves. The lobby is designed as a place of rest between learning and searching for information sources.The students' reading room has 20 individual learning seats, and in the short run, by setting up a learning bench, it can be converted into a collective work classroom or into a lecture room to perform user education programme. Users are enabled to work on their PCs.

The library space also offers six seats for individual or group learning and two seats with computers and internet access for online search. There is a place in the library for information and referral services and renting materials. The library is fully adapted to the movement of persons with disabilities.

The library fund contains approximately 8,000 units of material and 100 titles of domestic and foreign professional and scientific journals and collections of doctoral, master's, graduate and undergraduate thesis works. In addition to standard reference literature (dictionaries, encyclopaedias, manuals, lexicons …), the largest part of the fund consists of scientific and professional publications, covering a wider field of technical sciences, in particular textile technology. In addition, there is professional and exam literature from other fields (computing, economics, mathematics, physics, chemistry, marketing, ecology, design, art). In the future, the continuous acquisition of new professional and scientific literature will try to modernize the library fund as much as possible and adapt to the study programmes implemented at the Faculty.

The library fund can be searched through the library catalogue, and through the electronic resources portal for the Croatian academic and scientific community. Many databases and collections of journals and books are available to users.

The Faculty Library is a specialized higher education library which provides its collections and services with information and communication support for the scientific and educational activities of its mother institution.

As an open-type higher education library, the Faculty library is intended primarily for employees and students of the Faculty, but it is also open to all external users who need the literature or any kind of information in the field of textiles and fashion design. The Library fund and services are also available

to all the other members of the scientific, academic and business community and citizens with the interest in the scientific disciplines for which it is specialised.

Given the needs of its users, the interactive lobby and students' reading room are open from Monday to Friday from 8 to 18 hours, whilst the library is opened from 9 to 15 hours.

4.6. The higher education institution rationally manages its financial resources.

Elements of the standard

- *Financial sustainability and efficiency is evident in all aspects of the higher education institution's activity.*
- *HEI manages its financial resources transparently, efficiently and appropriately.*
- *Additional sources of funding are used for institutional development and improvement.*
- *Additional sources of funding are secured through national and international projects, cooperation with the industry, local community, etc.*

Based on the data in Table 4.6.1, the total income of the University of Zagreb Faculty of Textile Technology for the last 5 years (from 2016 to 2020) can be seen. On average, the income of the Faculty consists of 73 to 87% of the finances coming from the state budget. The Faculty generates a small share of its own income, which is the result of the difficult economic situation in the country and the environment. However, in recent years there has been a significant increase in incomes visible through the implementation of project applications financed from various sources. The financial evaluation – income (Table 4.11) and expenses (Table 4.12) according to the Analytic Supplement show that the Faculty is financially stable and sustainable with the incomes of the Ministry of Science and Education and the University of Zagreb.

The Faculty manages available financial resources transparently and responsibly, adopting the annual financial plan for the procurement of the Faculty, in which all the employees participate in such a way that the heads of the departments and project managers, centres and administrative services submit the procurement plan for the period in question and the financial plan is drawn up in cooperation of the head of the institution and the head of accounting. The final form of the plan is accepted by the Faculty Council.

All the annual financial reports of the budget, budgetary and extra-budgetary users and procurement plans are published on the Faculty website after adoption at the meeting of the Faculty Council of the University of Zagreb Faculty of Textile Technology, and are accessible in Croatian at Dokumenti i obrasci.

Additional and especially important sources of funding are ensured through scientific research, expert, development and infrastructure projects, as well as through research support financed from different sources, all of these contributing to the development of Faculty activities. In this way, the Faculty provides significant resources for the development and improvement of the teaching process at the undergraduate, graduate and postgraduate studies, improves research capacities, teaching competencies and other activities that contribute to better workings of the institution (Table 5.3. Analytic Supplement) and can be found at Projects.

During 2019, the University of Zagreb Faculty of Textile Technology earned 949.955,00 HRK from realized projects, while in 2020 it amounted to 6.282.523,00 HRK which contributed significantly to the reconstruction of the Faculty premises at the location of Savska 16/9, Zagreb and the procurement of modern laboratory equipment. It will certainly contribute to higher level of cooperation with business and thus higher incomes from its own activities in the field of advanced materials and technology. Such a significant increase in the inflow of funds was achieved through the project K.01.1.02.0024 *Modernisation of the Infrastructure of the Textile Science Research Centre* (MI-TSRC).

In addition to the incomes realised through the projects, Faculty teachers have secured 3.062.649,60 HRK from the short-term support to research funded by the University of Zagreb in the last 5 years.

Higher inflows of funds were realised through the national projects of the Croatian Science Foundation (Table 5.3. Analytic Supplement) in the total amount of 1.361.392,00 HRK (for 2019) and 1.899.262,00 HRK (for 2020).

During the last two years, through incomes under special regulations, the Faculty has accepted 1.381.371,00 HRK (2019) and 1.135.880 HRK (2020) from tuition, classification procedures for checking knowledge, enrolment fees, leases and other types of income used by the Faculty for regular business activities.

Since the buildings of the University of Zagreb Faculty of textile Technology were significantly damaged in the earthquakes that occurred in Zagreb on March 22nd 2020 and additionally on December 29th 2020 in Sisak-Moslavina County, there is a need to secure significant financial resources to repair the damages. In addition, it is necessary to repair a part of the building A at the same location, as great damage was caused to the laboratories and common premises of the Faculty (councillor, reading room, etc.) due to the pipe rupture on August 18th 2020. Some of the funds have already been provided for necessary repairs.

Table 4.6.1. Amounts and shares of the Faculty income for the period from 2016 to 2020, taken over from the statement of budget, budgetary and extra-budgetary users for the period of the last 5 calendar years

Source of funds		2016.	2017.	2018.	2019.	2020.
		HRK	HRK	HRK	HRK	HRK
1.	Incomes from the state budget	25.645.472	27.373.217	27.868.864	27.526.013	27.584.424
2.	Incomes from the budget of other public sources	956.136	803.576	2.063.706	1.361.392	1.899.262
4.	Incomes and own activities	338.565	258.843	806.018	303.807	188.218
5.	Income under special regulations	2.405.704	2.166.068	1.354.037	1.381.371	1.135.880
6.	Other non-mentioned income	455.832	1.369.252	5.821.350	949.955	6.282.523
AND	**Total operating income**	**29.801.709**	**31.970.956**	**37.913.975**	**31.522.538**	**37.090.307**
share of incomes from the state budget, %		86.1	85.6	73.5	87.3	74.4
share of income from own activity, %		1.1	0.8	2.1	1.0	0.5

At the University of Zagreb Faculty of Textile Technology, a Procedure for creating contractual obligations was drafted in 2019, based on which the implementation of the simple procurement procedure at the Faculty is regulated, from the start of the procurement procedure (Obrasci) to the realisation of the procurement procedure.

During 2020, the *Ordinance on distribution of own income generated on the market* was adopted (class: 400-09/20-1/08; Reg. no.: 251-68-01/1-20-1) in order to better distribute the income generated on the labour market within the centres (TSRC, CTD, COBRA, CKT) established at the Faculty.

V. Scientific/artistic activity

5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of scientific research.

Elements of the standard

- *Teachers and associates publish an appropriate number of high-quality scientific publications.*
- *The higher education institution has efficient procedures for encouraging high-quality scientific publication.*
- *The higher education institution keeps records of publications (publication index, citation impact, h-index, if applicable).*
- *HEI's scientific/artistic activity is evident in PhD theses.*
- *Teachers and associates of the higher education institution actively promote scientific/artistic achievements at national and international conferences.*

In the period between the academic years 2015/2016 and 2019/2020, teachers and associates of the University of Zagreb Faculty of Textile Technology carried out their scientific research and artistic research activities in accordance with clearly defined development and progress goals as stipulated in the Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020. Teachers and associates of the Faculty work in 5 different scientific and teaching fields: Technical sciences (textile technology, computing, engineering, basic technical sciences and electrical engineering), Natural sciences (chemistry, physics, mathematics), Humanist sciences (art history, philosophy, art science, philology), Social sciences (sociology, economics) and The art field (art, design, applied art). From the above, there is clear interdisciplinarity in research that contributes to raising excellence at the national and global level, which is best evaluated quantitatively and qualitatively through publications, reviewed art parts recognized at the national and international level, projects, patents and innovations.

Data on publications are clearly visible through the interface of the Croatian Scientific Bibliography (CROSBI), in which scientists and associates enter their publications in a timely and continuous manner. Based on these data and data published in the Web of Science (traces) and SCOPUS, the quality and quantity of scientific, expert and artistic publications are annually monitored through detailed analysis in Annual reports on work and businessoperations of the Faculty (In Croatian Godišnje izvješće o radu i poslovanju Fakulteta (GIRP) available at GIRP 2018/2019, GIRP 2017/2018, GIRP 2016/2017, GIRP 2015/2016), as well as their citation, which directly speaks of the visibility of individuals and institutions at the global level, easily confirmed by the h-index of individuals and institutions (Table 4.4. Analytic Supplement).

In accordance with the categorisation in the *Ordinance on conditions for selection into scientific titles,* teachers and associates published 273 papers in journals indexed to the Web of Science in the period from 2016 to 2020. The importance of scientific and research work of the Faculty employees is visible through the citation of high-ranking publications where the number of citations of publications in the WoS are 806 without self-citation, and the total h-index of the institution is 14 (Table 5.1 Analytic Supplement).

As can be seen in Analytic Supplement Table 5.1a generated by CROSBI database in the last 5 years, teachers and associates of the Faculty published 227 scientific papers of the category A according to the *Ordinance on conditions for selection in scientific vocations, Part 2: Technical sciences* (NN 28/2017). It is evident that 262 works belong to the category of other works in accordance with the Ordinance. The reviewed papers from scientific and professional conferences consist of 319 works, 221 of which are original scientific papers with international reviews from international conferences (category C of the Ordinance). Teachers of the Faculty are authors of 4 foreign books, 13 domestic books, 80 chapters in books and 10 editorial books.

Encouraging scientific-educational and artistic-educational staff and young researchers to publish high-quality scientific-research and artistic papers is evident through the systematic award of excellence by the Dean's Award for publishing papers in journals belonging to the first quartile (Q1), with a high impact factor. Financing publication of papers in journals belonging to the first quartile (Q1) is also encouraged. In particular, the publication of PhDs work in previously mentioned journal categories is encouraged, provided if PhD student is the first author. Since 2011, TSRC has launched a competition for the best scientific paper by young researchers in two categories, one for college students and the other for young researchers (scientists and artists) up to 35 years. All guidelines on these awards are presented through the Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020. Each year, the AMCA TTF presents one award in the category of best student scientific and visual arts work from Ferid Jakupovic's donation for awards, support and assistance.

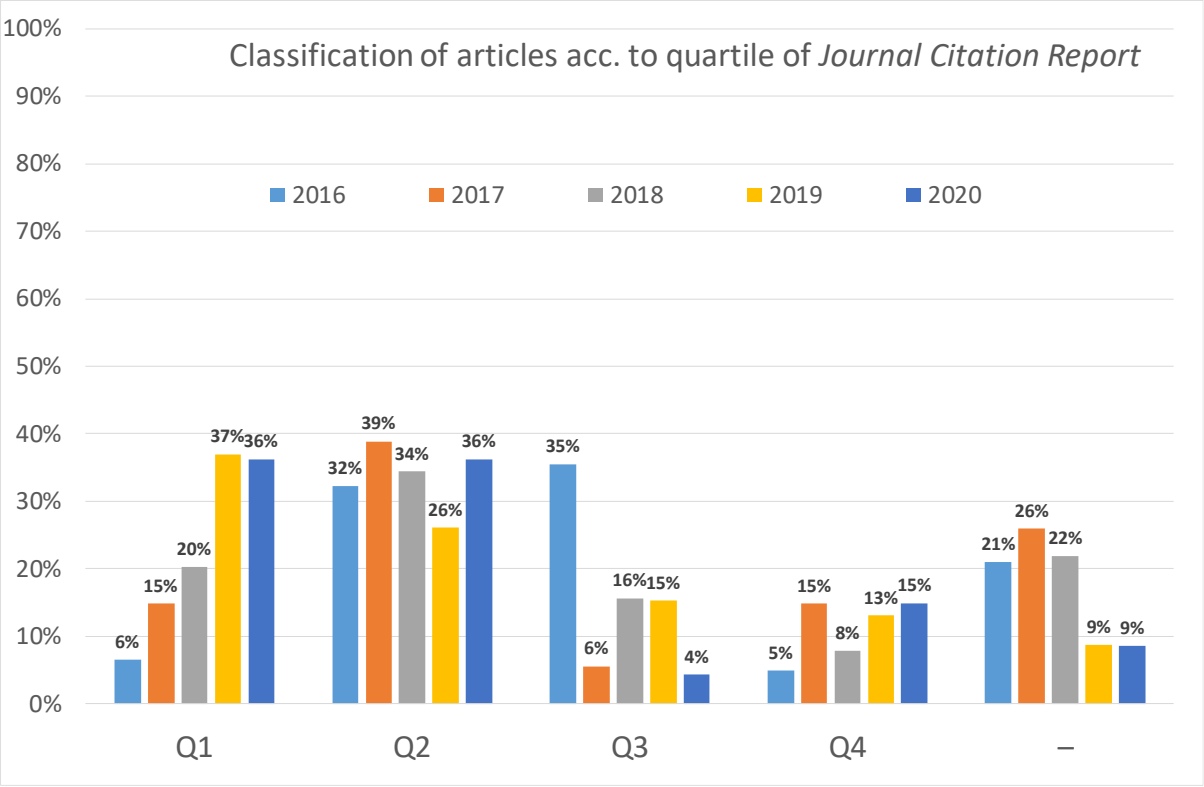

Figure 5.1. Classification of articles according to quartile of *Journal Citation Report* in Web of Knowledge

From Figure 5.1 Classification of articles according to quartile of *Journal Citation Report* in Web of Knowledge can be seen significant increase in the number of papers in the first quartile (Q1), which is a direct result of institution support in financing publications. The number of papers in the first (Q1) and second (Q2) quartile is significantly higher than in the third (Q3) and fourth (Q4), which directly indicates excellence in scientific and research work of teachers and associates of the Faculty.

Significant successes of artists in the art field are monitored through the premiere presentation of art works at group and individual exhibitions of international importance, in Croatia and abroad (Slovenia, Vojvodina, Germany, the Netherlands, Macedonia, Vietnam). Faculty teachers presented 8 art works for the first time at events of international importance. Eleven works were presented for the first time in Croatia, while 23 works of art were presented accompanied by published reviews (Table 5.2. Analytic Supplement).

The teachers in the artistic field present their work at individual and group exhibitions, both in fine arts, experimental film, fashion and textile design, in Croatia and abroad. The exhibitions are organised in galleries, museums and media premises, some of which listed here: Dom hrvatskih likovnih umjetnika, Zagreb; Lauba – for people and art, Zagreb; Izložbeni salon Izidor Kršnjavi, Zagreb; Muzej Mimara, Zagreb; Muzej suvremene umjetnosti, Zagreb; Tehnički muzej Nikola Tesla, Zagreb; Klovićevi dvori, Zagreb; Institut za suvremenu umjetnost Zagreb; Galerija VN, Zagreb; Galerija Bernardo Bernardi, Zagreb, Galerija Ulupuh, Zagreb; Gliptoteka, Zagreb; Galerija Vladimir Bužančić, Zagreb; Pogon Jedinstvo, Zagreb; Salon Galić, Split; Muzej suvremene umjetnosti Istre, Pula; Muzej grada Šibenika, Šibenik; Muzej Grada Krapine, Krapina; Galerija grada Krapina; Muzej likovnih umjetnosti u Osijeku; Gradska galerija Crikvenica, Crikvenica, Likovni salon Vladimir Becić, Slavonski Brod, Galerija Flora, HDLU Dubrovnik; Meulensteen art museum Bratislava, Slovakia; EX FORNACE GALLERY, Milano, Italy; Liquid Cities NY - XY Atelier Contemporary Art Gallery, New York, USA; Mesna galerija Piran, Piran, Slovenia; Central Museum of Textiles, Łódź, Poland; Laura Haber Gallery Buenos Aires, Argentina; Muzej suvremene umjetnosti Vojvodine, Novi Sad, Serbia; Cour de Justice de l'Union Européenne Galerie, Luxemburg; Galerija Mariánská, Češké Budějovice, Czech Republic; Huong Ngo Art Space Gallery Vietnam; Collegium Artisticum Sarajevo, Bosna and Hercegovina; Galerija Hest, Ljubljana, Slovenia; Bewegter wind, Nordhessen, Germany; Festival mode, Maastricht, the Netherlands, and Nacionalna galerija, Skopje, North Macedonia.

Scientific-research and artistic-research activities are visible through the mentorship of doctoral theses, stored in the repository of the Faculty. Over the period of five academic years, starting from the year 2015/2016, six doctoral theses were defended at the Faculty of Textile Sciences and Technology, three of which under dual mentoring, while two were written in English, indicating the interdisciplinarity of research, association and establishment of scientific research cooperation at the global level. Most doctoral theses take the form of a monograph, and one was made according to the Scandinavian model.

The Faculty teachers were mentors/commentors of four doctoral theses within the framework of doctoral studies on other faculties at the University of Zagreb, three in the natural sciences (chemistry, two mathematics) and one in the technical field (computing). In order to increase the state-of-the-art research several internationally recognised scientists are included in the teaching of doctoral studies and in the preparation of doctoral theses, as a measure to improve the quality of the doctoral study *Textile Science and Technology*. It is done by implementing the project *Internationalisation of the Doctoral Study Textile Science and Technology*, financed by the European Social Fund, ESF: UP.03.1.02.0022. In order to improve the scientific and research work of the doctoral programme, teachers are encouraged to draw up plans for financial allocation of funds - doctoral tuition of the TZT

programme and its dedicated spending. Thus, as a measure of implementation of scientific excellence of doctoral study and doctoral theses, the Dean's Management Board proposed financing the publication of scientific papers in journals classified in the first quarter (Q1), provided if the first author is our PhD student. This measure resulted in an increase of more than 100% of this type of work in the year 2019/2020. PhD students working on innovation and patents within the framework of doctoral research, by a decision of the *Council of Doctoral Study* (VDS), have the opportunity to use the allocated funds for the participation in national and international innovation fairs, as a measure of support to their professional and scientific development. Wider involvement of PhD students through the presentation of various research topics and linking and dissemination of their doctoral research was ensured through the establishment of the PhD Students day in February 2018. They have the opportunity of oral presentations for their topics of research, and/or posters alternatively. The chance to take part in this also have assistants who work on their PhD theses at cooperative institutions in Croatia and abroad. In September 2020, a **doctoral section** was held within the framework of the 13th International Scientific and Professional Conference *Textile Science and Economics* (TZG2020) in an online form called CHINESE-CROATIAN FORUM: Innovation, Design and Digitalization in the Textile and Leather Sector. They presented their research work to the general public at the national and international level by oral presentations.

The VDS is responsible for monitoring the implementation of the doctoral programme and in October 2019 a new *Ordinance on the doctoral study Textile Science and Technology* was adopted at the meeting of the Faculty Council. In addition to the existing prescribed methods of evaluation at the University of Zagreb, the VDS introduced an additional method of monitoring the quality of work of the doctoral programme in the current year in 2017, through **the work plan of the doctoral** programme, verified by the mentor/study advisor and the doctoral advisor. All the documents and instructions necessary to preform all activities within the doctoral study *Textile Science and Technology*, as well as the Protocol from the topic application to the doctoral thesis defense can be found on Faculty website.

Teachers and associates of the Faculty actively present the results of scientific and research work at international and domestic conferences. Table 5.1a shows that in the course of the last 5 years, teachers and associates participated in scientific and scientific-professional conferences with a total of 319 reviewed papers. A total of 88 papers were the result of the cooperation with higher education institutions and scientific organizations in Croatia and abroad. Also, 32 complete professional papers and 222 summaries of papers were published in the proceedings of scientific and professional conferences.

The total number of participants in congresses, symposia, workshops, exhibitions and similar events for the last 5 years was 444, out of which 244 participated in international events and 200 in domestic ones.

Since 2002, the Faculty has been organizing an international conference in Dubrovnik on textile, clothing and design entitled: ***International Textile, Clothing & Design Conference - Magic World of Textiles*** (ITC & DC). The Conference was postponed in 2020, due to the pandemic caused by Covid-19 virus. ITC&DC is a traditional and one of the most important European and world scientific conferences in the field of textile and clothing technologies, fashion, design and marketing, as well as the only international scientific conferences in this field held in the Republic of Croatia, under the auspices of national and international scientific and professional organizations.

The Faculty also organises a scientific-professional conference *Textile Science and Economics* every year since 2008, designed as a series of round tables, lectures, panels, creative laboratory, exhibitions of students' work and poster presentation of scientific research, artistic and professional papers, with the aim of connecting science, art, economy, creative industry and design. TZG 2019 and TZG 2020 were organised as international meetings. The importance of this symposium is confirmed by the fact that the National Library of Science and Technology (TIB), as a part of the creation of a centralized comprehensive collection of publications in the field of engineering sciences, has included in its database the proceedings of the TZG conference from 2015 to 2019, with the aim to make the papers permanently accessible to the international scientific community.

Main goals of both these conferences are to connect the economy, science and art for the purpose of "sustainable" industrial development, thus strengthening the economic growth of the Republic of Croatia and strengthening competitiveness in the European market. In July 2018 a new interdisciplinary conference, called ***Fashion, Costume and Visual Culture***, was launched, bringing together leading researchers, scientists and practitioners of modern fashion, fashion history, fashion theory, fashion design and costume design from 23 institutions. In 2020, in order to encourage an interdisciplinary approach to fashion research, the Faculty organized an international interdisciplinary symposium ***Museum of fashion – beginnings and challenges on the territory of Slovenia, Croatia and Serbia***, which gathered over 80 participants from the specialized area of fashion museums. Due to the pandemic caused by the Covid-19 virus, the symposium took place online only. The result of this is a bilingual scientific collection book.

In the previous period the Faculty has been additionally co-organizing the following international scientific conferences: *International Conference on Printing, Design and Graphic Communications "Blaz Baromic", International Conference on Textile Engineering* (Textileengg), *5. International Conference TexTeh*, *International Ergonomics Conference – ERGONOMICS* and domestic expert symposium *Textile days Zagreb (Tekstilni dani Zagreb)*.

The Textile Science Research Center (TSRC), which has been active at the Faculty since 2008, annually organises *the Textile Science Research Centre Open Day – TSRC Open Day*, which presents research and artistic potentials, focusing on selected strategic research topics. On the occasion of the 10th anniversary of the activities of the TSRC, a Monography was published, summarising the activities of the TSRC and its development within the University of Zagreb Faculty of Textile Technology.

5.2. The higher education institution provides evidence for the social relevance of its scientific / artistic / professional research and transfer of knowledge.

Elements of the standard

- *The higher education institution monitors and takes into consideration the needs of society and labour market in planning its research activities.*
- *The higher education institution has an efficient support system for research and transfer of knowledge and technologies.*
- *Teachers and associates participate in the activities of scientific, arts and professional organisations.*

Monitoring the needs of society and labour market and creating positive policies, intensifying scientific research and linking faculty scientists with the aim of improving and developing textile science, is enabled at the global level through the involvement of researchers in the European Research Area (ERA). The activities of the European Technology Platform (ETP) for the Future of Textiles and Clothing (FTC), are followed though it, as well as the initiative of leading markets in the Lead Market Initiative, (LMI). The ETP brings together 160 000 companies (members of EURATEX) and several thousand researchers from the EU (AUTEX and TEXTRANET – Association of Textile Research institutions) with a common goal of research and innovation and their application in business. Linking and exchange of knowledge and ideas is also enabled through continuous activities of the Faculty in international bodies of related institutions, such as the Association of Textile Universities (AUTEX), the Danube Adria Association for Automation & Manufacturing (DAAAM International), the Textile Institute, the International Federation of Knitting Technologists (IFKT), the Society of Dyers and Colourist (SDC), the International Colour Association (AIC), the International Technical Committee for Textile Care (ICTC), European Technology Platform for the Future of Textiles and Clothing and from 2019 Balkan Society of Textile Engineers (BASTE).

Monitoring scientific research, economic and artistic events at the global level enables the activities and development of science and profession in the national environment. One of the strategic guidelines of the Faculty is to strengthen the transfer of knowledge, research achievements, new patented products or processes and design solutions in favour of the development of the economy, especially small and medium enterprises, as well as the service sector. The Faculty is a member of FEANI, the European Federation of National Engineering Associations, a non-profit federation registered in Brussels, Belgium, whose members are the members of the National Engineering Association (more than 350), engineering associations from 32 countries in Europe, as well as engineers from all the disciplines and interested individuals. The *Croatian Engineering Federation* (HIS) is a full member of FEANI, while the *Croatian Textile Engineering Federation* (HIST) is a member of HIS. In 2019, the *Croatian Engineering Association* hosted a meeting of the Central European group FEANI, attended by the members from Austria, Belgium, Switzerland, Czech Republic, Slovakia, Germany, Ukraine and Croatia. Members of FEANI CEI visited the Faculty, one of the most innovative constituent units at the University of Zagreb.

Scientists and experts from the Faculty also contribute through their leading positions and the work in numerous public, professional and advisory bodies and boards, active both in private and public sector and successfully monitoring the needs of the society and market in particular. It is one of the ways the Faculty matches its activities with public needs and requirements. Some of them are:

Croatian Academy of Sciences and Arts, *Croatian Academy of Engineering* (*Hrvatska akademija tehničkih znanosti*), *The Croatian Defence Industry Competitiveness Cluster* (HKKOI), *The Croatian Competitive Cluster of Creative and Cultural Industries* (HKKKKI), *The Croatian Cluster of Competitiveness of the Textile, Leather and Footwear Industry* (*Hrvatski klaster konkurentnosti industrije tekstila, kože i obuće*), *Croatian Accreditation Agency, Croatian Standards Institute, Croatian Inventors Network, Zagreb Inventors' Association, Association for International Commercialisation of Zagreb Innovations, Association of Croatian Innovators, University Commission for Innovation and Technology Transfer of the University of Zagreb, Croatian Leather and Footwear Society, Almae Matris Croaticae Alumni – Tehnologiae Textilis Facultatis* (*AMCA TTF*), *Croatian and European Microscopic Society, The Fibre Society*, Group for waste management in textile and clothing industry at the *Association of Textile and Clothing Industry* (at The Croatian Chamber of Commerce), *Croatian Chemical Society, Scientific Council of Crystallography*, *Croatian Academy of Sciences and Arts - Croatian Crystallographic Community*, *Croatian Society of Chemical Engineers*, *Croatian Society for Materials and Tribology, Croatian Society for Quality, University of Zagreb Senate*, University councils in various sectors, *Agency for Science and Higher Education – Parent Committees, Croatian Vacuum Society*, etc. (various associations and societies).

One of the strategic guidelines of the work over the past years was the development of intensive cooperation and interconnection with the above-mentioned relevant institutions, linking private, scientific research and public institutions. Fruitful cooperation is visible through cooperation agreements and organised public panels/forums open to the general public. Many workshops were also held at the Faculty, organized for target groups, together with those held at domestic and international institutions. They were attended or monitored by teachers and associates online. The news section on the Faculty website contains information on holding various seminars, workshops and webinars in Croatia and abroad, important for students and employees. Numerous lectures, panels and workshops were also held as a part of co-operation with *the Agency for Vocational Education and Training* (ASOO), all with the aim of transferring knowledge and acquiring necessary competencies for employees of the business sector and all the interested parties who meet the established normative standards.

Targeted direction of human resources for the growth and development of textile business was carried out through the project *Development of qualification standards and undergraduate study programmes at the Faculty of Textile Technology* (In Croatian: *Razvoj standarda kvalifikacija i preddiplomskih studijskih programa*) (HR.3.1.15-0026) within which occupational standards, qualification standards and drafts of undergraduate study programmes were developed. The quality of the institution and the educational programme is planned to be increased by developing and implementing the Lifelong Learning Programme. Faculty teachers are members of Sectoral Council IV *Textiles and leather*, bringing together experts from the educational and business sectors, trade union representatives, the ministry responsible for economy, entrepreneurship and crafts, all with the aim of identifying current and future needs for the professions necessary for the economic development of fashion, textiles and leather. During the last four-year period, the requirements for entering occupational standards were evaluated, in the Registar HKO and basic activities for the implementation of the *Croatian Qualifications Framework*, in order to systematically orient education in the sector in Croatia towards the necessary knowledge, competences and skills that would ensure students would continue their education, employment in the sector and related sectors, and continue their personal and professional development in order to develop national and global economy. Sector Council IV *Textiles and leather* positively evaluated 6 occupational standards by the end of 2020: engineer/engineer of textile-chemical technology, engineer/engineer of textile-chemical technology,

engineer/engineer of development and construction of clothing, engineer/engineer of design and manufacture of textile materials, product designer/designer of textile and clothing, engineer/engineer of clothing technology and manager/manager of technological process in clothing production. One standard was entered in the Registar HKO in 2020 and the remaining 5 at the beginning of 2021. Two more occupational standards are in the phase of acceptance.

During the implementation of the above-mentioned project, HR.3.1.15-0026, there appeared a need to strengthen students' competencies closely related to the areas of work and the development in particular textile industry activities. Through the activities of the project, *Development and implementation of professional practice at TTF - RAST* (HR.03.1.04.0024), financed by the European Social Fund ESF (85%) and the State budget (Ministry funds) (15%), the selection course expert practice on undergraduate and graduate studies will be introduced and students enabled to develop targeted skills. The implementation of the project will also develop a model of professional practice, strengthen the competencies of teaching and non-teaching staff and increase the possibility of employing students through the acquisition of work experience during the implementation of professional practice. The *Centre for Career and Professional Practice* was established in 2020, with the aim of supporting students in achieving the necessary competences for early career development and entry into the labour market. Implementation of the project includes business entities, since students will perform part of their professional practice in the real sector in accordance with *the Ordinance on professional practice at the professional study of textile, clothing and training technology at the Faculty of Textile Technology, University of Zagreb, and the Ordinance on professional practice of undergraduate and graduate university studies at the Faculty of Textile Technology, University of Zagreb (In Croatian: Pravilnik o stručnoj praksi na Stručnom studiju tekstilne, odjevne i obućarske tehnologije na Sveučilištu u Zagrebu Tekstilno-tehnološkom fakultetu* and *Pravilnik o stručnoj praksi studenata preddiplomskih i diplomskih sveučilišnih studija Sveučilišta u Zagrebu Tekstilno-tehnološkog fakulteta).*

Application and successful project management is one of the significant potentials to strengthen the development, research, modernize scientific and research equipment and develop new technologies with the aim of networking and knowledge transfer. The Faculty adopted the Decision on the establishment of Office for Projects at the 5th regular session of the Faculty Council in the academic year 2015/2016 held in March 2016, for the purpose of most successful application and implementation of projects. The POIROT base provides an insight into the projects implemented at the Faculty.

Faculty scientists are actively involved in science and technology parks and the development and realization of innovative solutions for economic needs, which can be seen through the application and realization of two project proposals: differential thermal conductometer for textile composites and clothing PoC6_1_189, HAMAG-BICRO; a system for pretreatment of yarn with cold atmospheric plasma PoC6_11_31, HAMAG - BICRO through the Programme for verification of innovative concept for scientists and POC. The programme provided support for innovation in the early phase of research and the success of realization of the project PoC6_1_189 is visible through designed, created and moderate multipurpose differential thermal conductometer for textile composites and clothing, for which patent application was submitted to the Croatian State Intellectual Property Office under the code P20171643 on October 27th 2017. The patent was granted on March 20th 2020 under the code PK20171643. A total of one patent has been granted at the Faculty over the past 5 years. The Faculty has enormous inventive potential evident through the realization of patent applications (In Croatian portfolio of innovations and patents) and 54 awards to innovation inventions at 11 international and

6 national exhibitions. This indicates the Faculty is the innovative most important university component. Members of the Faculty who deal with innovations are members of the International jury of the second oldest exhibition of innovations in the world and the second largest European exhibition of innovations INOVA. The research project IP-2018-01-6363 continues to develop new innovations.

The project *Modernisation of infrastructure of the Textile Science Research Centre*, MI-TSRC (KK.01.1.1.02.0024) co-financed by the European Regional Development Fund, has procured a state-of-the-art research equipment and training for work on the project in accordance with the Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020. The project provides conditions for the implementation of state-of-the-art research on advanced materials and technologies, which will increase knowledge transfer and innovation into business and strengthen cross-sectoral cooperation, patent implementation and innovation into development, in line with market requirements, which will ultimately contribute to greater economic growth during the period in immediate future.

The Faculty also leads the project financed under the Operational Programme Competitiveness and Cohesion 2014-2020 *Design of advanced biocomposites from energy-sustainable sources* (BIOCOMPOSITES) KK.01.1.04.0091.

The Faculty is also a partner on the project under the Operational Programme Competitiveness and Cohesion 2014-2020 of *The European Regional Development Fund* (IRI-2), owned by the company Čateks Ltd, entitled *The development of multifunctional non-combustible fabric for dual use* (KK.01.2.1.02.0064), which started with implementation on August 17th 2020, with new patent applications and possible innovations expected, into which teachers and experts will invest their scientific and research potential.

Erasmus+ Programme - key Action 2 (KA2) - *Cooperation for Innovation and the Exchange of Good Practices*, call for proposals EAC/A03/2018 - *Knowledge Alliances*, approved the financing of the project called *ICT in Textile and Clothing Higher Education And Business (ICT-TEX)* - 612248-EPP-1-2019-1-BG-EPPKA2 - at which the Faculty participates as a partner. The project implementation started on January 1st 2020. The aim of the project is to develop curricula that would meet business requirements for experts working in the field of textile and clothing design and manufacture, which will contribute significantly to strengthening competencies, with the ultimate goal of economic growth at the national and then global level. The Erasmus+ Programme - key Action 2 (KA2) of the *Knowledge Platform for Transferring Research and Innovation in Footwear Manufacturing* (K4F), 2015-1-RO01-KA203-015198 (2015-2018) developed a platform for the transfer of research and innovation in the production of footwear, aimed at fostering excellence in training and education for design, product development, engineering and management, as well as at linking education, research and business.

All these projects contribute significantly to the transfer of knowledge, research and technology between the TTF and business entities.

Having in mind everything stated above, it is evident that scientists and experts of the Faculty successfully follow the set strategic guidelines, aimed at strengthening the transfer of knowledge, research achievements, new patented products or procedures, and designer solutions in favour of the development of the economy at the national and global levels.

Teachers and experts follow the environmental and economic requirements related to the processes of manufacture and processing of textiles and leather. The involvement of teachers in ecological issues

is evident through several projects and research topics, as well as through the participation in the development of the Environmental Protection Criteria "Friend of the Environment (leather)". The objectives of the aforementioned criteria for treatment, use and disposal of finished hides and skins are the reduction of harmful emissions in waste waters, reduced content of harmful substances in finished leather, waste management, socially responsible operations and reduction of environmental pollution using renewable energy.

Organization, coordination and updating of all the aspects of cooperation of employees is carried out through the The Center for Development and Transfer of Textile and Clothing Technology and Fashion Design (CTD) and the Textile Science Research Center (TSRC). Cooperation of external stakeholders with the Faculty is conducted through leaders who gather competent experts and researchers, able to offer quality and complete solutions at the request of a client, evident through numerous analyses and expertises prepared for external clients (CTD, TSRC expertise and scientific and research cooperation between the TSRC and business companies, institutes and higher education institutions).

During the past period, 13 tests for external stakeholders were conducted within CTD activities, with the total income of 70,344.75 HRK. The interest for various needs of research, testing and development was greater but the reasons for the inability to accept them were: lack of accredited and certified laboratories and methods, occasional difficulties with individual devices, lack of time on the part of scientific and teaching staff, inability to follow demanding implementation deadlines. CTD members have written a draft Ordinance on TTF Q. the CTD's head was also the chairman of the organising committee of the international symposium *Textile Science and Economy – French-Croatian Forum* (TZG 2019) entitled "Trends and Future Routes in Textile Creativity, Innovation and Technology" with the included "Investor day TTF 2019", the main aim of which was to connect the scientific and economic communities. Innovativeness of the teachers and their scientific and artistic research create a new original knowledge collection that can serve as a basis for the development and transfer of textile and clothing technologies and fashion design.

The Faculty, through the activities of the the *Textile Science Research Center* (TSRC), strengthens its cooperation with business entities, public institutions and European companies, thus achieving not only quality scientific and research cooperation, but also recognizability in the international market. The success and recognition of the TSRC was confirmed during 2018 when the project *Modernisation of Infrastructure of the Textile Science Research Center* (MI-TSRC) KK.01.1.1.02.0024 secured a new funding for the establishment of a *Laboratory for Advanced Materials and Advanced Technology*, which is crucial for further development of materials and technologies, increasing the number of innovations and transfer of knowledge to the academic and economic sectors. It will ultimately result in increased competitiveness of companies with which the TTF cooperates. 79 analyses were carried out within the TSRC activities, with corresponding inclusion of external participants, while total income was 191,611.33 HRK.

In addition to the above-mentioned tasks and goals, the TSRC encourages the involvement of students and young researchers in scientific and artistic work in some other ways as well. In order to encourage research work on the TTF, particularly by young researchers, there is a Competition for the Award for the most successful scientific or artistic research work in the field of textiles – TSRC in two categories every year, one for the TTF students , and the other for researchers (scientists and artists) under the age of 35. TSRC continuously promotes the popularization of science through the selection of current scientific themes on the TSRC Open days (TSRC Open day 2020) at the Nikola Tesla Technical Museum.

The activity described is financed through the programs of popularization of science by the Ministry of Science and Education.

The Faculty continuously participates in other activities of popularization of science such as Noć istraživača (*Researchers' night* 2019, 2018), Science Festival, Laboratory of Fame, organization of numerous STEM workshops for children, and through the project *Skrojene budućnosti?,* intended for population older than 54 years (54+), where the Faculty is a partner. There are also numerous appearances of faculty employees in the public media (radio and TV shows, electronic media) through which they try to bring their scientific, research, artistic and professional work closer to general public.

Close links with different areas of the profession and continuous monitoring of the growth and development of each segment can be seen through the publication of expert papers and participation in scientific-expert consultations. Over the past 5 years 32 professional papers were published in journals and 88 professional papers in proceedings. Out of the total number of professional papers 103 were reviewed. The largest number of papers belong to the field of textile technology, 5 of them to the interdisciplinary field of humanities sciences, 3 to design and fundamental technical sciences, and one to applied arts, one to fine arts and one to art history (distribution of all professional works per area).

The activities of the employees in the promotion of science and profession are visible through the popularization articles dealing with different topics.

Active and retired teachers of the Faculty actively participate in the large project of the Lexicographic Institute Miroslav Krleža and the Croatian Academy of Engineering in the preparation of the Croatian Technical Encyclopaedia related to textiles.

The efficiency of the support system for the development of scientific and research activities of the Faculty can be seen through the guidance of short-term university support to research. Over the past 5 years, there have been 80 supports from the technical field, 9 supports from the natural science area, 8 from the artistic field, 3 from the field of social sciences, 8 from interdisciplinary and one from the University Fund for the humanities field.

The Faculty employed in 2016, with the support of the Croatian Employment Service, Regional Office Zagreb, an expert associate, following the professional training programme, with the employment contract lasting for one year, having in mind the need to educate and promote the experience of young graduate engineers. In the course of the year, a team of employees intensified the activity of writing a research project, which indicated the possibility of further training of a professional associate and his permanent employment. This was done in 2018, through the Research Project financed by the Croatian Science Foundation HRZZ-UIP-05-2017-8780.

Within the programme "Young Researchers' Career Development Project – Training New Doctoral Students" of the Croatian Science Foundation, 4 young researchers were employed: 2 from the tender deadline DOK-10-2015 and 2 from the tender deadline DOK-09-2018.

Synergy of cooperation between the Faculty and media, small and large enterprises, associations, societies, laboratories and clusters is evident through mutual support and 56 donations in the amount of 419,376.53 HRK, all with the aim of the growth and development of textile science, technology and economy. At the same time, the Faculty supported professional and non-government associations through 13 donations in the amount of 85,607.59 HRK, in accordance with the *Ordinance on the distribution of own income*. (In Croatian Pravilnik o raspodjeli vlastitih prihoda).

5.3. Scientific/artistic and professional achievements of the higher education institution are recognized in the regional, national and international context.

Elements of the standard

- *Teachers, associates and professional staff have received university, national and international awards for their scientific / artistic / professional achievements.*
- *The higher education institution is a holder of an adequate number of scientific / artistic / professional projects (university, national and international projects).*
- *Teachers, associates and professional staff participate as invited lecturers in an adequate number of national and international conferences.*
- *Teachers and associates are members of the scientific / artistic / professional boards of conferences, and editorial boards of scientific journals.*

In the five-year period, teachers and associates of the Faculty have made great efforts and achieved valuable achievements in scientific, research, teaching and artistic work, for which they were awarded one state, one university, 31 international awards and 28 national awards. Notices on the possibilities of applications for individual prizes are visible on the Faculty website and the news are quickly accessible to all the interested applicants.

In 2019, a state award was awarded to a distinguished professor of the Faculty for exceptionally important achievements in scientific and research activities, for broadening scientific findings and for scientific achievements in the application of the results of scientific and research work in the technical field.

In 2019, a Faculty professor was awarded the Fran Bosnjakovic Award of the University of Zagreb, for the achievements of scientific results, promotion of scientific discipline and profession and transfer of knowledge, especially through the education of young experts in the field of technical sciences.

In 2020, a teacher and PhD student were awarded by international award for scientific excellence in textile technology, under the auspices of the World Research Council and the United Medical Council.

The AUTEX Award was presented to a representative of the Faculty for the contribution to the reputation and development of the association, as well as for the recognition of the European Commission - Open Education Europe, Europe's Teachers contest for best practice.

The employees of Faculty in the art field were awarded the ULUPUH annual award and T-HT prize.

The Faculty has significant innovation potential and is therefore one of the leading components of the University of Zagreb. It is important to emphasize that it is recognized and acknowledged in the international innovation community, confirmed by the awards at prestigious world invention and innovation exhibitions. Patents and innovations reported by teachers and associates in the framework of scientific, artistic or professional work constitute a significant intellectual portfolio, transferred to business and the society as a whole.

The *Croatian Academy of Sciences and Arts* (HAZU) and the *Croatian Academy of Engineering* (HATZ) are composed of members elected based on their scientific and professional achievements and they contribute to social and economic growth and development of Croatia. It should be emphasized that the scientific, artistic and technical achievements of the Faculty teachers and associates are globally

recognized. In the five-year period four teachers were involved in the work of the *Croatian Academy of Sciences and Arts*, while 13 were included in the work of the *Croatian Academy of Engineering*.

In accordance with strategic guidelines, the application of projects is continuously encouraged, while the dynamics is monitored through filling-in the application forms and mapping project proposals in the Faculty Archives (In Croatian). The Committee for projects, in cooperation with the Office for projects, coordinates the approval of the applications according to strategic priorities, primarily by analysing the finances. The Office for projects organised education (workshops, panels and courses) on the ways of preparing projects for individual tenders through interactive workshops and education on the preparation, application and evaluation of projects. In the last 5 calendar years, the Faculty has **applied for 21 national projects**, and teachers collaborate at 16 other national projects. The Faculty has applied **for 19 international projects** in the partnership with national and international scientific, research and economic institutions (Table 5.3 Analytic Supplement), and the teachers collaborate at 3 others. The contents of the projects show complexity, interdisciplinarity, internal and international connections and a careful focus of research topics aimed at the needs of the national and world economy, harmonised with the set strategic goals within the framework of the topics given through the Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020.

The data on the number of projects can be seen in Table 5.3 of the Analytic Supplement, showing that **20 national projects,** proposed by the Faculty or its employees, have been approved for financing. **Eight of them were research projects** (HRZZ IP-11-2013-5435 INEQUALITIES, HRZZ IP-11-2013-9967 ADVANCETEX, HRZZ IP-11-2013-3011 AMMIACC, HRZZ IP-06- 2016-5278 ComforMicrob TexFoot, HRZZ IP-06-2016-6878 COMBOELECTROSPUN, HRZZ-IP-2018-01-6363 ThermIC, HRZZ-IP-2018-3170 MF-WCOMPROTECT, HRZZ-IP- 2019-04-1381 ABBAMEDICA), **2 the Installation Research Projects** (HRZZ UIP-05-2017 8780 HPROTEX, HRZZ UIP-09-2014-1534 STARS) I and **4 Young Researchers' Career Development Project – Training New Doctoral Students** (DOK-2015-10-8492, HRZZ-DOK-2018-09-4254, HRZZ-DOK-2020-01, HRZZ-DOK-09-2018), financed by the Croatian Science foundation, **1 project within the European Research Council Proof of Concept project** (PoC6_1_189), **1 project of the national academy foundation (HAZU)**, **2 projects** financed by the European structural and investment funds within the Operative programme of Human potential development 2007-2013, European Social Fund (ESF) and Operational Programme **Efficient Human Resource 2014-2020** (UP.03.1.1.02.0022, UP.03.1.1.04.0024), **1 project** financed by ESF and Ministry of Science and Education (HR.3.1.15-0026) and **2 projects** financed by the European Structural and Investment Funds, European Fund for Regional Development, Operative programme **Competitiveness and Cohesion 2014-2020** (KK.01.1.1.02.0024 MI-TSRC, KK.01.1.1.04. 0091 Biocomposites). Apart from this, The Faculty employees collaborate at **9 HRZZ projects** (HRZZ IP-2424-2014 6198 TexASE, HRZZ IP-11-2013-5596 SCIENCENTRY, HRZZ IP-06-2016-4221 MOLART, HRZZ IP-06- 2016-5983 NanoGelMat, HRZZ IP-06-2016-5885 SynthMagIA, HRZZ-IP- 2018-7028 SEMECTEX, HRZZ-IP- 2018-4379 AntioxPot, HRZZ-IP-2018-8118 STEAM, HRZZ-IP- 2019- 04-6418 LaSyNanoApp), **one PoC** project (PoC6_11_31), **one ZCI** project (ZCI-QuantiX), **two projects** financed by European structural and investment funds, European social fund, by the Operative Programme Efficient Human Resources 2014-2020, by the public invitation Art and Culture 54+ (UP.02.1.1.03 *Skrojene budućnosti*?) and Improving Social Dialogue - Phase III (UP.04.2.1.03 ZAKOS). The Faculty was also a partner-applicant **for three projects** of the European structural and investment funds, European fund for Regional development, Operative programme *Competitiveness and Cohesion* 2014-2020 (KK.01.1.1.01. 0004 QuantiXLie, KK.05.1.1.02. 0016 Production of foodstuffs, biocomposites and biofuels from grain within circular bioeconomy, KK.01.2.1.02.0064 *The development of multifunctional non-combustible fabric for dual use*) Projects.

The Faculty also participated in 19 **international projects over the** past period. These were **5 Erasmus+ projects** (2016-1-HU01-KA204-022911, 612248-EPP-1-BG - EPPKA2-2013-1-RS-3- C3MP GRASS, 2015-1-KA203-015D1 collaboration in a project financed by the crisis through the program of Scientific Co-operation with Croatian scientists in the Diaspora - Scientific Co-operation (PZS-2019-02-5276). The Faculty is also a partner in **four projects** from the European Cooperation in Science and Technology COST Action (TU1101 HOPE Helmets, MP1105 FLARETEX, CM1203 PoCheMoN, OC-2016-2-21661) through which a network of scientists is primarily financed, and innovations are prepared. All of the above clearly indicates a wide range of scientific, professional and social competencies of highly qualified scientists and artists at the Faculty.

Funding scientific and research work at the Faculty is also provided through national science programme contracts (short-term support for research by the University of Zagreb). During the last 5 years, 3,062,649.60 HRK have been earned for 108 submitted topics.

The recognizability and interesting aspects of scientific-research and artistic work of the Faculty employees can be seen through their invited lectures. In the last five years, the Faculty staff held 17 invited and 3 invited plenary lectures at international scientific, and professional conferences, as well as 7 invited and 1 invited plenary lecture at domestic scientific and professional conferences and one invited lecture at domestic professional gathering. In addition, the Faculty teachers held 7 invited lectures at related institutions in Croatia and abroad (search based on CROSBI profile of the persons).

The Faculty's employees participate in the organizational and scientific committees of the domestic or international scientific-professional conference *Textile Science and Economy (TZG)*, which are held continuously every year since 2008 organized by the Faculty, and *International Conference International Textile Clothing & Design Conference "Magic World of Textiles" (ITC&DC)*, which has been organized by the Faculty since 2002 every two years at the International Center for Croatian Studies in Dubrovnik. Teachers and experts of the Faculty organize the TSRC Day every year, in which Croatian scientists, researchers and artists work in textile, clothing and related areas and popularise the textiles through various topics.

The Faculty was the organizer of the international interdisciplinary conference *Fashion, Costume and Visual Culture - FCVC*, Zagreb, July 17-19 2018 and *Museum of fashion - beginnings and challenges on the territory of Slovenia*, Zagreb, October 12-13 2020 These conferences are extremely important for networking and development of scientific and research approach among researchers, scientists and practitioners of modern fashion, fashion design, theory and fashion history. The Faculty staff are the members of the Scientific and Organisational Committee of the aforementioned conferences.

The Faculty co-organised the *Mathematical inequalities and applications 2018, MIA Conference 2018, Zagreb* July 4th 2018, at the University of Zagreb, Faculty of Electrical Engineering and Computing, in honour of the academic Josip Pečarić, on the occasion of his 70th birthday. Faculty scientists participated in the Organising Committee and the Scientific Committee with more than 50 of the world's most famous scientists in the field of mathematical inequality. The total of eighty scientists participated in the conference, half of them from abroad.

The Faculty has been a co-organizer for many years, and some teachers are on the organizational committee of the expert symposium *Textile days*, organized by the Croatian Textile Engineering Federation. The conference discusses current professional and scientific achievements and developments in the field of textile science, technology, industry and business.

The Faculty is also a co-organizer of the *International Colour Day*, which has been organized since 2013, when the *Croatian Colour Society* (HUBO) was established, every year on the first day of spring at the Technical Museum Nikola Tesla, Zagreb. The employees of the Faculty actively work in managing authorities and organising committees.

The Faculty employees are also on the organizational committees *of The International Conference on Printing, Design and Graphic Communications "Blaž Baromić*", The International Ergonomics Conference – ERGONOMICS, co-organised by the Faculty. In addition to participating in organizational committees of the conferences, it should be noted that teachers and associates are included in the organizational committees of many scientific, scientific-professional and professional conferences, which can be seen from Table 5.4 in the Analytical Annex. In addition, it should be noted that teachers and associates of the Faculty are members of scientific and programme committees in most of the above mentioned conferences in many other parts of the world as well: AUTEX – World Textile Conference, International Conference of Applied Research on Textile and Materials, International Conference on Energy, Environment and Power Engineering, IFKT International Conference, Central European Conference – Fibre-grade Polymers, Chemical Fibres and Special Textiles, Labour and Health Protection, etc.

Teachers and associates of the Faculty are editors, guest editors of special editions, members of the editorial board and Advisory Board of journals that deal with various topics in almost all the fields of science and art. Table 5.5 of the Analytic Supplement presents the journals classified by citation bases and domestic categorization in accordance with the *Ordinance on conditions for selection into scientific titles*, *Part 2: Technical Sciences* (In Croatian Pravilnik o uvjetima za izbore u znanstvena zvanja, Odjeljak 2: Tehničke znanosti), in which our employees are editors-in-chief or members of the editorial board.

5.4. The scientific / artistic activity of the higher education institution is both sustainable and developmental.

Elements of the standard

- *The research / arts development strategy is aligned with the vision of development of the higher education institution.*
- *Scientific / artistic activities are established by the strategic programme of the higher education institution.*
- *The higher education institution has appropriate resources for its scientific / artistic activities.*
- *HEI recognizes and rewards scientific / artistic achievements of its employees.*
- *HEI continuously improves its scientific / artistic activities by appropriate financing, human resource management, investing in spatial resources, equipment and appropriate literature, supporting dissemination of results and development of doctoral theses.*

University of Zagreb Faculty of Textile Technology is the only academic institution in Croatia that follows world scientific and artistic trends in the field of textile technology. In its research strategy, with a focus on excellent groups of scientists and artists in different fields, it takes care of their interconnection and cooperation. The research work at the Faculty is carried out in the technical, natural, social, humanist and artistic fields. The development of scientific and artistic activities during the last five academic years has been harmonised with the topics and strategic goals given in the the Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020.

The Faculty continuously encourages the inclusion of excellent researchers in expert groups of significant European associations. In accordance with research excellence and years of experience in the field of textiles, experts from the Faculty were involved in the workings of the European Technology Platform and the development of the research strategy until 2020, which identified the topics of future research aimed at raising excellence through the “knowledge triangle” (science - innovation - education) and competitiveness of the Croatian economy. In line with the Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020, it identified topics of strategic importance: Topic 1: Sustainable textile raw materials; Topic 2: Advanced, sustainable and energy-efficient technologies; Topic 3: Advanced textile materials; Topic 4: Innovative textile solutions; Topic 5: The development of measurement systems and applicable methodologies; Topic 6: Creativity in technology; Topic 7: Scientific excellence; Topic 8: Industry leadership; Topic 9: Social challenges.

The Research strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020 presents 5 main strategic goals with prominent activities and performance indicators:

- Strategic goal 1: Improvement of research quality in line with contemporary trends (10 activities),
- Strategic goal 2: Visibility and research dissemination (4 activities),
- Strategic goal 3: Improvement of quality of PhD studies (7 activities),
- Strategic goal 4: Improvement of arts-related activities and creativity (4 activities) and
- Strategic goal 5: Popularization of science and art (5 activities).

The Research is harmonised with the vision of the development of the Faculty, which is confirmed by Strategic goal 1: Improvement of research quality in line with contemporary trends. The structure of

this strategic objective consists of 10 activities, continuously monitored and analysed through particular indicators. The mapping of research activities is carried out by permanent and occasional expert bodies and committees, coordinated by the vice-dean for scientific and research work. He/she is assisted by the members of the Scientific Research and Artistic Board, consisting of professors, 2 of whom are in the technical field, 1 in the natural science area, 1 in the arts field and 1 in the social sciences field. Mapped activities are presented through publicly available Annual activity and business reports (GIRP), action plans and statistical indicators at the invitation of competent institutions.

The Faculty achieves its strategic goals by strengthening its scientific position to the highest level of research, innovation, competitiveness and excellence, through networking, as well as through exchange and comprehensive cooperation with member states of international scientific and research bodies.

The improvement of scientific infrastructure in the last 5 years has been achieved through the procurement of scientific and research equipment, mainly through projects (Table 5.3 Analytic Supplement). New laboratories are being established in harmony with modern trends in science development: *Laboratory for Analysis of Trace Elements and Nanoparticles* founded in the academic year 2016/2017 as a research activity of the national project HRZZ UIP-2014-09-1534, STARS. The project HRZZ UIP-2017-05-8780 in the academic years 2019/2020 resulted in the new *Laboratory for Controlled Monitoring of Crosslinking Process*. During the drafting of this self-analysis, 14 very sophisticated devices and instruments were purchased, and the Laboratory for Advanced Materials and Advanced Technology was established.

In view of thirty active projects and foreseen costs of equipment procurement, the establishment of new laboratories is expected in 2021.

By acquiring new scientific equipment through the realization of project activities and short-term university programme support for research, existing research laboratories have been modernized. This equipment is made available to students, researchers and doctoral students at the Faculty, as well as to non-faculty doctors. To finance repairs, maintenance and upgrades of scientific research equipment entered in the database Šestar. Faculty regularly seeks funds from the Ministry through public calls. The Faculty regularly generates funding based on the evaluation of indicators of the importance of equipment, according to the national criteria: activity of using scientific equipment on domestic scientific projects, activity of using scientific equipment on international scientific projects, number and quality of published works based on the use of the equipment concerned, anticipated impact of financial support on obtaining new scientific projects.

A bilingual catalogue of scientific and research equipment was created for better visibility of the possibility of evaluating textiles during research and development, as well as for the research work of the students, primarily at the postgraduate study within the framework of the project UP.03.1.02.0022. An insight into the entire portfolio of scientific equipment of capital, medium and small value available to employees, students, business and external stakeholders can be seen on the link.

Equipment efficiency is confirmed by the results presented in scientific research and professional papers published in journals or presented at national and international conferences. Disseminating the latest results measured on highly sophisticated equipment contributes to the exchange of experiences, negotiations of future cooperation and transfer of knowledge and technology into the economic sector. The work of the TSRC and the CTD shows the contribution and importance of research equipment for cooperation and the needs of external stakeholders.

Scientific and research work at the Faculty is visible through 293 publications quoted in the WoS bases during the five-year period, from 2016 to 2020. The number of publications published per scientist is shown in chapter 4 (Table 4.4.).

The Faculty is the second constitutional unit of the University of Zagreb in terms of the number of accepted patents and innovations awarded by numerous medals at the national and international level. The scope and continuity of innovative work is shown in the portfolio of innovations.

Membership in international and national bodies improves educational, scientific research and artistic cooperation in all the segments of textile profession, science and art for several employees of our institution. The Faculty uses annual financial support to pay membership fees in international scientific and research bodies (MZIT), based on the application for a public invitation. In 2020, the Faculty received grants for three membership fees (*The Textile Institute*, AUTEX - *Association of Universities for Textile*, AATCC - *American Association of Textile Chemists and Colorists*).

The visibility of artistic work was improved by establishing the TTF Gallery, which was opened to mark the day of the Faculty on January 24th 2014. The gallery space is conceived as a place of intertwining fashion, textile and other areas of design and contemporary art with the science of art and design, art history, visual studies and cultural anthropology, aiming at emphasizing the connection between artistic and scientific research work. It is a platform for affirming the creativity of teachers, associates and the best former and current students who, through their work with mentors, realise collections of textile design, fashion design or costume design. Through monitoring exhibitions, external participants and students have the opportunity to learn about different approaches and ways of presenting creative work. Artists from similar faculties, academies and institutions in the country and the world also exhibited at the Gallery, and it is open to renowned authors from other fields of design and visual arts. The TTF Gallery collaborates with the Association of artists of applied arts of Croatia (ULUPUH), the Singular Gallery (Pula), the Croatian Section of the International Association of Fine Arts (AICA), the University of Split, the Faculty of Philosophy, the Croatian Association of Artists (HULU, Split), and Lauba. The exhibitions presented the cooperation of the Faculty with textile factories, Regeneracija and Čateks, as well as museums such as The Museum of Contemporary Art, the Museum of Brod Posavina and others. Since its establishment, 7 workshops and 48 exhibitions have been held in the Gallery. The role of the TTF Gallery has multiple significance through numerous forms of cooperation with institutions, student education and better visibility of artistic work and creativity. The *Artistic judgement board of TTF Gallery,* consisting of teachers from the arts field, is responsible for improving the work of the *TTF Gallery*.

The Faculty recognizes and rewards scientific, artistic, innovative, professional and promotional achievements of teachers and associates during the celebration of Faculty day. Over the past 5 years, twenty awards and twenty recognitions of the Dean have been awarded in the following categories: 8 awards for publishing work in Q1 journal with high impact factor, 4 awards for young researchers for publishing work in Q1 journal with high impact factor, 2 awards for postgraduate university doctoral studies, 3 awards for artistic work, 3 awards for outstanding contributions in innovation, 1 award for approved project of strategic relevance, 1 award for science popularization, 3 awards for artistic and extra-scientific recognition.

The Textile Science Research Centre (TSRC) presents the award for best scientific and artistic work in the field of textiles in two categories. Over the past 5 years, 3 awards for scientific work and 3 awards for artistic work Competition for the Award for the most successful scientific or artistic research work in the field of textiles – TSRC have been given to participants.

Scientific excellence of PhD students, who co-authorising with their teachers/mentors, published a work belonging to the Q1 citation database WoS since 2018 has been financed from the funds available to the doctoral study TZT. To date, 55.011,62 HRK have been spent on this item.

Mobility of excellent scientists and artists is financed for the purpose of promoting and disseminating innovative, creative and artistic work. Funds are being allocated for the purchase of scientific journals, books and monographs, 245.027,61 HRK over the past 5 years. Teachers make significant efforts to write and publish textbooks, scripts, manuals and other publications. In the last 5 years, teachers have published 16 scientific monographs, with their share of original research. They are included as guest editors in eminent magazines and are the authors of chapters in publications by national and foreign publishers.

Increasing human resources financed by the Ministry of Science and Education is possible only from the coefficients, since restrictive employment measures are in force at the national level. Advances in higher scientific-educational, artistic-educational, educational and collaborative statuses are planned institutionally, and are coordinated with the University of Zagreb, to be realised within the above coefficients. However, it should be noted that the number of young researchers, whose employment has been financed from projects, has increased significantly over the past 5 years, i.e., from the resources of the Croatian Science Foundation or European Structural Funds.

5.5. Scientific/artistic and professional activities and achievements of the higher education institution improve the teaching process.

Elements of the standard

- *Space and equipment for scientific / artistic research and professional activities is used in teaching at undergraduate, graduate and postgraduate level.*
- *Undergraduate, graduate and postgraduate students are involved in scientific / artistic / professional projects of the HEI.*
- *Both teaching at the undergraduate and graduate levels, and doctoral theses reflect the scientific / artistic research and professional activities and achievements of the higher education institution.*

The Faculty continuously improves and develops its material resources with the aim of achieving the highest quality working environment and ensuring the best conditions for teaching at the undergraduate, graduate and postgraduate level, as well as of improving scientific research, artistic and professional work.

The premises of 40 laboratories and practices enable the implementation of fundamental, technological, applied and developmental, as well as creative research in the scientific field of textile technology, science, art and other scientific fields. Scientific and research equipment is to a certain extent used in the teaching of undergraduate, graduate and postgraduate doctoral studies. Capital research equipment is most often used for the preparation of graduate and doctoral works. This encourages research curiosity, develops innovative approach, critical thinking and enhances competencies in scientific work. Within this framework, it is important to point out that individual works are related to project topics, which is confirmed by 111 defended qualification works within the framework of projects over the past 5 years.

Inclusion of students of all levels in scientific and research work is one of the goals in education and in achieving learning outcomes that will result in positive improvements in strengthening the economy based on science and profession in the long run and by joining business and development. Published publications of the PhDs in co-authorship with the mentor and their involvement in projects are analysed annually through the form DR.SC.-09: Annual Report on the work of studies, and sent to the University of Zagreb. The number of PhD students included in research projects is 25, out of which 6 come from the business and public sectors. The excellence and involvement of the PhD students in the research work is confirmed by 139 published scientific papers co-authored with the mentors for the last 5 years. Undergraduate and graduate students are also involved in scientific and research work, mainly through the preparation of final undregraduate and graduate theses. Depending on the obtained results, some researches have been published. In cooperation with teachers/mentors, undergraduate and graduate students published numerous scientific or professional papers in journals or presented them at meetings and conferences. Over the past 5 years, students, in collaboration with teachers in the field of art, participated in 268 group exhibitions in the media of painting, experimental film, fashion and textile design, performances and multimedia events.

Since 2015, there has been the possibility of digitizing qualification works at the repository of the University of Zagreb Faculty of Textile Technology - Dabar.

Postgraduate doctoral study *Textile Science and Technology* in the scientific field of technical sciences and scientific field of textile technology is a continuation of the graduate study, combining theoretical

knowledge, research work and experience in solving problems based on the knowledge of modern production systems. It is based on research in the field of textile-mechanical engineering, material sciences, textile chemistry and technology, as well as clothing technology. Due to the persistent crisis in textile industry, Europe focuses on research and development of advanced technologies, materials and innovative products, with an emphasis on the importance of human ecology, quality and functionality. The goals set by the European Research Area in the field of textiles require a higher level of knowledge, which shows that the justification of a PhD study in the field of textile technology is not questionable.

The study is organized through two segments, teaching occupying 20% and research 80%. In accordance with the Development Strategy of University of Zagreb Faculty of Textile Technology for the period 2014-2020, Strategic goal 2: Improvement of research quality in line with contemporary trends, Activity 2.21: Organise post-graduate study programmes in English, has been achieved since 2018 through the project *Internationalization of the Doctoral Study Textile Science and Technology* (UP. 03.1.02.0022). The project is financed by the European Social Fund (ESF) (85%) and the State budget- Ministry of Science and Education funds (15%).

The Faculty announce a public invitation for granting scholarships according to the criteria of excellence, following the Ordinance on awarding scholarships for students of postgraduate university study TZT.

Since 2018, a *PhD student day* has been organised with the aim of promoting and improving the visibility of research topics, and mutually connecting doctoral students.

Undergraduate and graduate students are also involved in research and artistic work. Each year at least two Rector's awards are presented to students at the Faculty, for research and for arts. In the last 5 years 24 Rector's awards have been presented, 9 awards for individual scientific and artistic work (one or two authors), 3 for team scientific and artistic work, 4 for socially useful work in academic and wider community, 1 award for special competition successes of individuals or teams and 7 awards for "big" team scientific and artistic work (more than ten authors). Students present their research work within the *Tehnologijada*, where students of technological faculties from the country and the region traditionally gather.

During the *TSRC Open day*, the Textile Science Research Centre awards students for their best scientific and artistic work in the field of textiles in two categories. Over the past 5 years, 3 awards for scientific work and 3 awards for artistic work have been presented to students. The Association of former students and friends of the Faculty of Textile Technology (AMCA TTF) presents the annual award for best student work in the categories of science, fine arts and design. Over the past 5 years, 3 awards for excellent scientific work and 5 awards for fine work and fashion illustration have been presented.

Team and creative work of design students is encouraged through mentored work in the preparation of thematic exhibitions, workshops and shows, where creativity and art are presented. Cooperation among the students of the Faculty and students of the Academy of Fine Arts, the Academy of Drama Arts and the Academy of Music was realized through publicly presented projects, some of which were rewarded. In the last 5 years, 267 activities have been realized in which many undergraduate and graduate students participated. Some of them are presented in a catalogue of student works by fashion design graduates (DIPMOD). Students of fashion design can make their work public in cooperation with companies through tenders published on the web pages of the Faculty, where creative and design solutions are sought for the production and promotion of products, business clothes, decorative textiles, etc.

Students are actively involved in the popularization programmes of science and art, which is described in more detail in Chapter 5.2.

Prompted by the crisis caused by the corona-19 pandemic, students of all studies and branches *of the Faculty of Textile Technology, in cooperation with the Faculty employees, we have started the project only natural-hygienic mask coloured with natural colours*, with the aim of developing hygienic mask and active action in the wider community.

National and international scientific, economic, creative and information panels, forums and workshops of wide thematic fields for employees and students of undergraduate, graduate and doctoral studies are strategically and continuously organized. They contribute to strengthening scientific competences, gaining knowledge of economic opportunities and challenges, cognitive skills and fostering mobility.

Analytic supplement to Self-analysis

Higher education institution: Faculty of Textile Technology (117)

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TABLE WITHIN THE TOPIC 3 - TEACHING PROCESS AND STUDENT SUPPORT

Table 3.1. Number of students per study programme for the evaluated academic year

Study programme name	Full-time students	Part-time students
Textile Science and Technology (1466), postgraduate (doctoral) university study programme, Zagreb	51	0
Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin	26	0
Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb	115	0
Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb	94	0
Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb	217	0
Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb	149	0
Total	652	0

Table 3.2. Structure of enrolled students and interest in first level study programmes in the evaluated and the two previous academic years*

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

	Full-time students			Part-time students			Secondary School Performance	
Academic year	Applied	Enrolled	Enrolment quota	Applied	Enrolled	Enrolment quota	Success rate on the mandatory part of State Matura	Average grade
2019	368	67	215	-	-	-	50,91	3,71
2018	352	78	215	-	-	-	49,06	3,32
2017	312	80	215	-	-	-	52,89	3,72

*including the integrated graduate study programmes

Table 3.2. Structure of enrolled students and interest in first level study programmes in the evaluated and the two previous academic years*

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

	Full-time students			Part-time students			Secondary School Performance	
Academic year	Applied	Enrolled	Enrolment quota	Applied	Enrolled	Enrolment quota	Success rate on the mandatory part of State Matura	Average grade
2019	226	49	90	-	-	-	48,17	4,04
2018	239	65	90	-	-	-	50,72	3,92
2017	300	43	90	-	-	-	51,04	3,88

*including the integrated graduate study programmes

Table 3.2. Structure of enrolled students and interest in first level study programmes in the evaluated and the two previous academic years*

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

	Full-time students			Part-time students			Secondary School Performance	
Academic year	Applied	Enrolled	Enrolment quota	Applied	Enrolled	Enrolment quota	Success rate on the mandatory part of State Matura	Average grade
2019	21	3	75	-	-	-	34,17	4,59
2018	57	10	75	-	-	-	42,8	3,31
2017	86	10	75	-	-	-	49,99	3,57

*including the integrated graduate study programmes

Table 3.3. Structure of enrolled students and interest in graduate and postgraduate programmes in the evaluated and the two previous academic years

Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb

	Full-time students			Part-time students				
Academic year	Applied	Enrolled	Enrolment quota	Applied	Enrolled	Enrolment quota	Number of students transferred from other study programme or other HEI	Average grade on the previous level of study
2019	30	26	135	-	-	-	0	3,37
2018	27	28	135	-	-	-	0	3,4
2017	67	67	135	-	-	-	7	3,04

Table 3.3. Structure of enrolled students and interest in graduate and postgraduate programmes in the evaluated and the two previous academic years

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb

	Full-time students			Part-time students				
Academic year	Applied	Enrolled	Enrolment quota	Applied	Enrolled	Enrolment quota	Number of students transferred from other study programme or other HEI	Average grade on the previous level of study
2019	39	35	80	-	-	-	2	4,24
2018	53	50	80	-	-	-	5	3,75
2017	78	78	80	-	-	-	19	3,42

Table 3.3. Structure of enrolled students and interest in graduate and postgraduate programmes in the evaluated and the two previous academic years

Textile Science and Technology (1466), postgraduate (doctoral) university study programme, Zagreb

	Full-time students			Part-time students				
Academic year	Applied	Enrolled	Enrolment quota	Applied	Enrolled	Enrolment quota	Number of students transferred from other study programme or other HEI	Average grade on the previous level of study
2019	8	8	20	-	-	-	0	4,26
2018	7	7	20	-	-	-	1	4,35
2017	7	7	20	-	-	-	0	4,82

Table 3.4. Progress in the study programme from the first to the second year of study - only for undergraduate and integrated study programmes in the last five academic years

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

Year of enrolment	Number of students enrolled	Number of students who achieved 18 to 29 ECTS credits	Number of students who achieved 30 to 54 ECTS credits	Number of students who achieved 55 to 59 ECTS credits	Number of students who achieved at least 60 ECTS credits
2019	43	1	14	3	5
2018	61	4	17	2	5
2017	65	14	18	3	5
2016	106	8	39	7	4
2015	147	5	33	5	34

Note: Includes only ECTS credits determined by the study programme.

Table 3.4. Progress in the study programme from the first to the second year of study - only for undergraduate and integrated study programmes in the last five academic years

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

Year of enrolment	Number of students enrolled	Number of students who achieved 18 to 29 ECTS credits	Number of students who achieved 30 to 54 ECTS credits	Number of students who achieved 55 to 59 ECTS credits	Number of students who achieved at least 60 ECTS credits
2019	56	1	9	8	25
2018	70	5	14	14	20
2017	69	1	16	19	24
2016	82	1	8	11	59
2015	86	1	6	31	40

Note: Includes only ECTS credits determined by the study programme.

Table 3.4. Progress in the study programme from the first to the second year of study - only for undergraduate and integrated study programmes in the last five academic years

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

Year of enrolment	Number of students enrolled	Number of students who achieved 18 to 29 ECTS credits	Number of students who achieved 30 to 54 ECTS credits	Number of students who achieved 55 to 59 ECTS credits	Number of students who achieved at least 60 ECTS credits
2019	5	0	1	1	0
2018	12	2	0	0	6
2017	7	1	0	1	0
2016	34	2	2	1	13
2015	39	1	2	2	14

Note: Includes only ECTS credits determined by the study programme.

Table 3.5. Completion of the study programme

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

A cohort of enrolled students in one generation+	Number of enrolled students from generation*	Number of graduates from generation*	Number of students who are still studying from generation*	Number of students who have lost the right to study from generation*	Average duration of studying
2009	143	24	0	119	4,9
2010	193	43	1	149	4,5
2011	181	40	2	139	4,4
2012	211	51	1	159	4,1
2013	214	76	2	136	3,7
2014	189	48	3	138	3,8
2015	127	46	10	71	3
2016	67	3	15	49	3

*Does not include student transfers from other higher education institutions.
+Data for all academic years from 2009/2010 is entered. For the years for which the completion of education is not yet possible, data on graduates is not entered.

Table 3.5. Completion of the study programme

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

A cohort of enrolled students in one generation+	Number of enrolled students from generation*	Number of graduates from generation*	Number of students who are still studying from generation*	Number of students who have lost the right to study from generation*	Average duration of studying
2009	117	74	1	42	3,7
2010	107	74	0	33	4,5
2011	103	61	0	42	4,1
2012	121	71	1	49	4,1
2013	109	62	2	45	4
2014	102	60	3	39	3,8
2015	82	36	16	30	3,5
2016	81	16	47	18	3

*Does not include student transfers from other higher education institutions.
+Data for all academic years from 2009/2010 is entered. For the years for which the completion of education is not yet possible, data on graduates is not entered.

Table 3.5. Completion of the study programme

Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb

A cohort of enrolled students in one generation+	Number of enrolled students from generation*	Number of graduates from generation*	Number of students who are still studying from generation*	Number of students who have lost the right to study from generation*	Average duration of studying
2009	84	71	0	13	3,3
2010	26	25	0	1	3,1
2011	24	21	0	3	2,6
2012	25	17	0	8	2,6
2013	35	32	0	3	3,2
2014	36	32	0	4	2,7
2015	32	21	0	11	3
2016	66	56	6	4	2,5
2017	67	28	32	7	2

*Does not include student transfers from other higher education institutions.
+Data for all academic years from 2009/2010 is entered. For the years for which the completion of education is not yet possible, data on graduates is not entered.

Table 3.5. Completion of the study programme

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb

A cohort of enrolled students in one generation+	Number of enrolled students from generation*	Number of graduates from generation*	Number of students who are still studying from generation*	Number of students who have lost the right to study from generation*	Average duration of studying
2009	174	149	4	21	3,6
2010	90	76	1	13	3,1
2011	66	55	1	10	2,7
2012	58	53	0	5	2,6
2013	62	49	0	13	3,3
2014	69	51	2	15	2,7
2015	50	45	3	2	2,4
2016	46	37	3	6	2,6
2017	78	21	52	5	1,9

*Does not include student transfers from other higher education institutions.
+Data for all academic years from 2009/2010 is entered. For the years for which the completion of education is not yet possible, data on graduates is not entered.

Table 3.5. Completion of the study programme

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

A cohort of enrolled students in one generation+	Number of enrolled students from generation*	Number of graduates from generation*	Number of students who are still studying from generation*	Number of students who have lost the right to study from generation*	Average duration of studying
2009	71	24	0	47	4,8
2010	25	5	0	20	4,5
2011	51	14	1	36	4,5
2012	49	2	0	47	3,5
2013	41	12	0	29	4
2014	39	8	0	31	3,5
2015	37	12	4	21	3,4
2016	33	9	5	19	2,9

*Does not include student transfers from other higher education institutions.
+Data for all academic years from 2009/2010 is entered. For the years for which the completion of education is not yet possible, data on graduates is not entered.

Table 3.6. Mobility of students (total) in the last five academic years

	Number of students in international exchange	
	up to 3 months	more than 3 months
Outgoing mobility	105	46
Incoming mobility	48	43

Table 3.7. Employment of graduates / alumni in the last 3 calendar years

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

Year	Number of students who completed the study	Number of unemployed alumni according to the statistics of the Employment Office, at the national level*
2020	7	9
2019	16	4
2018	11	5

* Refers to the number of unemployed individuals holding qualifications obtained by completing the study programme in question

Table 3.7. Employment of graduates / alumni in the last 3 calendar years

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

Year	Number of students who completed the study	Number of unemployed alumni according to the statistics of the Employment Office, at the national level*
2020	30	12
2019	37	7
2018	48	13

* Refers to the number of unemployed individuals holding qualifications obtained by completing the study programme in question

Table 3.7. Employment of graduates / alumni in the last 3 calendar years

Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb

Year	Number of students who completed the study	Number of unemployed alumni according to the statistics of the Employment Office, at the national level*
2020	44	35
2019	64	35
2018	46	22

* Refers to the number of unemployed individuals holding qualifications obtained by completing the study programme in question

Table 3.7. Employment of graduates / alumni in the last 3 calendar years

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

Year	Number of students who completed the study	Number of unemployed alumni according to the statistics of the Employment Office, at the national level*
2020	57	29
2019	55	25
2018	69	19

* Refers to the number of unemployed individuals holding qualifications obtained by completing the study programme in question

Table 3.7. Employment of graduates / alumni in the last 3 calendar years

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb

Year	Number of students who completed the study	Number of unemployed alumni according to the statistics of the Employment Office, at the national level*
2020	57	71
2019	52	30
2018	34	42

* Refers to the number of unemployed individuals holding qualifications obtained by completing the study programme in question

TABLE WITHIN THE TOPIC 4 - TEACHING AND INSTITUTIONAL CAPACITIES

Table 4.1.a Staff Structure - FOR UNIVERSITIES in the evaluated academic year

Staff*	Full-time staff		Cumulative employment		External associates	
	Number	Average age	Number	Average age	Number	Average age
Full professors with tenure	11	63,55	-	-	2	67
Full professors	12	54,75	-	-	-	-
Associate professors	21	46,38	-	-	1	51
Assistant professors	18	43,67	-	-	6	44
Scientific advisor (permanent/ with tenure)	-	-	-	-	1	63
Scientific advisor	-	-	-	-	-	-
Senior Research Associate	-	-	-	-	-	-
Research Associate	-	-	-	-	-	-
Teaching grades	7	46,14	-	-	4	48
Assistants	18	36,5	-	-	9	40,44
Postdoctoral researcher	4	37,25	-	-	-	-
Employees on projects	1	0	-	-	-	-
Expert assistants	6	49,83	-	-	1	38
Technical staff	6	56,5	-	-	-	-
Administrative staff	24	47,79	-	-	-	-
Support staff	11	50	-	-	-	-

* Classification according to the Act on Scientific Activity and Higher Education

Table 4.2. The dynamics of recruiting teachers and associates over the last 5 years

(Data entered by academic years)

Academic year	Number of newly employed teachers	Number of newly employed associates	Number of teachers whose contracts expired
2019	6	5	2
2018	4	3	1
2017	2	2	0
2016	3	2	0
2015	1	5	0

Table 4.3. Teachers and assistants at the HEI in the evaluated academic year

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Snježana Vego	https://www.bib.irb.hr/pregled/znanstvenici/131981	full professors with tenure	-	Academy of Fine Arts, 2018	Arts	Visual arts	100	630	-
Budimir Mijović	https://www.bib.irb.hr/pregled/znanstvenici/173291	full professors with tenure	doktor znanosti	Faculty of Mechanical Engineering and Naval Architecture, 2009	Technical sciences	Mechanical engineering	100	616,5	-
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2014	Technical sciences	Textile technology	100	600	-
Dubravko Rogale	https://www.bib.irb.hr/pregled/znanstvenici/119041	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2008	Technical sciences	Textile technology	100	511	-
Zenun Skenderi	https://www.bib.irb.hr/pregled/znanstvenici/141653	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	366	-
Tanja Pušić	https://www.bib.irb.hr/pregled/znanstvenici/134124	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	352,5	-
Stana Kovačević	https://www.bib.irb.hr/pregled/znanstvenici/201815	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	306	-
Zlatko Vrljičak	https://www.bib.irb.hr/pregled/znanstvenici/73885	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	304	-
Sandra Bischof	https://www.bib.irb.hr/pregled/znanstvenici/187421	full professors with tenure	doktor znanosti	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	285	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Goran Hudec	https://www.bib.irb.hr/pregled/znanstvenici/102661	full professors with tenure	doktor znanosti	Faculty of Electrical Engineering, Computing and Information Technology, 2012	Technical sciences	Electrical engineering	100	256	-
Gordana Pavlović	https://www.bib.irb.hr/pregled/znanstvenici/174402	full professors with tenure	doktor znanosti	Faculty of Science, 2017	Natural sciences	Chemistry	100	135	-
Žarko Paić	https://www.bib.irb.hr/pregled/znanstvenici/172400	full professor	doktor znanosti	Faculty of Humanities and Social Sciences, 2018	Social sciences	Sociology	100	952,5	-
Edita Vujasinović	https://www.bib.irb.hr/pregled/znanstvenici/170644	full professor	doktor znanosti	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	753,5	-
Ivan Novak	https://www.bib.irb.hr/pregled/znanstvenici/225904	full professor	doktor znanosti	Faculty of Economics, 2020	Social sciences	Economics	100	720	-
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	597,5	-
Tomislav Rolich	https://www.bib.irb.hr/pregled/znanstvenici/232766	full professor	doktor znanosti	Faculty of Electrical Engineering and Computing, 2017	Technical sciences	Computer science	100	517,5	-
Željko Penava	https://www.bib.irb.hr/pregled/znanstvenici/170666	full professor	doktor znanosti	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	487,5	60
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	439,5	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Snježana Firšt Rogale	https://www.bib.irb.hr/pregled/znanstvenici/238780	full professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	426,5	-
Andrea Pavetić	https://www.bib.irb.hr/pregled/znanstvenici/232792	full professors	-	Academy of Fine Arts, 2018	Arts	Visual arts	100	360	-
Branka Vojnović	https://www.bib.irb.hr/pregled/znanstvenici/238844	full professor	doktor znanosti	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	356	-
Mario Cetina	https://www.bib.irb.hr/pregled/znanstvenici/132844	full professor	doktor znanosti	Faculty of Science, 2019	Natural sciences	Chemistry	100	274,5	-
Antoneta Tomljenović	https://www.bib.irb.hr/pregled/znanstvenici/255292	full professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	238,5	-
Sanja Ercegović Ražić	https://www.bib.irb.hr/pregled/znanstvenici/275033	associate professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	842	-
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	doktor znanosti	Faculty of Humanities and Social Sciences, 2018	Humanities	History of art	100	750	-
Helena Schultheis Edgeler	https://www.bib.irb.hr/pregled/znanstvenici/275055	associate professors	-	Academy of Fine Arts, 2020	Arts	Visual arts	100	690	-
Anica Hursa Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/238791	associate professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	680	-
Goran Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/280411	associate professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	652,5	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Ana Sutlović	https://www.bib.irb.hr/pregled/znanstvenici/232770	associate professor	doktor znanosti	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	565	-
Sandra Flinčec Grgac	https://www.bib.irb.hr/pregled/znanstvenici/275022	associate professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	525	-
Slavica Bogović	https://www.bib.irb.hr/pregled/znanstvenici/199222	associate professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	507	-
Maja Somogyi Škoc	https://www.bib.irb.hr/pregled/znanstvenici/274956	associate professor	doktor znanosti	Faculty of Textile Technology, 2019	Technical sciences	Textile technology	100	502,5	-
Paulina Jazvić	https://www.bib.irb.hr/pregled/znanstvenici/299181	associate professors	-	Academy of Fine Arts, 2017	Arts	Visual arts	100	461,3	-
Kristina Krulić Himmelreich	https://www.bib.irb.hr/pregled/znanstvenici/292530	associate professor	doktor znanosti	Faculty of Natural Sciences, Department of Mathematics, 2018	Natural sciences	Mathematics	100	431,3	-
Ružica Brunšek	https://www.bib.irb.hr/pregled/znanstvenici/275044	associate professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	406,5	-
Anita Tarbuk	https://www.bib.irb.hr/pregled/znanstvenici/274945	associate professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	405	72
Koraljka Kovač Dugandžić	https://www.bib.irb.hr/pregled/znanstvenici/331055	associate professors	-	Academy of Fine Arts, 2017	Arts	Visual arts	100	360	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Iva Rezić	https://www.bib.irb.hr/pregled/znanstvenici/274993	associate professor	doktor znanosti	Faculty of Chemical Engineering and Technology, 2018	Natural sciences	Chemistry	100	354	-
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	doktor znanosti	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	352,5	-
Mirna Rodić	https://www.bib.irb.hr/pregled/znanstvenici/274982	associate professor	doktor znanosti	Faculty of Natural Sciences, Department of Mathematics, 2016	Natural sciences	Mathematics	100	345	-
Dragana Kopitar	https://www.bib.irb.hr/pregled/znanstvenici/275000	associate professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	320	-
Livio Racane	https://www.bib.irb.hr/pregled/znanstvenici/236842	associate professor	doktor znanosti	Faculty of Chemical Engineering and Technology, 2012	Natural sciences	Chemistry	100	300	-
Ivana Salopek Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/274971	associate professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	285	-
Jasminka Končić	https://www.bib.irb.hr/pregled/znanstvenici/275066	associate professors	doktor znanosti	Academy of Fine Arts, 2017	Arts	Visual arts	100	180	-
Marin Sovar	https://www.bib.irb.hr/pregled/znanstvenici/331070	assistant professors	-	Faculty of Textile Technology, 2020	Arts	Visual arts	100	600	-
Irena Šabarić	https://www.bib.irb.hr/pregled/znanstvenici/280400	assistant professor	doktor znanosti	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	495	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Lea Popinjač	-	assistant professors	-	Academy of Fine Arts, 2020	Arts	Visual arts	100	465	-
Željko Knezić	https://www.bib.irb.hr/pregled/znanstvenici/131970	assistant professor	doktor znanosti	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	425	-
Renata Hrženjak	https://www.bib.irb.hr/pregled/znanstvenici/275011	assistant professor	doktor znanosti	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	411	-
Ivana Špelić	https://www.bib.irb.hr/pregled/znanstvenici/324114	assistant professor	doktor znanosti	Faculty of Engineering, 2019	Technical sciences	Basic engineering sciences	100	360	-
Tonči Valentić	https://www.bib.irb.hr/pregled/znanstvenici/382293	assistant professor	doktor znanosti	Faculty of Humanities and Social Sciences, 2020	Social sciences	Sociology	100	337,5	-
Karlo Lelas	https://www.bib.irb.hr/pregled/znanstvenici/297614	assistant professor	doktor znanosti	Faculty of Science, 2015	Natural sciences	Physics	100	330	-
Blaženka Brlobašić Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/294464	assistant professor	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	301,5	-
Emilija Zdraveva	https://www.bib.irb.hr/pregled/znanstvenici/320042	assistant professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	292,5	-
Tihana Dekanić	https://www.bib.irb.hr/pregled/znanstvenici/299170	assistant professor	doktor znanosti	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	292,5	-
Bosiljka Šaravanja	https://www.bib.irb.hr/pregled/znanstvenici/32881	assistant professor	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	282,5	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Josipa Štefanec	https://www.bib.irb.hr/pregled/znanstvenici/338893	assistant professors	-	Faculty of Architecture, 2019	Arts	Visual arts	100	225	-
Ivana Schwarz	https://www.bib.irb.hr/pregled/znanstvenici/274960	assistant professor	doktor znanosti	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	195	-
Lea Botteri	https://www.bib.irb.hr/pregled/znanstvenici/292526	assistant professor	doktor znanosti	Faculty of Textile Technology, 2019	Technical sciences	Textile technology	100	135	-
Ksenija Smoljak Kalamir	https://www.bib.irb.hr/pregled/znanstvenici/302900	assistant professor	doktor znanosti	Faculty of Natural Sciences, Department of Mathematics, 2018	Natural sciences	Mathematics	100	56,3	-
Alica Grilec	https://www.bib.irb.hr/pregled/znanstvenici/313553	assistant professor	doktor znanosti	Faculty of Economics and Business, 2018	Social sciences	Economics	100	0	450
Ksenija Doležal	https://www.bib.irb.hr/pregled/znanstvenici/287152	assistant professor	doktor znanosti	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	0	-
Agata Vinčić	https://www.bib.irb.hr/pregled/znanstvenici/170633	senior lecturer	-	Faculty of Textile Technology, 2019	Technical sciences	Textile technology	100	1.651,5	-
Ivana Martinčević	-	senior lecturer	-	Faculty of Kinesiology, 2018	Social sciences	Kinesiology	100	555,9	60
Suzana Kutnjak-Mravlinčić	https://www.bib.irb.hr/pregled/znanstvenici/333339	senior lecturer	-	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	420	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Antonia Treselj	https://www.bib.irb.hr/pregled/znanstvenici/37677	lecturer	-	2015	Humanities	Philology	100	675	-
Ivana Lukica	https://www.bib.irb.hr/pregled/znanstvenici/315103	lecturer	-	Faculty of Teacher Education, 2018	Humanities	Philosophy	100	405	-
Kristina Maršić	-	lecturer	-	Faculty of Economics and Business, 2020	Social sciences	Economics	100	300	8
Josip Petric	-	lecturer	-	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	180	-
Franka Karin	https://www.bib.irb.hr/pregled/znanstvenici/372413	assistant	-	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	322,5	-
Marijana Pavunc Samaržija	https://www.bib.irb.hr/pregled/znanstvenici/339405	assistant	-	Faculty of Textile Technology, 2013	Technical sciences	Textile technology	100	290	-
Maja Mahnić Naglić	https://www.bib.irb.hr/pregled/znanstvenici/349904	assistant	-	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	223,5	-
Petra Krpan	https://www.bib.irb.hr/pregled/znanstvenici/347632	assistant	-	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	210	-
Ivan Beritić	https://www.bib.irb.hr/pregled/znanstvenici/-385525	assistant	-	Faculty of Textile Technology, 2019	Technical sciences	Textile technology	100	202,5	-
Martina Bobovčan Marcelić	https://www.bib.irb.hr/pregled/znanstvenici/328765	assistant	-	Faculty of Textile Technology, 2010	Technical sciences	Textile technology	100	180	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Franka Žuvela Bošnjak	https://www.bib.irb.hr/pregled/znanstvenici/352920	assistant	-	Faculty of Textile Technology, 2016	Technical sciences	Textile technology	100	180	-
Željka Pavlović	https://www.bib.irb.hr/pregled/znanstvenici/352492	assistant	-	Faculty of Textile Technology, 2015	Technical sciences	Textile technology	100	170	-
Ivana Žanko	https://www.bib.irb.hr/pregled/znanstvenici/338902	assistant	-	Faculty of Textile Technology, 2013	Technical sciences	Textile technology	100	165	-
Anja Ludaš	https://www.bib.irb.hr/pregled/znanstvenici/386365	assistant	-	Faculty of Textile Technology, 2019	Technical sciences	Textile technology	100	165	-
Lucija Ptiček	https://www.bib.irb.hr/pregled/znanstvenici/347384	assistant	-	Faculty of Textile Technology, 2015	-	-	100	132,5	-
Juro Živičnjak	https://www.bib.irb.hr/pregled/znanstvenici/378583	assistant	-	Faculty of Textile Technology, 2019	Technical sciences	Textile technology	100	127,5	-
Robert Katava	https://www.bib.irb.hr/pregled/znanstvenici/344890	assistant	doktor znanosti	Faculty of Textile Technology, 2014	Natural sciences	Chemistry	100	83	-
Maja Katarina Tomić	-	assistant	-	Faculty of Textile Technology, 2019	Natural sciences	Mathematics	100	63,8	-
Marija Zorić	https://www.bib.irb.hr/pregled/znanstvenici/339771	assistant	-	Faculty of Textile Technology, 2013	Natural sciences	Physics	100	60	-
Jelena Peran	https://www.bib.irb.hr/pregled/znanstvenici/358926	assistant	-	Faculty of Textile Technology, 2017	Technical sciences	Textile technology	100	10	-

Teacher	Crosbi link	Grade*	Academic degree	HEI at which the teacher was appointed to grade, year of last appointment to grade	Research area	Research field	Cumulative employment percentage	Workload on the employer institution in standardised teaching hours	Workload on other institutions in standardised teaching hours
Daniel Domović	https://www.bib.irb.hr/pregled/znanstvenici/336615	postdoctoral researcher	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Computer science	100	285	-
Snježana Brnada	https://www.bib.irb.hr/pregled/znanstvenici/315952	postdoctoral researcher	doktor znanosti	Faculty of Textile Technology, 2018	Technical sciences	Textile technology	100	230	-
Zorana Kovačević	https://www.bib.irb.hr/pregled/znanstvenici/322283	postdoctoral researcher	doktor znanosti	Faculty of Textile Technology, 2020	Technical sciences	Textile technology	100	157,5	-
Rozarija Mikić	https://www.bib.irb.hr/pregled/znanstvenici/335651	postdoctoral researcher	doktor znanosti	Faculty of Textile Technology, 2020	Natural sciences	Mathematics	100	63,8	-
Kristina Šimić	https://www.bib.irb.hr/pregled/znanstvenici/335640	research fellow	doktor znanosti	Faculty of Textile Technology, 2012	Technical sciences	Textile technology	100	67,5	-

*Scientific-teaching / artistic-teaching / teaching grade/ assistant/ postdoctoral researcher

Table 4.4. Teachers in study programs in the evaluated academic year

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Tanja Pušić	https://www.bib.irb.hr/pregled/znanstvenici/134124	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	42**	1**	254 (Web of Science Core Collection) 700 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	6	2	-	2
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	31**	8**	168 (Web of Science Core Collection) 575 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	1	1	-	4
Stana Kovačević	https://www.bib.irb.hr/pregled/znanstvenici/201815	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	28**	3**	116 (Web of Science Core Collection) 461 (Google Scholar)	6 (Web of Science Core Collection) 10 (Google Scholar)	3	0	-	4
Budimir Mijović	https://www.bib.irb.hr/pregled/znanstvenici/173291	full professors with tenure	Technical sciences	Mechanical engineering	Permanent employment - full-time	25**	1**	120 (Web of Science Core Collection) 439 (Google Scholar)	6 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	3
Dubravko Rogale	https://www.bib.irb.hr/pregled/znanstvenici/119041	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	22**	34**	217 (Web of Science Core Collection) 560 (Google Scholar)	10 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Zenun Skenderi	https://www.bib.irb.hr/pregled/znanstvenici/141653	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	20**	3**	147 (Web of Science Core Collection) 436 (Google Scholar)	7 (Web of Science Core Collection) 10 (Google Scholar)	1	0	-	3
Sandra Bischof	https://www.bib.irb.hr/pregled/znanstvenici/187421	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	19**	-	366 (Web of Science Core Collection) 701 (Google Scholar)	11 (Web of Science Core Collection) 13 (Google Scholar)	5	3	-	1
Zlatko Vrljičak	https://www.bib.irb.hr/pregled/znanstvenici/73885	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	16**	6**	102 (Google Scholar)	4 (Google Scholar)	1	0	-	2
Gordana Pavlović	https://www.bib.irb.hr/pregled/znanstvenici/174402	full professors with tenure	Natural sciences	Chemistry	Permanent employment - full-time	15**	-	900 (Web of Science Core Collection) 2165 (Google Scholar)	16 (Web of Science Core Collection) 24 (Google Scholar)	0	2	-	4
Željko Šomođi	https://www.bib.irb.hr/pregled/znanstvenici/192413	full professors with tenure	Technical sciences	Mechanical engineering	Part-time teacher (temporary service contract)	9**	-	44 (Google Scholar)	3 (Google Scholar)	1	0	-	3
Goran Hudec	https://www.bib.irb.hr/pregled/znanstvenici/102661	full professors with tenure	Technical sciences	Electrical engineering	Permanent employment - full-time	1**	-	57 (Google Scholar)	4 (Google Scholar)	0	3	-	1
Snježana Vego	https://www.bib.irb.hr/pregled/znanstvenici/131981	full professors with tenure	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Žarko Paić	https://www.bib.irb.hr/pregled/znanstvenici/172400	full professor	Social sciences	Sociology	Permanent employment - full-time	38**	-	2 (Web of Science Core Collection) 582 (Google Scholar)	1 (Web of Science Core Collection) 11 (Google Scholar)	0	0	-	4
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	Technical sciences	Textile technology	Permanent employment - full-time	28**	6**	66 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	2
Željko Penava	https://www.bib.irb.hr/pregled/znanstvenici/170666	full professor	Technical sciences	Textile technology	Permanent employment - full-time	20**	8**	50 (Web of Science Core Collection) 164 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	2
Antoneta Tomljenović	https://www.bib.irb.hr/pregled/znanstvenici/255292	full professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	1**	23 (Web of Science Core Collection) 69 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	2	2	-	2
Ivan Novak	https://www.bib.irb.hr/pregled/znanstvenici/225904	full professor	Social sciences	Economics	Permanent employment - full-time	14**	1**	1 (Web of Science Core Collection) 91 (Google Scholar)	0 (Web of Science Core Collection) 3 (Google Scholar)	0	0	-	4
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	1**	15 (Web of Science Core Collection) 95 (Google Scholar)	2 (Web of Science Core Collection) 5 (Google Scholar)	1	5	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Edita Vujasinović	https://www.bib.irb.hr/pregled/znanstvenici/170644	full professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	1**	36 (Web of Science Core Collection) 111 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	6	2	-	2
Snježana Firšt Rogale	https://www.bib.irb.hr/pregled/znanstvenici/238780	full professor	Technical sciences	Textile technology	Permanent employment - full-time	11**	16**	39 (Web of Science Core Collection) 107 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	3	2	-	3
Mario Cetina	https://www.bib.irb.hr/pregled/znanstvenici/132844	full professor	Natural sciences	Chemistry	Permanent employment - full-time	11**	1**	835 (Web of Science Core Collection) 1239 (Google Scholar)	17 (Web of Science Core Collection) 18 (Google Scholar)	2	1	-	3
Branka Vojnović	https://www.bib.irb.hr/pregled/znanstvenici/238844	full professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	3**	30 (Web of Science Core Collection) 54 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	2	1	-	3
Tomislav Rolich	https://www.bib.irb.hr/pregled/znanstvenici/232766	full professor	Technical sciences	Computer science	Permanent employment - full-time	7**	-	99 (Web of Science Core Collection) 214 (Google Scholar)	5 (Web of Science Core Collection) 8 (Google Scholar)	3	3	-	2
Andrea Pavetić	https://www.bib.irb.hr/pregled/znanstvenici/232792	full professors	Arts	Visual arts	Permanent employment - full-time	-	1**	1 (Google Scholar)	1 (Google Scholar)	0	2	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Anita Tarbuk	https://www.bib.irb.hr/pregled/znanstvenici/274945	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	49**	2**	292 (Web of Science Core Collection) 852 (Google Scholar)	10 (Web of Science Core Collection) 14 (Google Scholar)	5	4	-	1
Sandra Flinčec Grgac	https://www.bib.irb.hr/pregled/znanstvenici/275022	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	29**	2**	151 (Web of Science Core Collection) 237 (Google Scholar)	7 (Web of Science Core Collection) 7 (Google Scholar)	4	2	-	2
Ivana Salopek Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/274971	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	23**	6**	81 (Web of Science Core Collection) 189 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	1	5	-	1
Ana Sutlović	https://www.bib.irb.hr/pregled/znanstvenici/232770	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	7**	12 (Web of Science Core Collection) 30 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	1	3	-	4
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	Humanities	History of art	Permanent employment - full-time	19**	4**	2 (Web of Science Core Collection) 47 (Google Scholar)	1 (Web of Science Core Collection) 4 (Google Scholar)	0	2	1**	3
Iva Rezić	https://www.bib.irb.hr/pregled/znanstvenici/274993	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	18**	-	404 (Web of Science Core Collection) 800 (Google Scholar)	13 (Web of Science Core Collection) 15 (Google Scholar)	6	2	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Anica Hursa Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/238791	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	17**	4**	86 (Web of Science Core Collection) 138 (Google Scholar)	5 (Web of Science Core Collection) 5 (Google Scholar)	1	4	-	2
Sanja Ercegović Ražić	https://www.bib.irb.hr/pregled/znanstvenici/275033	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	37 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	5	3	-	2
Dragana Kopitar	https://www.bib.irb.hr/pregled/znanstvenici/275000	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	2**	19 (Web of Science Core Collection) 66 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	2	-	3
Goran Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/280411	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	4**	8 (Web of Science Core Collection) 25 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	2	4	-	1
Ružica Brunšek	https://www.bib.irb.hr/pregled/znanstvenici/275044	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	-	21 (Web of Science Core Collection) 24 (Google Scholar)	3 (Web of Science Core Collection) 2 (Google Scholar)	2	0	-	2
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	2**	19 (Web of Science Core Collection) 73 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	4	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Slavica Bogović	https://www.bib.irb.hr/pregled/znanstvenici/199222	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	4**	14 (Web of Science Core Collection)	3 (Web of Science Core Collection)	3	3	-	3
Maja Somogyi Škoc	https://www.bib.irb.hr/pregled/znanstvenici/274956	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	-	28 (Web of Science Core Collection) 48 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	4	1	-	2
Livio Racane	https://www.bib.irb.hr/pregled/znanstvenici/236842	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	7**	1**	388 (Web of Science Core Collection) 633 (Google Scholar)	13 (Web of Science Core Collection) 13 (Google Scholar)	2	1	-	3
Mirna Rodić	https://www.bib.irb.hr/pregled/znanstvenici/274982	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	5**	-	28 (Web of Science Core Collection) 63 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	2
Kristina Krulić Himmelreich	https://www.bib.irb.hr/pregled/znanstvenici/292530	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	4**	-	110 (Web of Science Core Collection) 258 (Google Scholar)	7 (Web of Science Core Collection) 9 (Google Scholar)	2	0	-	2
Helena Schultheis Edgeler	https://www.bib.irb.hr/pregled/znanstvenici/275055	associate professors	Arts	Visual arts	Permanent employment - full-time	1**	1**	-	-	0	1	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Emilija Zdraveva	https://www.bib.irb.hr/pregled/znanstvenici/320042	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	30**	-	70 (Web of Science Core Collection) 208 (Google Scholar)	4 (Web of Science Core Collection) 8 (Google Scholar)	2	1	-	2
Bosiljka Šaravanja	https://www.bib.irb.hr/pregled/znanstvenici/32881	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	24**	6**	15 (Web of Science Core Collection) 41 (Google Scholar)	2 (Web of Science Core Collection) 4 (Google Scholar)	2	1	-	5
Ivana Schwarz	https://www.bib.irb.hr/pregled/znanstvenici/274960	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	44 (Web of Science Core Collection) 166 (Google Scholar)	5 (Web of Science Core Collection) 7 (Google Scholar)	2	2	-	2
Tihana Dekanić	https://www.bib.irb.hr/pregled/znanstvenici/299170	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	27 (Web of Science Core Collection) 102 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	4	1	-	2
Ivana Špelić	https://www.bib.irb.hr/pregled/znanstvenici/324114	assistant professor	Technical sciences	Basic engineering sciences	Permanent employment - full-time	21**	5**	4 (Web of Science Core Collection) 29 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	1	0	-	1
Alica Grilec	https://www.bib.irb.hr/pregled/znanstvenici/313553	assistant professor	Social sciences	Economics	Permanent employment - full-time	16**	2**	2 (Web of Science Core Collection) 81 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	2	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Blaženka Brlobašić Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/294464	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	20 (Web of Science Core Collection) 97 (Google Scholar)	3 (Web of Science Core Collection) 6 (Google Scholar)	2	0	-	4
Lea Botteri	https://www.bib.irb.hr/pregled/znanstvenici/292526	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	1**	68 (Web of Science Core Collection) 94 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	3	4	-	2
Ksenija Doležal	https://www.bib.irb.hr/pregled/znanstvenici/287152	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	4**	13 (Web of Science Core Collection) 77 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	1
Ksenija Smoljak Kalamir	https://www.bib.irb.hr/pregled/znanstvenici/302900	assistant professor	Natural sciences	Mathematics	Permanent employment - full-time	13**	-	17 (Web of Science Core Collection) 98 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	1
Renata Hrženjak	https://www.bib.irb.hr/pregled/znanstvenici/275011	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	26 (Web of Science Core Collection) 58 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	0	1	-	1
Irena Šabarić	https://www.bib.irb.hr/pregled/znanstvenici/280400	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	2 (Web of Science Core Collection) 25 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	1	1**	1
Tonči Valentić	https://www.bib.irb.hr/pregled/znanstvenici/382293	assistant professor	Social sciences	Sociology	Permanent employment - full-time	2**	-	36 (Google Scholar)	3 (Google Scholar)	0	0	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Karlo Lelas	https://www.bib.irb.hr/pregled/znanstvenici/297614	assistant professor	Natural sciences	Physics	Permanent employment - full-time	1**	-	8513 (Web of Science Core Collection) 24136 (Google Scholar)	51 (Web of Science Core Collection) 50 (Google Scholar)	4	0	-	2
Karla Lebhaft	https://www.bib.irb.hr/pregled/znanstvenici/325332	assistant professors	Humanities	History of art	Part-time teacher (temporary service contract)	1**	-	3 (Google Scholar)	1 (Google Scholar)	0	0	-	2
Ivana Mrčela	-	assistant professors	Arts	Design	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	1
Lea Popinjač	-	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	0	0	2
Marin Sovar	https://www.bib.irb.hr/pregled/znanstvenici/331070	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	2	0	3
Ivana Martinčević	-	senior lecturer	Social sciences	Kinesiology	Permanent employment - full-time	0	0	-	-	0	0	0	4
Antonia Treselj	https://www.bib.irb.hr/pregled/znanstvenici/37677	lecturer	Humanities	Philology	Permanent employment - full-time	0	0	-	-	0	0	0	6
Kristina Maršić	-	lecturer	Social sciences	Economics	Permanent employment - full-time	0	0	-	-	0	1	0	1

* Scientific-teaching / artistic-teaching / teaching grade

** Crosbi/PDB data

Table 4.4. Teachers in study programs in the evaluated academic year

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	31**	8**	168 (Web of Science Core Collection) 575 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	1	1	-	2
Snježana Vego	https://www.bib.irb.hr/pregled/znanstvenici/131981	full professors with tenure	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	3
Žarko Paić	https://www.bib.irb.hr/pregled/znanstvenici/172400	full professor	Social sciences	Sociology	Permanent employment - full-time	38**	-	2 (Web of Science Core Collection) 582 (Google Scholar)	1 (Web of Science Core Collection) 11 (Google Scholar)	0	0	-	3
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	Technical sciences	Textile technology	Permanent employment - full-time	28**	6**	66 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	1
Ivan Novak	https://www.bib.irb.hr/pregled/znanstvenici/225904	full professor	Social sciences	Economics	Permanent employment - full-time	14**	1**	1 (Web of Science Core Collection) 91 (Google Scholar)	0 (Web of Science Core Collection) 3 (Google Scholar)	0	0	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	1**	15 (Web of Science Core Collection) 95 (Google Scholar)	2 (Web of Science Core Collection) 5 (Google Scholar)	1	5	-	2
Edita Vujasinović	https://www.bib.irb.hr/pregled/znanstvenici/170644	full professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	1**	36 (Web of Science Core Collection) 111 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	6	2	-	1
Tomislav Rolich	https://www.bib.irb.hr/pregled/znanstvenici/232766	full professor	Technical sciences	Computer science	Permanent employment - full-time	7**	-	99 (Web of Science Core Collection) 214 (Google Scholar)	5 (Web of Science Core Collection) 8 (Google Scholar)	3	3	-	1
Andrea Pavetić	https://www.bib.irb.hr/pregled/znanstvenici/232792	full professors	Arts	Visual arts	Permanent employment - full-time	-	1**	1 (Google Scholar)	1 (Google Scholar)	0	2	-	3
Sandra Flinčec Grgac	https://www.bib.irb.hr/pregled/znanstvenici/275022	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	29**	2**	151 (Web of Science Core Collection) 237 (Google Scholar)	7 (Web of Science Core Collection) 7 (Google Scholar)	4	2	-	1
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	Humanities	History of art	Permanent employment - full-time	19**	4**	2 (Web of Science Core Collection) 47 (Google Scholar)	1 (Web of Science Core Collection) 4 (Google Scholar)	0	2	1**	5

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Anica Hursa Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/238791	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	17**	4**	86 (Web of Science Core Collection) 138 (Google Scholar)	5 (Web of Science Core Collection) 5 (Google Scholar)	1	4	-	1
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	2**	19 (Web of Science Core Collection) 73 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	4	-	1
Mirna Rodić	https://www.bib.irb.hr/pregled/znanstvenici/274982	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	5**	-	28 (Web of Science Core Collection) 63 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	1
Jasminka Končić	https://www.bib.irb.hr/pregled/znanstvenici/275066	associate professors	Arts	Visual arts	Permanent employment - full-time	3**	-	1 (Web of Science Core Collection) 1 (Google Scholar)	1 (Web of Science Core Collection) 1 (Google Scholar)	0	2	-	1
Koraljka Kovač Dugandžić	https://www.bib.irb.hr/pregled/znanstvenici/331055	associate professors	Arts	Visual arts	Permanent employment - full-time	2**	1**	-	-	0	2	-	3
Helena Schultheis Edgeler	https://www.bib.irb.hr/pregled/znanstvenici/275055	associate professors	Arts	Visual arts	Permanent employment - full-time	1**	1**	-	-	0	1	-	4
Paulina Jazvić	https://www.bib.irb.hr/pregled/znanstvenici/299181	associate professors	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Ivana Schwarz	https://www.bib.irb.hr/pregled/znanstvenici/274960	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	44 (Web of Science Core Collection) 166 (Google Scholar)	5 (Web of Science Core Collection) 7 (Google Scholar)	2	2	-	1
Tihana Dekanić	https://www.bib.irb.hr/pregled/znanstvenici/299170	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	27 (Web of Science Core Collection) 102 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	4	1	-	1
Ivana Špelić	https://www.bib.irb.hr/pregled/znanstvenici/324114	assistant professor	Technical sciences	Basic engineering sciences	Permanent employment - full-time	21**	5**	4 (Web of Science Core Collection) 29 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	1	0	-	1
Blaženka Brlobašić Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/294464	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	20 (Web of Science Core Collection) 97 (Google Scholar)	3 (Web of Science Core Collection) 6 (Google Scholar)	2	0	-	4
Alica Grilec	https://www.bib.irb.hr/pregled/znanstvenici/313553	assistant professor	Social sciences	Economics	Permanent employment - full-time	16**	2**	2 (Web of Science Core Collection) 81 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	2	-	2
Ksenija Doležal	https://www.bib.irb.hr/pregled/znanstvenici/287152	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	4**	13 (Web of Science Core Collection) 77 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Irena Šabarić	https://www.bib.irb.hr/pregled/znanstvenici/280400	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	2 (Web of Science Core Collection) 25 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	1	1**	3
Renata Hrženjak	https://www.bib.irb.hr/pregled/znanstvenici/275011	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	26 (Web of Science Core Collection) 58 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	0	1	-	2
Tonči Valentić	https://www.bib.irb.hr/pregled/znanstvenici/382293	assistant professor	Social sciences	Sociology	Permanent employment - full-time	2**	-	36 (Google Scholar)	3 (Google Scholar)	0	0	-	1
Karla Lebhaft	https://www.bib.irb.hr/pregled/znanstvenici/325332	assistant professors	Humanities	History of art	Part-time teacher (temporary service contract)	1**	-	3 (Google Scholar)	1 (Google Scholar)	0	0	-	5
Josipa Štefanec	https://www.bib.irb.hr/pregled/znanstvenici/338893	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	0	0	2
Ivana Mrčela	-	assistant professors	Arts	Design	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	4
Lea Popinjač	-	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	0	0	2
Marin Sovar	https://www.bib.irb.hr/pregled/znanstvenici/331070	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	2	0	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Ivana Martinčević	-	senior lecturer	Social sciences	Kinesiology	Permanent employment - full-time	0	0	-	-	0	0	0	4
Antonia Treselj	https://www.bib.irb.hr/pregled/znanstvenici/37677	lecturer	Humanities	Philology	Permanent employment - full-time	0	0	-	-	0	0	0	4
Kristina Maršić	-	lecturer	Social sciences	Economics	Permanent employment - full-time	0	0	-	-	0	1	0	1
Ivana Lukica	https://www.bib.irb.hr/pregled/znanstvenici/315103	lecturer	Humanities	Philosophy	Permanent employment - full-time	0	0	-	-	0	0	0	4

* Scientific-teaching / artistic-teaching / teaching grade

** Crosbi/PDB data

Table 4.4. Teachers in study programs in the evaluated academic year

Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Tanja Pušić	https://www.bib.irb.hr/pregled/znanstvenici/134124	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	42**	1**	254 (Web of Science Core Collection) 700 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	6	2	-	3
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	31**	8**	168 (Web of Science Core Collection) 575 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	1	1	-	4
Stana Kovačević	https://www.bib.irb.hr/pregled/znanstvenici/201815	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	28**	3**	116 (Web of Science Core Collection) 461 (Google Scholar)	6 (Web of Science Core Collection) 10 (Google Scholar)	3	0	-	1
Budimir Mijović	https://www.bib.irb.hr/pregled/znanstvenici/173291	full professors with tenure	Technical sciences	Mechanical engineering	Permanent employment - full-time	25**	1**	120 (Web of Science Core Collection) 439 (Google Scholar)	6 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	3
Dubravko Rogale	https://www.bib.irb.hr/pregled/znanstvenici/119041	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	22**	34**	217 (Web of Science Core Collection) 560 (Google Scholar)	10 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	7

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Zenun Skenderi	https://www.bib.irb.hr/pregled/znanstvenici/141653	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	20**	3**	147 (Web of Science Core Collection) 436 (Google Scholar)	7 (Web of Science Core Collection) 10 (Google Scholar)	1	0	-	3
Sandra Bischof	https://www.bib.irb.hr/pregled/znanstvenici/187421	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	19**	-	366 (Web of Science Core Collection) 701 (Google Scholar)	11 (Web of Science Core Collection) 13 (Google Scholar)	5	3	-	3
Zlatko Vrljičak	https://www.bib.irb.hr/pregled/znanstvenici/73885	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	16**	6**	102 (Google Scholar)	4 (Google Scholar)	1	0	-	3
Gordana Pavlović	https://www.bib.irb.hr/pregled/znanstvenici/174402	full professors with tenure	Natural sciences	Chemistry	Permanent employment - full-time	15**	-	900 (Web of Science Core Collection) 2165 (Google Scholar)	16 (Web of Science Core Collection) 24 (Google Scholar)	0	2	-	1
Željko Šomođi	https://www.bib.irb.hr/pregled/znanstvenici/192413	full professors with tenure	Technical sciences	Mechanical engineering	Part-time teacher (temporary service contract)	9**	-	44 (Google Scholar)	3 (Google Scholar)	1	0	-	1
Goran Hudec	https://www.bib.irb.hr/pregled/znanstvenici/102661	full professors with tenure	Technical sciences	Electrical engineering	Permanent employment - full-time	1**	-	57 (Google Scholar)	4 (Google Scholar)	0	3	-	1
Jelka Geršak	https://www.bib.irb.hr/pregled/znanstvenici/04628	full professors with tenure	Technical sciences	Textile technology	Part-time teacher (temporary service contract)	0	0	-	-	1	0	0	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Snježana Vego	https://www.bib.irb.hr/pregled/znanstvenici/131981	full professors with tenure	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	6
Žarko Paić	https://www.bib.irb.hr/pregled/znanstvenici/172400	full professor	Social sciences	Sociology	Permanent employment - full-time	38**	-	2 (Web of Science Core Collection) 582 (Google Scholar)	1 (Web of Science Core Collection) 11 (Google Scholar)	0	0	-	5
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	Technical sciences	Textile technology	Permanent employment - full-time	28**	6**	66 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	3
Željko Penava	https://www.bib.irb.hr/pregled/znanstvenici/170666	full professor	Technical sciences	Textile technology	Permanent employment - full-time	20**	8**	50 (Web of Science Core Collection) 164 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	4
Antoneta Tomljenović	https://www.bib.irb.hr/pregled/znanstvenici/255292	full professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	1**	23 (Web of Science Core Collection) 69 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	2	2	-	2
Ivan Novak	https://www.bib.irb.hr/pregled/znanstvenici/225904	full professor	Social sciences	Economics	Permanent employment - full-time	14**	1**	1 (Web of Science Core Collection) 91 (Google Scholar)	0 (Web of Science Core Collection) 3 (Google Scholar)	0	0	-	6

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	1**	15 (Web of Science Core Collection) 95 (Google Scholar)	2 (Web of Science Core Collection) 5 (Google Scholar)	1	5	-	4
Edita Vujasinović	https://www.bib.irb.hr/pregled/znanstvenici/170644	full professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	1**	36 (Web of Science Core Collection) 111 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	6	2	-	9
Snježana Firšt Rogale	https://www.bib.irb.hr/pregled/znanstvenici/238780	full professor	Technical sciences	Textile technology	Permanent employment - full-time	11**	16**	39 (Web of Science Core Collection) 107 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	3	2	-	4
Branka Vojnović	https://www.bib.irb.hr/pregled/znanstvenici/238844	full professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	3**	30 (Web of Science Core Collection) 54 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	2	1	-	2
Tomislav Rolich	https://www.bib.irb.hr/pregled/znanstvenici/232766	full professor	Technical sciences	Computer science	Permanent employment - full-time	7**	-	99 (Web of Science Core Collection) 214 (Google Scholar)	5 (Web of Science Core Collection) 8 (Google Scholar)	3	3	-	2
Andrea Pavetić	https://www.bib.irb.hr/pregled/znanstvenici/232792	full professors	Arts	Visual arts	Permanent employment - full-time	-	1**	1 (Google Scholar)	1 (Google Scholar)	0	2	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Anita Tarbuk	https://www.bib.irb.hr/pregled/znanstvenici/274945	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	49**	2**	292 (Web of Science Core Collection) 852 (Google Scholar)	10 (Web of Science Core Collection) 14 (Google Scholar)	5	4	-	2
Sandra Flinčec Grgac	https://www.bib.irb.hr/pregled/znanstvenici/275022	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	29**	2**	151 (Web of Science Core Collection) 237 (Google Scholar)	7 (Web of Science Core Collection) 7 (Google Scholar)	4	2	-	2
Ivana Salopek Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/274971	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	23**	6**	81 (Web of Science Core Collection) 189 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	1	5	-	2
Ana Sutlović	https://www.bib.irb.hr/pregled/znanstvenici/232770	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	7**	12 (Web of Science Core Collection) 30 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	1	3	-	2
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	Humanities	History of art	Permanent employment - full-time	19**	4**	2 (Web of Science Core Collection) 47 (Google Scholar)	1 (Web of Science Core Collection) 4 (Google Scholar)	0	2	1**	2
Mario Kasović	https://www.bib.irb.hr/pregled/znanstvenici/255536	associate professor	Social sciences	Kinesiology	Part-time teacher (temporary service contract)	19**	5**	-	-	0	0	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Iva Rezić	https://www.bib.irb.hr/pregled/znanstvenici/274993	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	18**	-	404 (Web of Science Core Collection) 800 (Google Scholar)	13 (Web of Science Core Collection) 15 (Google Scholar)	6	2	-	1
Anica Hursa Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/238791	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	17**	4**	86 (Web of Science Core Collection) 138 (Google Scholar)	5 (Web of Science Core Collection) 5 (Google Scholar)	1	4	-	4
Sanja Ercegović Ražić	https://www.bib.irb.hr/pregled/znanstvenici/275033	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	37 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	5	3	-	2
Goran Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/280411	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	4**	8 (Web of Science Core Collection) 25 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	2	4	-	3
Dragana Kopitar	https://www.bib.irb.hr/pregled/znanstvenici/275000	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	2**	19 (Web of Science Core Collection) 66 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	2	-	2
Ružica Brunšek	https://www.bib.irb.hr/pregled/znanstvenici/275044	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	-	21 (Web of Science Core Collection) 24 (Google Scholar)	3 (Web of Science Core Collection) 2 (Google Scholar)	2	0	-	4

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	2**	19 (Web of Science Core Collection) 73 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	4	-	1
Maja Somogyi Škoc	https://www.bib.irb.hr/pregled/znanstvenici/274956	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	-	28 (Web of Science Core Collection) 48 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	4	1	-	2
Slavica Bogović	https://www.bib.irb.hr/pregled/znanstvenici/199222	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	4**	14 (Web of Science Core Collection)	3 (Web of Science Core Collection)	3	3	-	3
Livio Racane	https://www.bib.irb.hr/pregled/znanstvenici/236842	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	7**	1**	388 (Web of Science Core Collection) 633 (Google Scholar)	13 (Web of Science Core Collection) 13 (Google Scholar)	2	1	-	3
Mirna Rodić	https://www.bib.irb.hr/pregled/znanstvenici/274982	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	5**	-	28 (Web of Science Core Collection) 63 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	2
Kristina Krulić Himmelreich	https://www.bib.irb.hr/pregled/znanstvenici/292530	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	4**	-	110 (Web of Science Core Collection) 258 (Google Scholar)	7 (Web of Science Core Collection) 9 (Google Scholar)	2	0	-	1
Paulina Jazvić	https://www.bib.irb.hr/pregled/znanstvenici/299181	associate professors	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Emilija Zdraveva	https://www.bib.irb.hr/pregled/znanstvenici/320042	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	30**	-	70 (Web of Science Core Collection) 208 (Google Scholar)	4 (Web of Science Core Collection) 8 (Google Scholar)	2	1	-	3
Bosiljka Šaravanja	https://www.bib.irb.hr/pregled/znanstvenici/32881	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	24**	6**	15 (Web of Science Core Collection) 41 (Google Scholar)	2 (Web of Science Core Collection) 4 (Google Scholar)	2	1	-	3
Tihana Dekanić	https://www.bib.irb.hr/pregled/znanstvenici/299170	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	27 (Web of Science Core Collection) 102 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	4	1	-	4
Ivana Špelić	https://www.bib.irb.hr/pregled/znanstvenici/324114	assistant professor	Technical sciences	Basic engineering sciences	Permanent employment - full-time	21**	5**	4 (Web of Science Core Collection) 29 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	1	0	-	1
Alica Grilec	https://www.bib.irb.hr/pregled/znanstvenici/313553	assistant professor	Social sciences	Economics	Permanent employment - full-time	16**	2**	2 (Web of Science Core Collection) 81 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	2	-	1
Blaženka Brlobašić Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/294464	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	20 (Web of Science Core Collection) 97 (Google Scholar)	3 (Web of Science Core Collection) 6 (Google Scholar)	2	0	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Lea Botteri	https://www.bib.irb.hr/pregled/znanstvenici/292526	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	1**	68 (Web of Science Core Collection) 94 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	3	4	-	2
Ksenija Smoljak Kalamir	https://www.bib.irb.hr/pregled/znanstvenici/302900	assistant professor	Natural sciences	Mathematics	Permanent employment - full-time	13**	-	17 (Web of Science Core Collection) 98 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	1
Željko Knezić	https://www.bib.irb.hr/pregled/znanstvenici/131970	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	14**	20 (Web of Science Core Collection) 11 (Google Scholar)	1 (Web of Science Core Collection) 2 (Google Scholar)	3	1	-	3
Irena Šabarić	https://www.bib.irb.hr/pregled/znanstvenici/280400	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	2 (Web of Science Core Collection) 25 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	1	1**	4
Renata Hrženjak	https://www.bib.irb.hr/pregled/znanstvenici/275011	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	26 (Web of Science Core Collection) 58 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	0	1	-	3
Tonči Valentić	https://www.bib.irb.hr/pregled/znanstvenici/382293	assistant professor	Social sciences	Sociology	Permanent employment - full-time	2**	-	36 (Google Scholar)	3 (Google Scholar)	0	0	-	1
Karla Lebhaft	https://www.bib.irb.hr/pregled/znanstvenici/325332	assistant professors	Humanities	History of art	Part-time teacher (temporary service contract)	1**	-	3 (Google Scholar)	1 (Google Scholar)	0	0	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Ivana Mrčela	-	assistant professors	Arts	Design	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	2
Marin Sovar	https://www.bib.irb.hr/pregled/znanstvenici/331070	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	2	0	2
Kristina Maršić	-	lecturer	Social sciences	Economics	Permanent employment - full-time	0	0	-	-	0	1	0	1
Lea Vene	-	lecturer	Humanities	History of art	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	1

* Scientific-teaching / artistic-teaching / teaching grade

** Crosbi/PDB data

Table 4.4. Teachers in study programs in the evaluated academic year

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	31**	8**	168 (Web of Science Core Collection) 575 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	1	1	-	3
Snježana Vego	https://www.bib.irb.hr/pregled/znanstvenici/131981	full professors with tenure	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	5
Žarko Paić	https://www.bib.irb.hr/pregled/znanstvenici/172400	full professor	Social sciences	Sociology	Permanent employment - full-time	38**	-	2 (Web of Science Core Collection) 582 (Google Scholar)	1 (Web of Science Core Collection) 11 (Google Scholar)	0	0	-	10
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	Technical sciences	Textile technology	Permanent employment - full-time	28**	6**	66 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	3
Ivan Novak	https://www.bib.irb.hr/pregled/znanstvenici/225904	full professor	Social sciences	Economics	Permanent employment - full-time	14**	1**	1 (Web of Science Core Collection) 91 (Google Scholar)	0 (Web of Science Core Collection) 3 (Google Scholar)	0	0	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	1**	15 (Web of Science Core Collection) 95 (Google Scholar)	2 (Web of Science Core Collection) 5 (Google Scholar)	1	5	-	1
Snježana Firšt Rogale	https://www.bib.irb.hr/pregled/znanstvenici/238780	full professor	Technical sciences	Textile technology	Permanent employment - full-time	11**	16**	39 (Web of Science Core Collection) 107 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	3	2	-	1
Ivana Šalopek Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/274971	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	23**	6**	81 (Web of Science Core Collection) 189 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	1	5	-	1
Ana Sutlović	https://www.bib.irb.hr/pregled/znanstvenici/232770	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	7**	12 (Web of Science Core Collection) 30 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	1	3	-	1
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	Humanities	History of art	Permanent employment - full-time	19**	4**	2 (Web of Science Core Collection) 47 (Google Scholar)	1 (Web of Science Core Collection) 4 (Google Scholar)	0	2	1**	8
Dragana Kopitar	https://www.bib.irb.hr/pregled/znanstvenici/275000	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	2**	19 (Web of Science Core Collection) 66 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	2	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	2**	19 (Web of Science Core Collection) 73 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	4	-	1
Slavica Bogović	https://www.bib.irb.hr/pregled/znanstvenici/199222	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	4**	14 (Web of Science Core Collection)	3 (Web of Science Core Collection)	3	3	-	1
Jasminka Končić	https://www.bib.irb.hr/pregled/znanstvenici/275066	associate professors	Arts	Visual arts	Permanent employment - full-time	3**	-	1 (Web of Science Core Collection) 1 (Google Scholar)	1 (Web of Science Core Collection) 1 (Google Scholar)	0	2	-	5
Koraljka Kovač Dugandžić	https://www.bib.irb.hr/pregled/znanstvenici/331055	associate professors	Arts	Visual arts	Permanent employment - full-time	2**	1**	-	-	0	2	-	4
Paulina Jazvić	https://www.bib.irb.hr/pregled/znanstvenici/299181	associate professors	Arts	Visual arts	Permanent employment - full-time	-	1**	-	-	0	0	-	3
Ivana Schwarz	https://www.bib.irb.hr/pregled/znanstvenici/274960	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	44 (Web of Science Core Collection) 166 (Google Scholar)	5 (Web of Science Core Collection) 7 (Google Scholar)	2	2	-	1
Tihana Dekanić	https://www.bib.irb.hr/pregled/znanstvenici/299170	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	-	27 (Web of Science Core Collection) 102 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	4	1	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Alica Grilec	https://www.bib.irb.hr/pregled/znanstvenici/313553	assistant professor	Social sciences	Economics	Permanent employment - full-time	16**	2**	2 (Web of Science Core Collection) 81 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	2	-	1
Blaženka Brlobašić Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/294464	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	20 (Web of Science Core Collection) 97 (Google Scholar)	3 (Web of Science Core Collection) 6 (Google Scholar)	2	0	-	1
Ksenija Doležal	https://www.bib.irb.hr/pregled/znanstvenici/287152	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	4**	13 (Web of Science Core Collection) 77 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	1
Renata Hrženjak	https://www.bib.irb.hr/pregled/znanstvenici/275011	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	26 (Web of Science Core Collection) 58 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	0	1	-	3
Irena Šabarić	https://www.bib.irb.hr/pregled/znanstvenici/280400	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	2 (Web of Science Core Collection) 25 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	1	1**	1
Ivana Bakal	-	assistant professors	Technical sciences	Textile technology	Part-time teacher (temporary service contract)	6**	3**	-	-	0	0	-	2
Tonči Valentić	https://www.bib.irb.hr/pregled/znanstvenici/382293	assistant professor	Social sciences	Sociology	Permanent employment - full-time	2**	-	36 (Google Scholar)	3 (Google Scholar)	0	0	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Karla Lebhaft	https://www.bib.irb.hr/pregled/znanstvenici/325332	assistant professors	Humanities	History of art	Part-time teacher (temporary service contract)	1**	-	3 (Google Scholar)	1 (Google Scholar)	0	0	-	1
Ivo Knezović	https://www.bib.irb.hr/pregled/znanstvenici/356722	assistant professors	Arts	Applied arts	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	2
Marin Sovar	https://www.bib.irb.hr/pregled/znanstvenici/331070	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	2	0	5
Ivana Mrčela	-	assistant professors	Arts	Design	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	3
Josipa Štefanec	https://www.bib.irb.hr/pregled/znanstvenici/338893	assistant professors	Arts	Visual arts	Permanent employment - full-time	0	0	-	-	0	0	0	1
Barbara Bourek	-	assistant professors	Arts	Applied arts	Part-time teacher (temporary service contract)	-	-	-	-	0	0	1**	3
Ana Kodrić Gagro	-	lecturer	Humanities	Art sciences	Part-time teacher (temporary service contract)	4**	1**	-	-	0	0	-	2
Lea Vene	-	lecturer	Humanities	History of art	Part-time teacher (temporary service contract)	0	0	-	-	0	0	0	3

* Scientific-teaching / artistic-teaching / teaching grade

** Crosbi/PDB data

Table 4.4. Teachers in study programs in the evaluated academic year

Textile Science and Technology (1466), postgraduate (doctoral) university study programme, Zagreb

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Tanja Pušić	https://www.bib.irb.hr/pregled/znanstvenici/134124	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	42**	1**	254 (Web of Science Core Collection) 700 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	6	2	-	2
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	31**	8**	168 (Web of Science Core Collection) 575 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	1	1	-	1
Budimir Mijović	https://www.bib.irb.hr/pregled/znanstvenici/173291	full professors with tenure	Technical sciences	Mechanical engineering	Permanent employment - full-time	25**	1**	120 (Web of Science Core Collection) 439 (Google Scholar)	6 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	1
Dubravko Rogale	https://www.bib.irb.hr/pregled/znanstvenici/119041	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	22**	34**	217 (Web of Science Core Collection) 560 (Google Scholar)	10 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	2
Zenun Skenderi	https://www.bib.irb.hr/pregled/znanstvenici/141653	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	20**	3**	147 (Web of Science Core Collection) 436 (Google Scholar)	7 (Web of Science Core Collection) 10 (Google Scholar)	1	0	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Sandra Bischof	https://www.bib.irb.hr/pregled/znanstvenici/187421	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	19**	-	366 (Web of Science Core Collection) 701 (Google Scholar)	11 (Web of Science Core Collection) 13 (Google Scholar)	5	3	-	2
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	Technical sciences	Textile technology	Permanent employment - full-time	28**	6**	66 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	1
Željko Penava	https://www.bib.irb.hr/pregled/znanstvenici/170666	full professor	Technical sciences	Textile technology	Permanent employment - full-time	20**	8**	50 (Web of Science Core Collection) 164 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	1
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	1**	15 (Web of Science Core Collection) 95 (Google Scholar)	2 (Web of Science Core Collection) 5 (Google Scholar)	1	5	-	1
Edita Vujasinović	https://www.bib.irb.hr/pregled/znanstvenici/170644	full professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	1**	36 (Web of Science Core Collection) 111 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	6	2	-	2
Snježana Firšt Rogale	https://www.bib.irb.hr/pregled/znanstvenici/238780	full professor	Technical sciences	Textile technology	Permanent employment - full-time	11**	16**	39 (Web of Science Core Collection) 107 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	3	2	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Branka Vojnović	https://www.bib.irb.hr/pregled/znanstvenici/238844	full professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	3**	30 (Web of Science Core Collection) 54 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	2	1	-	1
Tomislav Rolich	https://www.bib.irb.hr/pregled/znanstvenici/232766	full professor	Technical sciences	Computer science	Permanent employment - full-time	7**	-	99 (Web of Science Core Collection) 214 (Google Scholar)	5 (Web of Science Core Collection) 8 (Google Scholar)	3	3	-	2
Anita Tarbuk	https://www.bib.irb.hr/pregled/znanstvenici/274945	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	49**	2**	292 (Web of Science Core Collection) 852 (Google Scholar)	10 (Web of Science Core Collection) 14 (Google Scholar)	5	4	-	1
Sandra Flinčec Grgac	https://www.bib.irb.hr/pregled/znanstvenici/275022	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	29**	2**	151 (Web of Science Core Collection) 237 (Google Scholar)	7 (Web of Science Core Collection) 7 (Google Scholar)	4	2	-	1
Ivana Salopek Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/274971	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	23**	6**	81 (Web of Science Core Collection) 189 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	1	5	-	1
Ana Sutlović	https://www.bib.irb.hr/pregled/znanstvenici/232770	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	7**	12 (Web of Science Core Collection) 30 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	1	3	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	Humanities	History of art	Permanent employment - full-time	19**	4**	2 (Web of Science Core Collection) 47 (Google Scholar)	1 (Web of Science Core Collection) 4 (Google Scholar)	0	2	1**	1
Iva Rezić	https://www.bib.irb.hr/pregled/znanstvenici/274993	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	18**	-	404 (Web of Science Core Collection) 800 (Google Scholar)	13 (Web of Science Core Collection) 15 (Google Scholar)	6	2	-	1
Sanja Ercegović Ražić	https://www.bib.irb.hr/pregled/znanstvenici/275033	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	37 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	5	3	-	2
Ružica Brunšek	https://www.bib.irb.hr/pregled/znanstvenici/275044	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	-	21 (Web of Science Core Collection) 24 (Google Scholar)	3 (Web of Science Core Collection) 2 (Google Scholar)	2	0	-	1
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	2**	19 (Web of Science Core Collection) 73 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	4	-	2
Maja Somogyi Škoc	https://www.bib.irb.hr/pregled/znanstvenici/274956	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	-	28 (Web of Science Core Collection) 48 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	4	1	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Mirna Rodić	https://www.bib.irb.hr/pregled/znanstvenici/274982	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	5**	-	28 (Web of Science Core Collection) 63 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	1
Kristina Krulić Himmelreich	https://www.bib.irb.hr/pregled/znanstvenici/292530	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	4**	-	110 (Web of Science Core Collection) 258 (Google Scholar)	7 (Web of Science Core Collection) 9 (Google Scholar)	2	0	-	1
Karlo Lelas	https://www.bib.irb.hr/pregled/znanstvenici/297614	assistant professor	Natural sciences	Physics	Permanent employment - full-time	1**	-	8513 (Web of Science Core Collection) 24136 (Google Scholar)	51 (Web of Science Core Collection) 50 (Google Scholar)	4	0	-	1

* Scientific-teaching / artistic-teaching / teaching grade

** Crosbi/PDB data

Table 4.4. Teachers in study programs in the evaluated academic year

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Darko Ujević	https://www.bib.irb.hr/pregled/znanstvenici/139605	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	31**	8**	168 (Web of Science Core Collection) 575 (Google Scholar)	8 (Web of Science Core Collection) 11 (Google Scholar)	1	1	-	2
Stana Kovačević	https://www.bib.irb.hr/pregled/znanstvenici/201815	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	28**	3**	116 (Web of Science Core Collection) 461 (Google Scholar)	6 (Web of Science Core Collection) 10 (Google Scholar)	3	0	-	6
Budimir Mijović	https://www.bib.irb.hr/pregled/znanstvenici/173291	full professors with tenure	Technical sciences	Mechanical engineering	Permanent employment - full-time	25**	1**	120 (Web of Science Core Collection) 439 (Google Scholar)	6 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	3
Dubravko Rogale	https://www.bib.irb.hr/pregled/znanstvenici/119041	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	22**	34**	217 (Web of Science Core Collection) 560 (Google Scholar)	10 (Web of Science Core Collection) 13 (Google Scholar)	4	1	-	4
Zenun Skenderi	https://www.bib.irb.hr/pregled/znanstvenici/141653	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	20**	3**	147 (Web of Science Core Collection) 436 (Google Scholar)	7 (Web of Science Core Collection) 10 (Google Scholar)	1	0	-	3

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Sandra Bischof	https://www.bib.irb.hr/pregled/znanstvenici/187421	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	19**	-	366 (Web of Science Core Collection) 701 (Google Scholar)	11 (Web of Science Core Collection) 13 (Google Scholar)	5	3	-	1
Zlatko Vrljičak	https://www.bib.irb.hr/pregled/znanstvenici/73885	full professors with tenure	Technical sciences	Textile technology	Permanent employment - full-time	16**	6**	102 (Google Scholar)	4 (Google Scholar)	1	0	-	2
Željko Šomođi	https://www.bib.irb.hr/pregled/znanstvenici/192413	full professors with tenure	Technical sciences	Mechanical engineering	Part-time teacher (temporary service contract)	9**	-	44 (Google Scholar)	3 (Google Scholar)	1	0	-	1
Goran Hudec	https://www.bib.irb.hr/pregled/znanstvenici/102661	full professors with tenure	Technical sciences	Electrical engineering	Permanent employment - full-time	1**	-	57 (Google Scholar)	4 (Google Scholar)	0	3	-	1
Žarko Paić	https://www.bib.irb.hr/pregled/znanstvenici/172400	full professor	Social sciences	Sociology	Permanent employment - full-time	38**	-	2 (Web of Science Core Collection) 582 (Google Scholar)	1 (Web of Science Core Collection) 11 (Google Scholar)	0	0	-	2
Slavenka Petrak	https://www.bib.irb.hr/pregled/znanstvenici/238822	full professor	Technical sciences	Textile technology	Permanent employment - full-time	28**	6**	66 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Željko Penava	https://www.bib.irb.hr/pregled/znanstvenici/170666	full professor	Technical sciences	Textile technology	Permanent employment - full-time	20**	8**	50 (Web of Science Core Collection) 164 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	2	1	-	2
Antoneta Tomljenović	https://www.bib.irb.hr/pregled/znanstvenici/255292	full professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	1**	23 (Web of Science Core Collection) 69 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	2	2	-	2
Ivan Novak	https://www.bib.irb.hr/pregled/znanstvenici/225904	full professor	Social sciences	Economics	Permanent employment - full-time	14**	1**	1 (Web of Science Core Collection) 91 (Google Scholar)	0 (Web of Science Core Collection) 3 (Google Scholar)	0	0	-	1
Martinia Ira Glogar	https://www.bib.irb.hr/pregled/znanstvenici/238800	full professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	1**	15 (Web of Science Core Collection) 95 (Google Scholar)	2 (Web of Science Core Collection) 5 (Google Scholar)	1	5	-	3
Snježana Firšt Rogale	https://www.bib.irb.hr/pregled/znanstvenici/238780	full professor	Technical sciences	Textile technology	Permanent employment - full-time	11**	16**	39 (Web of Science Core Collection) 107 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	3	2	-	2
Mario Cetina	https://www.bib.irb.hr/pregled/znanstvenici/132844	full professor	Natural sciences	Chemistry	Permanent employment - full-time	11**	1**	835 (Web of Science Core Collection) 1239 (Google Scholar)	17 (Web of Science Core Collection) 18 (Google Scholar)	2	1	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Branka Vojnović	https://www.bib.irb.hr/pregled/znanstvenici/238844	full professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	3**	30 (Web of Science Core Collection) 54 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	2	1	-	1
Tomislav Rolich	https://www.bib.irb.hr/pregled/znanstvenici/232766	full professor	Technical sciences	Computer science	Permanent employment - full-time	7**	-	99 (Web of Science Core Collection) 214 (Google Scholar)	5 (Web of Science Core Collection) 8 (Google Scholar)	3	3	-	2
Sandra Flinčec Grgac	https://www.bib.irb.hr/pregled/znanstvenici/275022	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	29**	2**	151 (Web of Science Core Collection) 237 (Google Scholar)	7 (Web of Science Core Collection) 7 (Google Scholar)	4	2	-	1
Ivana Salopek Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/274971	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	23**	6**	81 (Web of Science Core Collection) 189 (Google Scholar)	4 (Web of Science Core Collection) 6 (Google Scholar)	1	5	-	1
Ana Sutlović	https://www.bib.irb.hr/pregled/znanstvenici/232770	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	22**	7**	12 (Web of Science Core Collection) 30 (Google Scholar)	3 (Web of Science Core Collection) 3 (Google Scholar)	1	3	-	1
Katarina Nina Simončič	https://www.bib.irb.hr/pregled/znanstvenici/275070	associate professor	Humanities	History of art	Permanent employment - full-time	19**	4**	2 (Web of Science Core Collection) 47 (Google Scholar)	1 (Web of Science Core Collection) 4 (Google Scholar)	0	2	1**	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Iva Rezić	https://www.bib.irb.hr/pregled/znanstvenici/274993	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	18**	-	404 (Web of Science Core Collection) 800 (Google Scholar)	13 (Web of Science Core Collection) 15 (Google Scholar)	6	2	-	1
Anica Hursa Šajatović	https://www.bib.irb.hr/pregled/znanstvenici/238791	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	17**	4**	86 (Web of Science Core Collection) 138 (Google Scholar)	5 (Web of Science Core Collection) 5 (Google Scholar)	1	4	-	6
Sanja Ercegović Ražić	https://www.bib.irb.hr/pregled/znanstvenici/275033	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	16**	3**	37 (Web of Science Core Collection) 161 (Google Scholar)	4 (Web of Science Core Collection) 7 (Google Scholar)	5	3	-	1
Dragana Kopitar	https://www.bib.irb.hr/pregled/znanstvenici/275000	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	2**	19 (Web of Science Core Collection) 66 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	2	-	1
Goran Čubrić	https://www.bib.irb.hr/pregled/znanstvenici/280411	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	15**	4**	8 (Web of Science Core Collection) 25 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	2	4	-	3
Vesna Marija Potočić Matković	https://www.bib.irb.hr/pregled/znanstvenici/255301	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	13**	2**	19 (Web of Science Core Collection) 73 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	1	4	-	1

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Slavica Bogović	https://www.bib.irb.hr/pregled/znanstvenici/199222	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	4**	14 (Web of Science Core Collection)	3 (Web of Science Core Collection)	3	3	-	4
Maja Somogyi Škoc	https://www.bib.irb.hr/pregled/znanstvenici/274956	associate professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	-	28 (Web of Science Core Collection) 48 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	4	1	-	1
Livio Racane	https://www.bib.irb.hr/pregled/znanstvenici/236842	associate professor	Natural sciences	Chemistry	Permanent employment - full-time	7**	1**	388 (Web of Science Core Collection) 633 (Google Scholar)	13 (Web of Science Core Collection) 13 (Google Scholar)	2	1	-	1
Mirna Rodić	https://www.bib.irb.hr/pregled/znanstvenici/274982	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	5**	-	28 (Web of Science Core Collection) 63 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	2
Kristina Krulić Himmelreich	https://www.bib.irb.hr/pregled/znanstvenici/292530	associate professor	Natural sciences	Mathematics	Permanent employment - full-time	4**	-	110 (Web of Science Core Collection) 258 (Google Scholar)	7 (Web of Science Core Collection) 9 (Google Scholar)	2	0	-	2
Emilija Zdraveva	https://www.bib.irb.hr/pregled/znanstvenici/320042	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	30**	-	70 (Web of Science Core Collection) 208 (Google Scholar)	4 (Web of Science Core Collection) 8 (Google Scholar)	2	1	-	2

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Bosiljka Šaravanja	https://www.bib.irb.hr/pregled/znanstvenici/32881	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	24**	6**	15 (Web of Science Core Collection) 41 (Google Scholar)	2 (Web of Science Core Collection) 4 (Google Scholar)	2	1	-	6
Ivana Špelić	https://www.bib.irb.hr/pregled/znanstvenici/324114	assistant professor	Technical sciences	Basic engineering sciences	Permanent employment - full-time	21**	5**	4 (Web of Science Core Collection) 29 (Google Scholar)	2 (Web of Science Core Collection) 3 (Google Scholar)	1	0	-	3
Alica Grilec	https://www.bib.irb.hr/pregled/znanstvenici/313553	assistant professor	Social sciences	Economics	Permanent employment - full-time	16**	2**	2 (Web of Science Core Collection) 81 (Google Scholar)	1 (Web of Science Core Collection) 3 (Google Scholar)	0	2	-	1
Ksenija Doležal	https://www.bib.irb.hr/pregled/znanstvenici/287152	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	4**	13 (Web of Science Core Collection) 77 (Google Scholar)	3 (Web of Science Core Collection) 5 (Google Scholar)	1	0	-	2
Lea Botteri	https://www.bib.irb.hr/pregled/znanstvenici/292526	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	14**	1**	68 (Web of Science Core Collection) 94 (Google Scholar)	4 (Web of Science Core Collection) 5 (Google Scholar)	3	4	-	1
Željko Knezić	https://www.bib.irb.hr/pregled/znanstvenici/131970	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	12**	14**	20 (Web of Science Core Collection) 11 (Google Scholar)	1 (Web of Science Core Collection) 2 (Google Scholar)	3	1	-	10
Renata Hrženjak	https://www.bib.irb.hr/pregled/znanstvenici/275011	assistant professor	Technical sciences	Textile technology	Permanent employment - full-time	8**	5**	26 (Web of Science Core Collection) 58 (Google Scholar)	3 (Web of Science Core Collection) 4 (Google Scholar)	0	1	-	4

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Karlo Lelas	https://www.bib.irb.hr/pregled/znanstvenici/297614	assistant professor	Natural sciences	Physics	Permanent employment - full-time	1**	-	8513 (Web of Science Core Collection) 24136 (Google Scholar)	51 (Web of Science Core Collection) 50 (Google Scholar)	4	0	-	1
Suzana Kutnjak-Mravlinčić	https://www.bib.irb.hr/pregled/znanstvenici/333339	senior lecturer	Technical sciences	Textile technology	Permanent employment - full-time	0	0	-	-	1	1	0	10
Ivana Martinčević	-	senior lecturer	Social sciences	Kinesiology	Permanent employment - full-time	0	0	-	-	0	0	0	3
Agata Vinčić	https://www.bib.irb.hr/pregled/znanstvenici/170633	senior lecturer	Technical sciences	Textile technology	Permanent employment - full-time	-	4**	5 (Google Scholar)	1 (Google Scholar)	0	0	-	20
Alen Pajtak	-	lecturer	-	-	Part-time teacher (temporary service contract)	3**	-	-	-	0	0	-	1
Antonia Treselj	https://www.bib.irb.hr/pregled/znanstvenici/37677	lecturer	Humanities	Philology	Permanent employment - full-time	0	0	-	-	0	0	0	3
Jadranka Akalović	-	lecturer	-	-	Part-time teacher (temporary service contract)	0	0	-	-	1	1	0	8
Josip Petric	-	lecturer	Technical sciences	Textile technology	Permanent employment - full-time	0	0	-	-	0	0	0	6

Teacher	Crosbi link	Grade*	Research area	Research field	Type of employment	Number of scientific papers in the last five years	Number of professional papers in the last five years	Total number of citations - indicate the source	Total h-index - indicate the source	Number of scientific projects as a leader and/or associate	Number of other projects, as principal investigator and/or project associate	Number of published higher education textbooks	Number of courses in the programme
Kristina Maršić	-	lecturer	Social sciences	Economics	Permanent employment - full-time	0	0	-	-	0	1	0	3
Ivana Lukica	https://www.bib.irb.hr/pregled/znanstvenici/315103	lecturer	Humanities	Philosophy	Permanent employment - full-time	0	0	-	-	0	0	0	3

* Scientific-teaching / artistic-teaching / teaching grade

** Crosbi/PDB data

Table 4.5. Total mobility of teachers and associates in the last five academic years

Type of mobility	Outgoing mobility		Incoming mobility	
	up to 3 months	3 and more months	up to 3 months	3 and more months
Teaching	34	5	24	-
Professional	60	-	4	-
In Arts	1	-	1	-
Research	129	1	8	1

Table 4.6. Total mobility of non-teaching staff in the last five academic years

Number of professional visits of non-teaching staff to HEIs abroad	
up to 3 months	3 and more months
1	-

Table 4.8. Space

		number/number of computers	square meters
A	Classrooms	16 / 13	1.199
B	Teaching laboratories/practicums	30 / 72	1.604
C	Worksites	- / -	-
C	Computer classrooms	2 / 33	107
C	Scientific laboratories	10 / 32	276
C	Rooms for student activities	6 / 24	280
D	Teaching offices	59 / 171	893
	TOTAL	123 / 345	4.359

Table 4.9. Capital equipment

(Provide information on the available capital equipment of a HEI whose purchase value exceeds 200,000 HRK)

Name of the instrument (equipment)	Purchase value (kn)	Year of purchase
Elektrokinetički analizator za određivanje zeta potencijala	279.205,35	2015
Spektrofotometar s jedinicom za hlađenje	249.998,75	2016
Naparivač uzoraka	221.062,5	2017
Uređaj za elektroispredanje iz taline	396.224,85	2017
Laboratorijski uređaj za pripremu i izradu uzoraka tkanina	240.287,5	2019
Goniometar s analizom kapljice i nagibnim stolićem	331.475	2019
Remisijski spektrofotometar	276.919	2020
Uređaj za detekciju pomoću X-zraka	403.182	2020
EDS - SDD setektor za SEM	797.500	2020

Table 4.10. Library equipment

(Provide information for HEI's library, if available)

Total area (in m2)	60
Number of professional library staff employed (HEI)	1
Total number of book volumes	2.940
Reading room within the library (number of seats / square metres)	12 / 60
Total number of compulsory literature textbooks (titles)	40
Total number of compulsory literature textbooks (volumes)	7.560
Total number of printed foreign journals in the library	3
Total number of printed national journals in the library	2
Number of electronic journals with full texts provided by the institution	5.811
The number of bibliographic databases provided and financed by the university / institution	53

Table 4.11 Financial evaluation - income

		2019 calendar year (kn)	2020 calendar year (kn)
	INCOME		
1.	STATE BUDGET INCOME	27.526.013	27.584.424
1.1.	Staff salaries	23.292.364	23.862.217
1.2.	Operational costs (including fieldwork)	1.960.390	1.151.184
1.3.	Adjunct/visiting teaching staff costs	317.201	362.826
1.4.	National scientific projects	-	-
1.5.	International scientific projects	78.555	7.438
1.6.	International cooperation	-	24.659
1.7.	Organization of academic conferences	-	16.685
1.8.	Journal subscription fees	-	-
1.9.	Maintenance	178.438	-
1.10.	Capital investments (buildings), investments mai	-	-
1.11.	Equipment	-	192.015
1.12.	Total income from other sources	1.699.065	1.967.400
2.	OTHER PUBLIC BUDGET INCOME	1.361.392	1.899.262
2.1.	Income and support by local authorities (town, city, county etc.)	-	-
2.2.	Income and support by other institutions (such as the National Science Foundation)	1.361.392	1.899.262
2.3.	Total income from other types of sources	-	-
3.	INTEREST INCOME	-	-
4.	OWN ACTIVITY INCOME	303.807	188.218
4.1.	Tuition fees - postgraduate specialist	-	-
4.2.	Tuition fees - postgraduate doctoral	84.000	73.400
4.3.	Scientific projects	-	-
4.4.	Professional projects	-	-
4.5.	Rental income	74.121	16.497
4.6.	Total income from other sources	145.686	98.321
5.	SPECIAL REGULATION INCOME	1.381.371	1.135.880
5.1.	Tuition fees - undergraduate, graduate, professional	986.829	599.980
5.2.	Additional knowledge or skills testing (if implemented in addition to State Graduation Exam)	43.200	49.800
5.3.	Enrolment fees	177.550	174.150
5.4.	Publishing	2.790	14.527
5.5.	Administrative fees (charging various forms, diplomas, certificates etc.)	84.300	89.750
5.6.	Total income from other sources	86.702	207.673
6.	OTHER (UNSPECIFIED) INCOME	949.955	6.282.523
A	TOTAL OPERATING INCOME	31.522.538	37.090.307

Table 4.12 Financial evaluation - expenses

		2019 calendar year (kn)	2020 calendar year (kn)
	EXPENSES		
1.	EMPLOYEE EXPENSES	24.647.212	25.842.794
1.1.	Staff salaries	20.696.160	21.601.953
1.2.	Adjunct/visiting teaching staff costs	-	-
1.3.	Total remaining expenditure	3.951.052	4.240.841
2.	MATERIAL AND ENERGY EXPENSES	1.450.016	1.243.259
2.1.	Office supplies and other material costs	541.076	429.272
2.2.	Laboratory supplies	-	-
2.3.	Energy	735.887	707.821
2.4.	Equipment and material for scheduled and investment maintenance	31.121	38.107
2.5.	Small inventory	118.038	60.103
2.6.	Total remaining expenditure	23.894	7.956
3.	SERVICE EXPENSES	2.879.793	2.549.526
3.1.	Telephone and postal costs, transport costs	141.069	167.544
3.2.	Scheduled and investment maintenance services	481.890	763.512
3.3.	Information and promotion	130.008	118.623
3.4.	Communal services	258.446	261.335
3.5.	Leasing, rent	125.849	43.511
3.6.	Intellectual and personal services (fees, contracts)	1.450.470	870.486
3.7.	IT services	121.172	131.005
3.8.	Total remaining expenditure	170.889	193.510
4.	NON-FINANCIAL ASSETS EXPENSES	6.711.697	4.169.644
4.1.	Facilities	-	-
4.2.	IT equipment	203.513	268.546
4.3.	Laboratory equipment	1.095.037	3.073.147
4.4.	Office equipment	192.015	289.251
4.5.	Communication equipment	20.895	5.150
4.6.	Other equipment	8.203	52.948
4.7.	Reading materials (books, journals etc.)	48.615	36.373
4.8.	Investment in machines, production facilities and other equipment	-	-
4.9.	Additional investment in buildings	5.143.419	326.828
4.10.	Total remaining expenditure	-	117.401
5.	EMPLOYEE REIMBURSEMENT	1.488.017	871.412
5.1.	Travel costs	627.297	190.753
5.2.	Training costs	324.144	257.666
5.3.	Other staff costs including transport costs	536.576	422.993
6.	OTHER (UNSPECIFIED) OPERATING EXPENSES	503.609	841.478
6.1.	Insurance premiums	63.720	43.110
6.2.	Representation costs	106.001	41.046
6.3.	Membership fees	20.723	35.149
6.4.	Bank costs	24.682	20.777
6.5.	Interest	-	-
6.6.	Other financial costs	288.483	701.396

		2019 calendar year (kn)	2020 calendar year (kn)
B	TOTAL OPERATING EXPENSES	37.680.344	35.518.113
C	Bottom line carried over from the last year	12.779.096	6.621.290
	UKUPNO STANJE 31.12. (A-B+C)	6.621.290	8.193.484

TABLE WITHIN THE TOPIC 5 - SCIENTIFIC / ARTISTIC AND PROFESSIONAL ACTIVITIES

Table 5.1.a Bibliography (in the last 5 years)

Type of publication*	Total number of publications	Number of publications that were the result of collaboration with other HEIs and scientific organisations	Ratio: Number of publications/number of teachers/5 years
Publications of the highest category according to the Ordinance on Appointment to Scientific Grades**	227	105	0,66
Other publications according to the Ordinance on Appointment to Scientific Grades**	262	63	0,76
Authorship of books published abroad**	4	0	0,01
Authorship of books published in Croatia**	13	4	0,04
Chapters in books**	80	6	0,23
Editorship of books**	10	2	0,03
Professional papers**	32	0	0,09
Peer-reviewed publications from scientific and professional events/conferences/in proceedings of scientific and professional events/conferences**	319	72	0,93
Number of publications of HEI's teachers in HEI's own journals	0	0	0
Number of citations for HEI (specify the source database, not including self-citations)	806 (Web of Science Core Collection)		
Total h-index citations for HEI (specify the source database, not including self-citations)	14 (Web of Science Core Collection)		
Link to Crosbi	https://www.bib.irb.hr/pregled/ustanove/117		
Link to citation database with a comprehensive overview for a HEI (works in WoS, Scopus)	https://bit.ly/30Va6bi		

*national and international

- The data on the HEI 's papers are entered in the table.
- Only data on peer-reviewed papers are entered in the table.
- Papers authored by several teachers of a HEI are indicated only once.
- For citations, state the total number and the citation database.
- For h-index, state the total number and the citation database.

** Crosbi data (analysis made according to technical sciences area rules).

Table 5.2. Bibliography of artists (in the last 5 years)

ARTISTIC PRODUCTIVITY	Total
Number of complex artworks defined as extraordinary achievements with international merit	0
Number of complex artworks defined as extraordinary achievements with national merit	0
Number of artworks premiered at artistic events with international merit	8
Number of artworks premiered at artistic events with national merit	11
Number of artworks premiered with reviews published	23
Number of artworks premiered	54
Authorship of books published abroad	0
Authorship of books published in Croatia	1

Table 5.3. Projects in the last 5 years*

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Razvoj multifunkcionalne negorive tkanine za dualnu namjenu	17.08.2020 - 16.08.2023	Scientific	Grants	European Commision Ministry of Economy, Entrepreneurship and Crafts	European Regional Development Fund	partner	3.239.176,25 HRK	11.660.948,54 HRK
Laserska sinteza nanočestica i primjene	01.02.2020 - 31.01.2024	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	1.499.920 HRK
Kompozitna mreža 3D čvrstoće i biorazgradivi vlaknasti fibroin svile / hidroksiapatita na bazi 3D tehnologije tiska	01.01.2020 - 31.12.2021	Scientific	Project funding	Ministry of Science and Education		leading institution	60.000 HRK	60.000 HRK
Antibakterijska prevlaka za biorazgradive medicinske materijale	20.12.2019 - 19.12.2023	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	952.252 HRK	952.252 HRK
Dizajn naprednih biokompozita iz energetski održivih izvora (BIOKOMPOZITI)	20.12.2019 - 20.12.2022	Scientific	Project funding	European Commision Ministry of Science and Education	European Regional Development Fund	leading institution	4.168.509,75 HRK	5.955.013,92 HRK
Sinteza naprednih nanočestica i primjene u fotokatalizi i tekstilnim materijalima	01.10.2019 - 30.09.2022	Scientific	Project funding	Croatian Science Foundation	Programme Research Cooperability	partner	0 HRK	2.090.486 HRK

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Proizvodnja hrane, biokompozita i biogoriva iz žitarica u kružnom biogospodarstvu	01.09.2019 - 01.06.2023	Scientific	Grants	European Commision The Environmental Protection and Energy Efficiency Fund Institution self-funding Ministry of Environment and Energy	European Regional Development Fund	partner	538.942,52 HRK	3.398.322,29 HRK
Bio-inovativni poliesteri	01.05.2019 - 01.01.2022	Scientific	Project funding	Ministry of Science and Education		leading institution	22.280 HRK	22.280 HRK
Doktorand na projektu Bolničke zaštitne tekstilije	25.04.2019 - 24.04.2023	Scientific	Project funding	Croatian Science Foundation	Young Researchers Career Development Project - Training New Doctoral Students	leading institution	585.600 HRK	585.600 HRK
Doktorand na projektu Razvoj i toplinska svojstva inteligentne odjeće	25.04.2019 - 24.04.2023	Scientific	Project funding	Croatian Science Foundation	Young Researchers Career Development Project - Training New Doctoral Students	leading institution	585.600 HRK	585.600 HRK
Izračun antropometrijskih mjera pametnim telefonom i tabletom	01.02.2019 - 31.01.2023	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	959.000 HRK
Razvoj i toplinska svojstava inteligentne odjeće	01.01.2019 - 31.12.2022	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	828.100 HRK	828.100 HRK
Oklapanje od elektromagnetskih polja električki vodljivim tekstilnim materijalima	01.12.2018 - 30.11.2022	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	969.136 HRK

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Multi-funkcionalni tkani kompoziti za toplinsku zaštitnu odjeću	15.11.2018 - 14.11.2022	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	868.000 HRK	868.000 HRK
Istraživanje antioksidativnog djelovanja benzazolskog skeleta u dizajnu novih antitumorskih agensa	01.11.2018 - 30.10.2022	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	994.000 HRK
Bolničke zaštitne tekstilije	15.03.2018 - 14.09.2023	Scientific	Project funding	Croatian Science Foundation	Installation Research Projects	leading institution	1.743.064 HRK	1.743.064 HRK
Metalosupramolekulske strukture i anorgansko organski polioksometalatni hibridi	01.03.2018 - 21.02.2021	Scientific	Project funding	Croatian Science Foundation Ministry of Science and Education	Research Projects	partner	0 HRK	858.000 HRK
Antropometrijska mjerenja sportske populacije za tkanu i netkanu odjeću	01.02.2018 - 01.02.2020	Scientific	Project funding	Ministry of Science and Education		leading institution	60.000 HRK	60.000 HRK
Razvoj pametne odjeće za dementne osobe	01.01.2018 - 31.12.2019	Scientific	Project funding	Ministry of Science and Education		leading institution	2.000 EUR	2.000 EUR
Utjecaj raspoloživosti kationa i aniona iz biomase na lignocelulozne enzime i primjena u tekstilnoj industriji	01.01.2018 - 31.12.2019	Scientific	Project funding	Ministry of Science and Education		leading institution	40.800 HRK	40.800 HRK

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Provedba vrhunskih istraživanja u sklopu Znanstvenog centra izvrsnosti za kvantne i kompleksne sustave te reprezentacije Liejevih algebri	01.11.2017 - 31.10.2022	Scientific	Grants	European Commision	European Social Fund	partner	0 HRK	36.956.624,09 HRK
Dinamični hibridni materijali za novu primjenu temeljeni na metalnim nanočesticama i gelovima	15.03.2017 - 14.03.2021	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	1.000.000 HRK
Sintetička magnetska polja uz međudjelovanja i anyoni	15.03.2017 - 14.03.2021	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	382.733 HRK
Ciljana izrada prototipa vlaknastog nosača za uzgoj tkivnih stanica kombiniranim elektroispredanje m	01.03.2017 - 31.08.2021	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	969.701 HRK	969.701 HRK
Udobnost i antimikrobna svojstva tekstila i obuće	01.03.2017 - 31.12.2021	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	724.100 HRK	724.100 HRK
Doktorand na projektu Sinteza i ciljana primjena metalnih nanočestica	14.12.2016 - 13.06.2021	Scientific	Project funding	Croatian Science Foundation	Young Researchers Career Development Project - Training New Doctoral Students	leading institution	658.800 HRK	658.800 HRK

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Doktorand na projektu Napredni tekstilni materijali dobiveni ciljanom modifikacijom površine	28.11.2016 - 07.04.2017	Scientific	Project funding	Croatian Science Foundation	Young Researchers Career Development Project - Training New Doctoral Students	leading institution	61.000 HRK	61.000 HRK
Sinergija vodikove i halogenske veze u kreiranju funkcionalnih meterijala	19.07.2016 - 19.07.2017	Scientific	Project funding	Other Business Entity	Zaklada Hrvatske akademije za znanost i umjetnost	leading institution	6.000 HRK	6.000 HRK
Diferencijalni toplinski konduktometar za tekstilne kompozite i odjeću	01.07.2016 - 30.06.2017	Scientific	Project funding	Croatian Agency for SMEs, Innovations and Investments Institution self-funding	Program provjere inovativnog koncepta (PoC)	leading institution	451.587,88 HRK	451.587,88 HRK
Sustav za predobradu predenih pređa hladnom atmosferskom plazmom	01.07.2016 - 30.06.2017	Scientific	Project funding	Croatian Agency for SMEs, Innovations and Investments Institution self-funding	Program provjere inovativnog koncepta (PoC)	leading institution	20.572,74 HRK	388.888,9 HRK
Innovative textile solutions for the aplication of humic substances with antibacterial, antiviral and anti fugal effects	01.04.2016 - 31.03.2018	Scientific	Project funding	Foreign institution in Science and Higher Education	Federal Ministry of Education and Research (Germany)	partner	3.120 EUR	74.603,2 EUR
Amonijev boran i njegovi derivati za pohranu vodika u čvrstom stanju	01.01.2016 - 31.12.2017	Scientific	Project funding	Ministry of Science and Education		partner	0 EUR	2.000 EUR
Nove tehnologije pri razvoju zaštitne odjeće u virtualnom okruženju	01.01.2016 - 31.12.2017	Scientific	Project funding	Ministry of Science and Education		leading institution	2.000 EUR	2.000 EUR
Topološka svojstva optičkih i fotoničkih rešetki	01.01.2016 - 31.12.2017	Scientific	Project funding	Ministry of Science and Education		partner	0 HRK	40.000 HRK

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Bioxyarn In vitro evaluation of the biocompatibility of nanofibrous yarns from an oxidative stress perspective	01.12.2015 - 01.12.2017	Scientific	Project funding	European Commision	Horizon 2020	coordinator of activities	3.000 EUR	170.010 EUR
Sinteza i ciljana primjena metalnih nanočestica	01.09.2015 - 31.08.2018	Scientific	Project funding	Croatian Science Foundation	Installation Research Projects	leading institution	846.965 HRK	846.965 HRK
Univerzalne osobine sustava hladnih bozonskih i fermionskih sustava	15.06.2015 - 14.03.2019	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	595.500 HRK
Napredni tekstilni materijali dobiveni ciljanom modifikacijom površine	01.10.2014 - 30.09.2018	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	989.200 HRK	989.200 HRK
Primjena matematičkog modeliranja i inteligentnih algoritama pri konstrukciji odjeće	01.10.2014 - 30.09.2018	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	412.900 HRK	412.900 HRK
Tekstilne antene za pametno okruženje	01.09.2014 - 30.08.2018	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	988.000 HRK
Sinteza i citostatska ispitivanja biblioteka novih dušikovih heterocikla	02.06.2014 - 30.05.2018	Scientific	Project funding	Croatian Science Foundation	Research Projects	partner	0 HRK	934.036 HRK
Nejednakosti i primjene	01.06.2014 - 30.05.2018	Scientific	Project funding	Croatian Science Foundation	Research Projects	leading institution	547.130,36 HRK	547.130,36 HRK
Razvoj i provedba stručne prakse na Tekstilno-tehnološkom fakultetu - RAST	09.03.2020 - 09.03.2023	Professional	Grants	European Commision Ministry of Science and Education	European Social Fund	leading institution	3.580.194,33 HRK	3.756.400,57 HRK

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
ICT in Textile and Clothing Higher Education and Business	01.01.2020 - 31.12.2021	Professional	Project funding	European Commision	Erasmus+	partner	70.500 EUR	999.185 EUR
Internacionalizacij a doktorskog studija Tekstilna znanost i tehnologija	12.10.2018 - 12.10.2021	Professional	Grants	European Commision	European Social Fund	leading institution	1.740.737,48 HRK	1.740.737,48 HRK
Skrojene budućnosti?	23.07.2018 - 23.07.2019	Professional	Grants	European Commision Ministry of Culture	European Social Fund	partner	33.405,96 HRK	547.246,02 HRK
Zajedno ka održivom socijalnom dijalogu - ZAKOS	29.03.2018 - 29.03.2020	Professional	Grants	European Commision Ministry of Labour and the Pension System	European Social Fund	partner	14.301,63 HRK	679.793,81 HRK
Restoring Resilience - Connecting to Nature and Self	01.09.2016 - 31.08.2018	Professional	Project funding	European Commision	Erasmus+	coordinator of activities	0 EUR	59.983 EUR
Platforma znanja za prijenos istraživanja i inovacija u proizvodnji obuće	01.07.2015 - 31.08.2018	Professional	Project funding	European Commision	Erasmus+	partner	18.469 EUR	229.576 EUR
Razvoj standarda kvalifikacija i preddiplomskih studijskih programa na Tekstilno-tehnološkom fakultetu	18.06.2015 - 18.10.2016	Professional	Grants	European Commision Ministry of Science and Education	European Social Fund	leading institution	1.389.947,2 HRK	1.669.467,26 HRK
Grading Soft Skills - GRASS	01.01.2014 - 31.12.2016	Professional	Project funding	European Commision		partner	40.525,2 EUR	540.444 EUR
Teaching Creativity in Engineering - TECRINO	01.01.2014 - 31.01.2016	Professional	Project funding	European Commision		partner	37.668,67 EUR	398.653 EUR

Project (name)	Project interval duration**	Type of project	Type of funding	Funder	Financing details	The role of HEI	Total amount allocated to HEI (kn)	Total project amount (kn)
Modernizacija infrastrukture znanstvenoistraživačkoga centra za tekstil (MI-TRSC)	16.05.2018 - 16.03.2021	Infrastructural	Grants	European Commision Ministry of Science and Education	European Regional Development Fund	leading institution	10.642.529 HRK	10.642.529 HRK
Investigating Avant-garde Mosquito Repellent Nano-Technologies as control Measures for Mosquito	21.09.2017 - 20.09.2021	International Mobility	Project funding	COST - European Cooperation in Science and Technology		partner	0 EUR	483.490,84 EUR
Polyoxometalate Chemistry for Molecular Nanoscience	09.11.2012 - 08.11.2016	International Mobility	Project funding	COST - European Cooperation in Science and Technology		partner	0 EUR	355.403,09 EUR
Sustainable flame retardancy for textiles and related materials based on nanoparticles substituting conventional chemicals	23.05.2012 - 22.05.2016	International Mobility	Project funding	COST - European Cooperation in Science and Technology		partner	0 EUR	0 EUR

*In reverse order, starting from the most recent projects including those which are not yet completed.

**Project start and end date (month and year).

Table 5.4. Work in conference organizational committees in the last 5 years

Conference (name)	Organizer	Year	Number of persons involved in organization	Number of participants
20th International Conference on Printing, Design and Graphic Communications „Blaž Baromić“	Faculty of Graphic Arts(128)	2016	1	150
4th International OFEL Conference on Governance, Management and Entrepreneurship	Governance Research and Development Centre(304914)	2016	1	200
6th International Ergonomics Conference – Ergonomics	Faculty of Textile Technology(117)	2016	4	150
8th International Textile Clothing & Design Conference – Magic World of Textiles, ITC&DC 2016	Faculty of Textile Technology(117)	2016	7	180
9. Znanstveno-stručni skup Tekstilna znanost i gospodarstvo 2016	Faculty of Textile Technology(117)	2016	9	110
Dan Znanstveno-istraživačkog centra za tekstil (TSRC)	Faculty of Textile Technology(117)	2016	5	100
Inter Congress: World anthropologies and privatization of knowledge: engaging anthropology in public, Panel 751	Croatian Anthropological Society(304917)	2016	1	200
International Conference MATRIB 2016, Vela Luka, Croatia	Faculty of Mechanical Engineering and Naval Architecture(120)	2016	1	150
Međunarodni dan boja 2016	Crotian Colour Society(304916)	2016	3	150
Posthumano stanje i perspective umjetnosti	Center for Visual Studies(304497)	2016	2	200
Tekstilni dani Zagreb 2016.	Croatian Engineering Association(304411)	2016	9	80
The Twenty-fourth Croatian-Slovenian Crystallographic Meeting, (Bol, Croatia)	Croatian Crystallographic Association(304882)	2016	1	150
10. Znanstveno-stručni skup, Tekstilna znanost i gospodarstvo, TZG 2017., Zagreb	Faculty of Textile Technology(117)	2017	8	180
21st International Conference on Printing, Design and Graphic Communications „Blaž Baromić“	Faculty of Graphic Arts(128)	2017	1	150

Conference (name)	Organizer	Year	Number of persons involved in organization	Number of participants
5th Annual International Conference on Material Science and Engineering ICMSE2017, Suzhou, Jiangsu	Faculty of Science(119)	2017	1	200
5th International OFEL Conference on Governance, Management and Entrepreneurship: The Paradoxes of Leadership and Governance	Governance Research and Development Centre(304914)	2017	1	200
Dan Znanstveno-istraživačkog centra za tekstil (TSRC)	Faculty of Textile Technology(117)	2017	10	81
Festival znanosti 2017.	Technical Museum Nikola Tesla and University of Zagreb(304909)	2017	1	1.000
Međunarodni dan boje	Crotian Colour Society(304916)	2017	3	150
NOVE TEORIJE SLIKE, interdisciplinarna znanstvena konferencija	Center for Visual Studies(304497)	2017	1	100
Razmjeri prostornog obrata: filozofsko čitanje arhitekture, Zagreb, Hrvatska	Tvrđa- theory, culture and visual arts journal(304915)	2017	2	200
Tekstilni dani 2017.	Croatian Engineering Association(304411)	2017	4	80
11. znanstveno-stručno savjetovanje Tekstilna znanost i tehnologija, TZG 2018	Faculty of Textile Technology(117)	2018	11	140
22nd International Conference on Printing, Design and Graphic Communications „Blaž Baromić“	Faculty of Graphic Arts(128)	2018	1	150
6th International OFEL Conference on Governance, Management and Entrepreneurship	Governance Research and Development Centre(304914)	2018	1	150
7th International Ergonomics Conference – ERGONOMICS 2018	Faculty of Textile Technology(117)	2018	4	150
9th International Textile Clothing & Design Conference - Magic World of Textiles, ITC&DC 2018	Faculty of Textile Technology(117)	2018	10	130
Dan Znanstveno-istraživačkog centra za tekstil (TSRC)	Faculty of Textile Technology(117)	2018	7	181

Conference (name)	Organizer	Year	Number of persons involved in organization	Number of participants
Danube Adria Association for Automation & Manufacturing Symposium, 2018	DAAAM International Vienna(303983)	2018	1	150
Fashion, Costume and Visual Culture - FCVC 2018	Faculty of Textile Technology(117)	2018	2	150
International Conference MATRIB 2016, Vela Luka, Croatia	Faculty of Mechanical Engineering and Naval Architecture(120)	2018	1	150
Mathematical Inequalities and Applications 2018 (MIA conference 2018)	University of Zagreb(304091)	2018	2	80
Međunarodni dan boja „Boja u suvremenosti”	Faculty of Textile Technology(117)	2018	3	150
Obrazovanje u modnom dizajnu - prednosti i mane	Faculty of Architecture(54)	2018	1	100
Tekstilni dani Zagreb 2018	Croatian Engineering Association(304411)	2018	9	80
The Twenty-Sixth Croatian-Slovenian Crystallographic Meeting (Poreč, Croatia)	Croatian Crystallographic Association(304882)	2018	1	85
'Suvremeni film i njegove teorije: Od narativnosti događaja do vizualizacije života'	Center for Visual Studies(304497)	2019	2	100
12th International Conference TZG 2019 - Textile Science and Economy 2019 French-Croatian Forum	Faculty of Textile Technology(117)	2019	10	200
12th International Scientific Conference on Production Engineering	Technical faculty of University of Bihać(304912)	2019	7	150
20th MATRIB International conference on Materials	Croatian society for materials and tribology(303964)	2019	1	150
23rd International Conference on Printing, Design and Graphic Communications „Blaž Baromić“	Faculty of Graphic Arts(128)	2019	1	150
30th Danube Adria Association for Automation & Manufacturing Symposium, 2019	DAAAM International Vienna(303983)	2019	2	200
7th International OFEL Conference on Governance, Management and Entrepreneurship	Governance Research and Development Centre(304914)	2019	1	200
Dan Znanstveno-istraživačkog centra za tekstil (TSRC)	Faculty of Textile Technology(117)	2019	5	118

Conference (name)	Organizer	Year	Number of persons involved in organization	Number of participants
Fashion, Costume and Visual Cultures 2019	University of Zagreb(304091)	2019	1	300
Festival znanosti 2019.	Technical Museum Nikola Tesla and University of Zagreb(304909)	2019	1	1.000
Međunarodni dan boja, znanstveno-stručni skup „Boja i materijali”	Faculty of Textile Technology(117)	2019	4	100
Tekstilni dani Zagreb 2019	Croatian Engineering Association(304411)	2019	9	80
The International Conference Tex Teh IX, Advanced textiles for a better world	The National Research and Development Institute for Textiles and Leather(304913)	2019	1	200
13th International Scientific-Professional Symposium - Textile Science & Economy 2020, Chinese-Croatian Forum	Faculty of Textile Technology(117)	2020	15	700
8th International OFEL Conference on Governance, Management and Entrepreneurship	Governance Research and Development Centre(304914)	2020	1	150
Dan Znanstveno-istraživačkog centra za tekstil (TSRC)	Faculty of Textile Technology(117)	2020	5	160
International Ergonomics Conferences – ERGONOMICS 2020	Croatian Ergonomics Society(303965)	2020	4	150
Muzealizacija mode – počeci i izazovi na prostoru Slovenije, Hrvatske i Srbije	Faculty of Textile Technology(117)	2020	8	150

Table 5.5. Editorship in journals in the last 5 years

Journal	Publisher, place	Type of participation of the member of HEI's academic staff (chief editor / member of editorial board, etc.)	Citation database or national classification (A1/2, A,B,C)	Q of the journal (link to JCR, SCImago) or Crosbi link
AUTEX Research Journal, ISSN 1470-9589	Lodz University of Technology Faculty of Material Technologies and Textile Design, Lodz	editorial board	A	http://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=24ee76f6-8795-413e-b
Abstract and Applied Analysis, ISSN: 1085-3375	Hindawi Publishing Corporation, London	editorial board	B	https://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=19f8e1d3-893a-4a05-
Acta Graphica ISSN 0353-4707, e-ISSN 1848-3828	Grafički fakultet Sveučilišta u zagrebu, Zagreb	editorial board	B	https://hrcak.srce.hr/actagraphica
Advances in Nonlinear Analysis and Applications (ANAA), e-ISSN: 2587-2648	Serials Publications, Delhi	editorial board	A	https://www.scimagojr.com/journalsearch.php?q=21100943825&tip=sid&clean=0
Asian-European Journal of Mathematics, World Scientific , ISSN: 1793- 5571	World scientific, Tuck Link, Singapore	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=21100198431&tip=sid&clean=0
Banach Journal of Mathematical Analysis (BJMA) ISSN: 1735-8787	Springer Nature, Basel, Basel	editorial board	A	https://www.scimagojr.com/journalsearch.php?q=17300154737&tip=sid&clean=0
Croatian Mathematical Society and Department of Mathematics, ISSN: 0017-095X	Sveučilište u Zagrebu, Zagreb	editorial board	A	https://www.scimagojr.com/journalsearch.php?q=4700152292&tip=sid&clean=0
Didactica Mathematica, ISSN: 0172-8407	Casa Cărţii de Ştiinţă ("Babeş-Bolyai" University, Cluj-Napoca, Rešita	editorial board	B	http://www.math.ubbcluj.ro/~didactica/scope.html
Eurasian Mathematical Journal ISSN: 2077-9879	L. N. Gumilyov Eurasian National University, Nur-Sultan, Moskva	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=21100336501&tip=sid&clean=0
Fractional differential calculus ISSN: 1847-9677	Element, digital publisher	chief editor	B	http://fdc.ele-math.com/
IMAGES: JOURNAL FOR VISUAL STUDIES ISSN: 1848-9478	SAGE Publishing, Thousand Oaks, California	editorial board	B	http://www.visual-studies.com/images/
International Journal of Applied Mathematics, ISSN: 1311-1728	Publishing House „Academic Publications" Hindawi Publishing Corporation, California	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=19700182690&tip=sid&clean=0
Journal Nonlinear Analysis and Applications ISSN: 2193-3472	ISPACS GmbH, Mannheim, Germany, Basel	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=21100873480&tip=sid&clean=0

Journal	Publisher, place	Type of participation of the member of HEI's academic staff (chief editor / member of editorial board, etc.)	Citation database or national classification (A1/2, A,B,C)	Q of the journal (link to JCR, SCImago) or Crosbi link
Journal of Classical Analysis ISSN: 1848-5979	Element, Zagreb	editorial board	Google Scholar, B	http://jca.ele-math.com/
Journal of Computational Analysis and Applications, ISSN: 1521-1398	Springer, New York, New York	editorial board	A	https://www.scimagojr.com/journalsearch.php?q=23912&tip=sid&clean=0
Journal of Function Spaces and Applications, ISSN: 2314-8896	Hindawi Publishing Corporation, London, London	editorial board	A	http://apps.webofknowledge.com/Search.do?product=WOS&SID=D4qPSXHUG1E9JWXs5L4&search_mode=GeneralSearch&prID=6c9c88bc-35b4-4d34-b
Journal of Inequalities in Pure & Applied Mathematics, ISSN: 1443-5756	Victoria University, Melbourne, Melbourne	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=23912&tip=sid&clean=0
Journal of Mathematical Inequalities ISSN: 1846-579X	Element, Zagreb	chief editor	B	https://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=d0c62711-87b3-419b-
Journal of Mathematical and Computational Science, ISSN: 1927-5307	Science & Knowledge Publishing Corporation Limited, London, London	editorial board	B	http://scik.org/index.php/jmcs
Književna republika, ISSN: 1334-1057	Hrvatsko Društvo Pisaca, Zagreb	editorial board	B	https://hrvatskodrustvopisaca.hr/hr/casopisi/knjizevna-republika/1-4-2019
Koža & obuća, ISSN 0450-8726	HDKO, Zagreb	chief editor	B	https://hrcak.srce.hr/koza-i-obuca
Materials Special Issue of Advanced Materials for Clothing and Textile Engineering ISSN: 1996-1944	MDPI AG, Basel	chief editor	A	http://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=c15963b1-02e1-4b6b-9
Mathematical Inequalities & Applications, ISSN: 1331-4343	Element, Zagreb	chief editor	A	https://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=f054d47a-fd0b-46b9-
Međunarodnog interdisciplinarnog časopisa TEDI, online ISSN: 1847-9545	Sveučilište u Zagrebu Tekstilno-tehnološki fakultet, Zagreb	editorial board	B	https://hrcak.srce.hr/tedi
Molecules (Special Issue) Chemical Modification of Textiles and Fibrous Polymers ISSN: 1420-3049	MDPI AG, Basel	chief editor	A	http://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=c39dc518-9d99-4c34-8

Journal	Publisher, place	Type of participation of the member of HEI's academic staff (chief editor / member of editorial board, etc.)	Citation database or national classification (A1/2, A,B,C)	Q of the journal (link to JCR, SCImago) or Crosbi link
Nonlinear Functional Analysis ans Applications, ISSN: 1229-1595	Publishing House „Academic Publications" Hindawi Publishing Corporation, California	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=21100838755&tip=sid&clean=0
Operators and Matrices ISSN: 1846-3886	Element, Zagreb	chief editor	Web of Science Core Collection, A	https://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=243a2498-edf1-49d4-
Pakistan Journal of Scientific and Industrial Research (PJSIR), ISSN 2221-6413 (Print); ISSN 2223-2559)	Pakistan Council of Scientific and Industrial Research, Bahawalpur	chief editor	B	https://www.scimagojr.com/journalsearch.php?q=22276&tip=sid&clean=0
Pan American Mathematical Journal, ISSN: 1064-9735	International Publications USA, Denton, Houston	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=11100153312&tip=sid
Phainomena p-ISSN: 1318-3362 e-ISSN: 2232-6650	Fenomenološko društvo u Ljubljani, Ljubljana	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=5700167641&tip=sid&clean=0
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Polymers (Special Issue "Multifunctional Advanced Textile Materials") ISSN: 2073-4360	MDPI AG, Basel	chief editor	A	http://apps.webofknowledge.com/Search.do?product=WOS&SID=F2RkexV6lvtWyV1WbqX&search_mode=GeneralSearch&prID=f220e34a-f549-42ea-9
RAD HAZU, Matematičke znanosti, Croatian ISSN: 1845-4100	Hrvatska akademija znanosti i umjetnosti, Zagreb, Zagreb	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=21100455621&tip=sid&clean=0
TVRĐA: časopis za teoriju, kulturu i vizualne umjetnosti ISSN: 1332-9146	Hrvatsko Društvo Pisaca, Zagreb	chief editor	B	https://hrvatskodrustvopisaca.hr/hr/casopisi/tvrda/1-2-2020
Tamsui Oxford Journal of Information and Mathematical Sciences (previous name: Tamsui Oxford Journal of Mathematical Science), I	Aletheia University, New Taipei City, Peking	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=21100217203&tip=sid&clean=0
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Tekstilec, ISSN: 2350-3696	University of Ljubljana, Faculty of Natural Sciences and Engineering, Ljubljana	editorial board	Web of Science Core Collection, A	https://www.scimagojr.com/journalsearch.php?q=100237&tip=sid&clean=0
Textile & Leather Review, ISSN: 2623-6281	Seniko studio d.o.o., Zagreb	chief editor	B	https://hrcak.srce.hr/TLR

Journal	Publisher, place	Type of participation of the member of HEI's academic staff (chief editor / member of editorial board, etc.)	Citation database or national classification (A1/2, A,B,C)	Q of the journal (link to JCR, SCImago) or Crosbi link
Vlákna a textil ISSN (print): 1335-0617, ISSN (online): 2585-8890	Slovak University of Technology in Bratislava, Technical University of Liberec, Bratislava	editorial board	B	https://www.scimagojr.com/journalsearch.php?q=17198&tip=sid&clean=0

TOPIC 2 - STUDY PROGRAMMES

Higher education institution: Faculty of Textile Technology (117)

Generated: 07.04.2021.

TABLE WITHIN THE TOPIC 2 - STUDY PROGRAMMES

Table 2.1. Learning outcomes at the level of the study programme for the evaluated academic year

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

Learning outcomes* of study programme / Courses	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	ST11	ST12	ST13
S Machin.a.Autom.for Clorh.Tech. (1339)			+		+		+				+		+
S Clothes Finishing Technology (1340)			+		+					+	+		
S English Language II (1342)		+											+
S Practical Training DO (1344)	+		+		+		+			+	+		+
S Textile Materials (1345)			+	+			+	+				+	
S Physical Education II (1346)											+		
S Economics (1347)		+					+				+		+
S Basics of Textile Finishing (1348)			+		+					+			
S Practical Training OT (1349)	+		+		+		+		+	+	+		+
Foreign Language I- S German II (1350)		+											+
S Basics of Textile Production (1351)			+									+	
S Weaving Technology (1352)	+		+		+	+			+	+		+	
S Pretreatment ofText.Finishing (1353)			+		+			+		+			
S Quality Management (1354)				+	+	+			+				
S Physical Education I (1355)											+		
Foreign Language I - S English (1356)		+									+		+
Matrials in Footw Industry II (1357)				+	+				+				
S Computer Aided Reciping (1358)		+							+		+		
S Computing (1359)	+	+				+							+
S Mathematics (1360)	+		+	+	+	+			+				
Foreign Language I- S German III (1361)		+											+
S Testing of Textiles a.Clothing (1363)			+				+		+		+		
S Textile Fibres and Materials (1364)	+		+	+				+	+		+		
S Footwear .Design (1365)		+		+							+		
S Practical Training TTK (1366)			+	+	+	+	+	+	+	+	+	+	
S Footwear Product. Techno. II (1367)		+	+		+	+		+				+	
S Spinning Technology I (1369)			+			+		+	+	+			
S Techn. Prepar.in Cloth.Produ. (1370)	+		+		+		+				+		+

Learning outcomes* of study programme / Courses	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	ST11	ST12	ST13
S Organic Chemistry (1371)	+			+			+		+			+	
Foreign Language I- S German I (1372)		+									+		+
S Textile Care Processes (1373)				+		+			+	+			
S Patte.a.Const.of fKnitted Fabr. (1374)	+			+				+			+		+
S Struct. a. Properties of Mater. (1376)	+		+				+	+					
S Footwear Model.a. Constru.I (1377)		+	+	+								+	
S Statistics (1378)	+					+			+				+
S Physical Education IV (1379)											+		
S History of Fo. a. Accessories (1380)		+	+				+						
Fibres I (1381)	+		+	+				+	+				+
S Foreign Language III- S English III (1382)		+											+
S General Chemistry (1383)	+		+	+			+	+	+			+	
S Last Construction (1386)	+		+										+
Machin.a.Autom.for Clorh.Tech. (1387)	+		+		+		+				+		+
S Footwear Prod. Technology I (1388)		+	+		+	+		+					
S Thermodynamics (1389)	+		+	+					+				
S Clothes Cutting Technology (1390)			+		+		+			+	+		
S Weavs a.Fabr. Constructions (1391)	+			+				+			+		+
S Basics of Design (1393)							+						+
S Clothing Construction II (1394)													
S Clothes Modelling (1395)			+		+		+						+
S Physics I (1396)	+		+		+		+				+		
S Physical Education III (1397)											+		
S Machin.a.Mechan.in Fo.Ind. (1398)	+		+									+	
S Footwear Model.a. Constru.I (1399)	+		+	+			+						+
S Textile Testing (1401)			+	+			+		+		+		
S Basics of. Mech. Engineering (1338)	+		+			+						+	
S Textile Finishing Operations (1405)			+	+	+					+		+	
S Artistic and Graphic Composition (1453)					+		+						+
S Matrials in Footw Industry (1406)				+	+				+			+	
S Fashion Theory (1407)		+					+						+
S Physico-mech Testing ofTex. (1408)			+				+		+		+		
S Cementing Oper.a.Adhesives (1411)				+				+				+	
S Analytical Chemistry (1413)	+			+					+				
S Textile Finishing Operations (1414)			+			+		+	+	+			

Learning outcomes* of study programme / Courses	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	ST11	ST12	ST13
S Biomechanics (1415)	+		+									+	
S Anatomy (1416)			+				+						
S Practical Training TTM (1418)		+	+		+	+			+	+	+	+	+
S Basics of Leather Processing (1419)	+	+		+					+				
S Basics of Clothing Production (1421)	+		+							+			
S Fundam. of Clothing Design (1422)	+		+		+		+				+		
S Autom.in Footwear Product (1425)	+		+			+				+		+	
S Clothing Construction I (1426)		+	+	+	+		+						+
S Knitting Technology (1428)			+			+		+	+	+	+		
S Fibres II (1429)	+		+			+		+	+				+
S Computeraided Footwear Design (1430)			+		+	+							+
S Computer Clothing Construction (1435)	+		+			+			+		+		+
S Colour Basics (1436)	+					+							
S Yarn Structure and Properties (1437)			+										+
S Basics of Footwear Design (1438)		+	+				+				+		+
S Textile Finishing Technology (1439)				+	+	+				+			
S Practical Training OBT (1441)	+		+		+		+			+	+		+
S Design of Leather Articles (1442)			+	+	+		+						
S Drawing and Painting (1443)		+									+		+
S Yarn PreparationTechnology. (1444)	+		+		+	+				+			
S Textile Printing Technology (1445)				+	+	+				+			
S Textile Dyeing Technology (1446)				+	+	+				+		+	
S Spinning Technology II (1449)			+		+	+		+	+	+			
S Leather production (1450)			+		+	+			+			+	
S Techn. Process of Sewing (1451)			+		+		+			+	+		+
S Mechanics (1452)	+		+		+	+	+						
Total number of courses per LO	33	20	55	27	35	26	30	17	28	23	32	18	33

Table 2.1.a Learning outcomes - explanation

Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin

LO label	Learning outcomes description
ST01	Knowledge and understanding of appropriate general educational principles in mathematics, physics, chemistry, computing and techniques in textile, clothing and footwear technology
ST02	Knowledge and understanding of the basic principles of social, ethical and business context of the profession in the field of textile, clothing and footwear technology
ST03	Knowledge and understanding of textile, clothing or footwear production with an emphasis on a narrower specialty depending on the module
ST04	Knowledge and understanding of the production, finishing, testing and recycling of textile materials and leather, as well as ensuring and managing their quality with an emphasis on environmental protection and sustainable development
ST05	Ability to identify problems and select the appropriate analytical method in solving the problem
ST06	Ability to use computer information from machines and laboratory equipment in terms of managing and optimizing the production process
ST07	Ability to search professional literature and technological documentation
ST08	Applications of new raw materials and chemical agents to produce new products and improve the existing ones
ST09	Use of laboratory analyses of input raw materials and auxiliary agents with the aim of improving and managing technological processes
ST10	Management of technological process in accordance with the principles of sustainable development
ST11	The ability to carry out independent and team work
ST12	Assuming responsibility for the right work environment and safety at work
ST13	Recognizing the need and willingness to engage in lifelong learning

Table 2.1. Learning outcomes at the level of the study programme for the evaluated academic year

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

Learning outcomes* of study programme / Courses	PT01	PT02	PT03	PT04	PT05	PT06	PT07	PT08	PT09	PT10	PT11	PT12	PT13	PT14	PT15	PT16	PT17	PT18
Clothing Design for Industry I (1455)															+	+	+	+
Textile-Mechanical Processes (1456)	+	+	+	+				+				+						+
Drawing of Historical Costume (1457)															+	+		
Statistics (1458)	+					+		+		+								
Physical Education IV (1144)										+								
Foreign Language III - German (1459)				+							+							
Construction of textile fabrics (1460)			+		+				+						+	+		+
History and Theory of Design (1171)							+										+	
Physical Education III (1113)										+								
Processes of Garment Production (1461)	+	+	+					+	+	+				+				
Clothing Construction (1454)		+	+		+				+	+				+				
Weaving (1462)		+	+	+				+	+			+						
Physical Education (1123)										+								
Foreign Language I - English (1463)				+							+							
Organic Chemistry I (1464)	+					+	+	+			+							
Creativity in Textiles II (1465)						+				+	+					+	+	
Creative Patterning of Textile Materials I (1466)											+					+	+	
Creativity in Textiles I (1467)			+								+				+	+	+	
Mechanical Engineering (1468)	+	+			+	+						+						
Textile Finishing Processes (1469)	+	+	+	+				+	+									
Knitted structure design (1470)					+				+							+		+
Textile Ecology (1471)		+											+					
Foreign Language III - English (1472)				+							+							
Laboratory Exercises of General Chemistry (1474)	+					+				+								
Computing (1475)	+				+	+	+	+										
Technological Processes of Clothing Finishing (1476)			+				+			+	+			+				

Learning outcomes* of study programme / Courses	PT01	PT02	PT03	PT04	PT05	PT06	PT07	PT08	PT09	PT10	PT11	PT12	PT13	PT14	PT15	PT16	PT17	PT18
Textile Chemistry (1477)	+	+				+				+	+							
Technological Processes of Garment Sewing (1478)		+	+				+	+		+	+			+				
Machinery and Automata for Clothing Technology (1479)		+	+				+	+						+				
Fibres I (1480)	+	+	+		+			+	+									
Standardization in Clothing Technology (1481)							+							+				
Textile printing (1482)			+		+			+	+				+					
Spinning (1483)			+	+					+			+						+
Textile Finishing Operations (1484)			+		+				+				+					
Aesthetics (1485)		+							+								+	
Electrical engineering and electronics (1486)	+	+			+	+		+										
Fibres II (1195)	+	+	+					+	+				+					
Knitting I (1487)			+		+				+			+	+					
Physical Education (1160)										+								
Foreign Language II - English (1488)				+							+							
Creativity in Clothing II (1489)						+				+	+					+	+	
Economics of Fashion and Textile Industry (1169)				+								+		+				+
Textile Finishing (1490)			+		+				+				+					
Technical Thermodynamics (1491)	+	+			+	+												
Drawing and Painting II (1492)																+		
Textile Dyeing (1493)			+		+			+	+				+					
Computer Clothing Construction (1494)		+	+		+		+	+						+				
Descriptive Geometry D (1495)	+														+			
Mechanics (1473)		+			+	+						+						
Textile Materials (1496)		+						+	+									
Economics of Enterpreneurship in Textile (1228)				+			+					+						
Testing of Textiles and Clothes (1497)			+		+			+						+				
Fabric construction (1498)												+			+	+	+	+
Descriptive Geometry (1499)	+													+				
Nonwoven and technical textile (1500)	+		+				+	+				+						
Foreign Language I - German (1501)				+							+							

Learning outcomes* of study programme / Courses	PT01	PT02	PT03	PT04	PT05	PT06	PT07	PT08	PT09	PT10	PT11	PT12	PT13	PT14	PT15	PT16	PT17	PT18
Mathematics I (1502)	+	+	+		+	+				+								
Textile Care Processes (1503)			+		+	+							+					
Foreign Language II - German (1504)				+							+							
Dyeing and Printing Processes (1505)	+		+		+			+	+						+			
Physics I (1506)	+	+	+		+	+												
Management of Textile and Fashion Marketing (1170)				+			+			+		+						
Technological Processes of Garment Cutting (1507)		+					+			+				+				
History of Textile and Clothing (1508)			+														+	
Colour metrics (1265)			+			+												
Yarn Structure Design (1509)	+	+	+				+					+						
General Chemistry (1510)	+	+	+		+	+							+					
Garment Modelling (1511)					+		+			+				+				
Work Study (1512)			+				+			+	+			+				
Analytical Chemistry (1513)	+					+		+			+							
Clothing Construction D (1514)					+				+	+				+	+			
Physical chemistry (1515)	+		+				+	+		+								
Technical Preparation of Clothing Production (1516)		+	+							+	+			+				
Testing of Physical Textile Properties (1517)			+					+	+			+	+					
Creativity in Clothing I (1518)			+								+				+	+	+	
Textile Testing (1519)			+		+			+	+		+		+					
Crtanje i slikanje I (1538)																+		
Total number of courses per LO	23	24	35	13	24	17	16	23	20	21	19	13	11	15	9	12	10	7

Table 2.1.a Learning outcomes - explanation

Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb

LO label	Learning outcomes description
PT01	Knowledge and understanding of appropriate mathematical, physical and chemical principles and techniques relevant to textile technologies
PT02	Knowledge and understanding of scientific principles important for the study of textile technology
PT03	Knowledge and understanding of the entire field of textile technology based on knowledge and understanding of the basic principles adopted through common subjects, and advanced knowledge of the field acquired in specialist subjects
PT04	Knowledge and understanding of the social, ethical and business context of engineering
PT05	Ability to apply acquired knowledge for identification and solving engineering/art design problems
PT06	Ability to select appropriate analytical methods and procedures for problem modeling
PT07	Ability to search literature, databases, and other sources of information
PT08	Ability to use appropriate laboratory equipment and conduct critical analysis of laboratory results
PT09	Application of appropriate scientific and professional principles in analysis of textile materials and management of technological processes in accordance with the principles of sustainable development/ artistic and design value of textile products
PT10	The ability to carry out independent and team work and to present the results of work orally or in written form
PT11	Recognizing the need and willingness to engage in lifelong learning
PT12	Knowledge and understanding of the design of yarns, woven, knitted and non-woven fabrics, technical textiles, as well as textile marketing and management
PT13	Knowledge and understanding of production, finishing, testing and recycling of textile materials, as well as their quality assurance and management with emphasis on sustainable development
PT14	Knowledge and understanding of underlying principles in clothing technologies and interdisciplinary knowledge necessary in the realization of certain phases in clothing production processes
PT15	Knowledge and understanding of the skill of artistic creation and design of textiles and clothing and linking engineering knowledge with education in art
PT16	The ability to incorporate a creative art-design component into the process of making textiles and clothing
PT17	The ability to apply acquired knowledge in the estimation of the artistic and design value of the product
PT18	Ability to design and implement a project in the field of industrial design of textiles and clothing, to present and interpret results and to draw conclusions

Table 2.1. Learning outcomes at the level of the study programme for the evaluated academic year

Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb

Learning outcomes* of study programme / Courses	DT01	DT02	DT03	DT04	DT05	DT06	DT07	DT08	DT09	DT10	DT11	DT12	DT13	DT14	DT15	DT16	DT17	DT18	DT19	DT20	DT21	DT22	DT23	DT24	DT25	DT26	DT27	DT28	DT29	DT30	DT31	DT32	DT33	DT34	DT35	DT36	DT37	DT38	DT39	DT40	DT41	DT42	DT43	DT44	DT45	DT46	DT47	DT48	DT49	DT50	DT51	DT52	DT53	DT54	DT55	DT56	DT57	DT58	DT59
Textile and Garment Care (1185)				+																												+										+																	
Fabric structures design (1186)			+			+								+			+		+	+																																							
Process Parameters of Clothing Engineering (1230)					+																											+	+						+																				
Protection Materials and Clothing (1187)	+							+	+																																	+																	
Production Organization (1188)																																+		+									+																
Basics of Colour Measurement (1189)				+																																																+					+		
Textile printing A (1172)																																													+		+		+										
Management of Textile and Fashion Marketing (1170)		+				+				+																		+			+																												
Workplace Design (1173)					+			+	+																							+		+																									
Clothing Design for Industry IV (1175)																																																		+			+		+				+
New Polymer Fibres (1176)								+		+	+	+																																															
Computer Clothing Construction (1177)				+				+	+																								+							+																			
Technical Documentation (1178)								+	+																							+											+																
Construction of Knitted Fabric (1179)									+																																						+				+		+						
Contemporary Art and Design (1180)		+										+																																													+		+
International Textile Market (1181)						+		+	+								+		+																																								
Creativity in Textiles IV (1182)																																													+				+			+	+	+	+				
Creative Patterning of Textile Materials III (1183)																																													+			+					+		+				
Computer Clothing Design I (1184)	+									+		+																																													+	+	+
Fashion illustration (1190)												+																																													+	+	+
Clothing Design for Industry V (1191)																																																+		+	+						+		
Composite materials (1192)			+	+							+				+			+																																									
Making-up of Technical Textile (1193)				+				+	+																															+																			
Textile Care Theory (1194)	+																					+	+	+				+			+																												
Fibres II (1195)	+		+	+																																											+		+			+						+	
Computer Clothing Construction (1196)	+									+		+																																													+	+	+

Learning outcomes* of study programme Courses	DT01	DT02	DT03	DT04	DT05	DT06	DT07	DT08	DT09	DT10	DT11	DT12	DT13	DT14	DT15	DT16	DT17	DT18	DT19	DT20	DT21	DT22	DT23	DT24	DT25	DT26	DT27	DT28	DT29	DT30
Technical Fabrics (1197)								+																						
Mathematics II (1198)	+		+	+							+	+										+								
Creative Patterning of Textile Materials IV (1199)																														
Finishing Processes Management (1200)					+	+		+																			+			+
Smart Textile (1201)	+											+			+	+	+	+												
Engineering Design of Production Systems (1202)					+																									
Computer Clothing Construction (1203)	+			+																										
Unconventional Spinning Systems (1204)											+	+		+		+		+												
Industrial Waters and Wastewaters (1205)	+			+	+																+			+					+	
High Performance Fibres (1206)		+		+								+				+									+					
Theory of science (1207)		+																												
CAD/CAM in Clothing Engineering (1208)	+											+																		
Clothing Design for Industry II (1209)																														
Eenergetics (1210)	+		+		+											+			+											
Instrumental Methods (1211)	+		+	+																	+				+	+				
Systems of Synthetic Times (1212)								+	+																					
CAD/CAM for textiles (1213)			+	+											+		+	+												
Technical Knitted Fabrics (1214)			+	+										+	+		+		+											
Theory of Finishing (1215)	+												+											+			+			
Creativity in Textiles V (1216)																														
High Performance Finishing (1217)		+							+	+												+								
Enviroment Protection in Textile Finishing (1218)				+					+			+																+	+	+
Workshop of clothing production (1219)																														
Creativity in Textiles III (1220)																														
Quality of Textiles and Clothing (1221)				+																										
Theory and Analysis of Expenses in Textile (1222)		+				+				+		+								+										
Mechatronics and Robotics (1223)	+			+																										
Standardization in Clothing Technology (1224)									+																					
Automation of the System of Clothing Tehnologies (1225)				+				+																						
Textile Mechanics (1226)	+		+		+											+			+											
Sociology of Culture (1227)		+														+														
Nonwoven textile (1229)															+															

Learning outcomes* of study programme Courses	DT31	DT32	DT33	DT34	DT35	DT36	DT37	DT38	DT39	DT40	DT41	DT42	DT43	DT44	DT45	DT46	DT47	DT48	DT49	DT50	DT51	DT52	DT53	DT54	DT55	DT56	DT57	DT58	DT59
Technical Fabrics (1197)																	+				+								
Mathematics II (1198)																													
Creative Patterning of Textile Materials IV (1199)																		+		+				+	+				
Finishing Processes Management (1200)																													
Smart Textile (1201)																													
Engineering Design of Production Systems (1202)		+									+		+																
Computer Clothing Construction (1203)					+									+															
Unconventional Spinning Systems (1204)																													
Industrial Waters and Wastewaters (1205)																													
High Performance Fibres (1206)														+															
Theory of science (1207)																			+								+		
CAD/CAM in Clothing Engineering (1208)					+		+	+																					
Clothing Design for Industry II (1209)																+			+	+					+		+		+
Eenergetics (1210)																													
Instrumental Methods (1211)																													
Systems of Synthetic Times (1212)				+							+																		
CAD/CAM for textiles (1213)																													
Technical Knitted Fabrics (1214)																													
Theory of Finishing (1215)	+																												
Creativity in Textiles V (1216)															+					+				+	+	+			
High Performance Finishing (1217)																													
Enviroment Protection in Textile Finishing (1218)	+																												
Workshop of clothing production (1219)																											+	+	+
Creativity in Textiles III (1220)															+					+		+			+				
Quality of Textiles and Clothing (1221)																				+	+					+	+		
Theory and Analysis of Expenses in Textile (1222)																													
Mechatronics and Robotics (1223)			+			+					+																		
Standardization in Clothing Technology (1224)												+																	
Automation of the System of Clothing Tehnologies (1225)			+						+		+																		
Textile Mechanics (1226)																													
Sociology of Culture (1227)																													
Nonwoven textile (1229)																+					+					+			

Learning outcomes* of study programme / Courses	DT01	DT02	DT03	DT04	DT05	DT06	DT07	DT08	DT09	DT10	DT11	DT12	DT13	DT14	DT15	DT16	DT17	DT18	DT19	DT20
Man-Made Fibers Manufacture and Modification (1232)						+	+				+									
Theory of Dyeing (1233)	+				+								+							
Selected Chapters of Clothing Technology (1234)																				
Chemistry of Dyes (1235)	+										+									
Mesurements and automatic control (1236)														+		+		+	+	+
Clothing Design for Industry II (1237)																				
Textile and Garment Finishing (1238)				+																
Clothing and Textile Care (1239)																				
Quality Management of Textiles and Clothing (1231)								+					+							
Objective Evaluation of Textiles and Clothing (1240)				+																
Economics of Enterpreneurship in Textile (1228)		+					+	+												
Ethnographical practicum (1241)																				
Applied Computing (1242)								+												
Yarn Construction (1243)											+									
Environmental Management (1244)							+						+							
Creative Patterning of Textile Materials II (1245)																				
Strategic Associations in Textile and Fashion (1246)		+					+			+							+			+
Technical Textiles (1247)				+					+				+							
Fibre reinforced composites (1248)				+					+		+									
Total number of courses per LO	17	9	9	21	8	6	4	14	13	7	8	12	5	4	5	7	6	5	6	4

Learning outcomes* of study programme / Courses	DT21	DT22	DT23	DT24	DT25	DT26	DT27	DT28	DT29	DT30	DT31	DT32	DT33	DT34	DT35	DT36	DT37	DT38	DT39	DT40
Man-Made Fibers Manufacture and Modification (1232)			+		+					+										
Theory of Dyeing (1233)						+	+													
Selected Chapters of Clothing Technology (1234)																				+
Chemistry of Dyes (1235)	+					+														
Mesurements and automatic control (1236)																				
Clothing Design for Industry II (1237)																				
Textile and Garment Finishing (1238)																				
Clothing and Textile Care (1239)																				
Quality Management of Textiles and Clothing (1231)			+	+				+			+									
Objective Evaluation of Textiles and Clothing (1240)																				
Economics of Enterpreneurship in Textile (1228)																				
Ethnographical practicum (1241)																				
Applied Computing (1242)																		+		
Yarn Construction (1243)																				
Environmental Management (1244)			+	+					+		+									
Creative Patterning of Textile Materials II (1245)																				
Strategic Associations in Textile and Fashion (1246)																				
Technical Textiles (1247)				+	+															
Fibre reinforced composites (1248)					+															
Total number of courses per LO	3	3	4	6	5	3	3	4	3	3	6	6	4	3	2	1	1	2	2	3

Learning outcomes* of study programme / Courses	DT41	DT42	DT43	DT44	DT45	DT46	DT47	DT48	DT49	DT50	DT51	DT52	DT53	DT54	DT55	DT56	DT57	DT58	DT59
Man-Made Fibers Manufacture and Modification (1232)																			
Theory of Dyeing (1233)																			
Selected Chapters of Clothing Technology (1234)											+			+					+
Chemistry of Dyes (1235)																			
Mesurements and automatic control (1236)																			
Clothing Design for Industry II (1237)										+		+			+		+		+
Textile and Garment Finishing (1238)					+							+							
Clothing and Textile Care (1239)																			+
Quality Management of Textiles and Clothing (1231)																			
Objective Evaluation of Textiles and Clothing (1240)		+																	
Economics of Enterpreneurship in Textile (1228)																+			
Ethnographical practicum (1241)						+				+			+		+				
Applied Computing (1242)			+												+	+			
Yarn Construction (1243)							+			+									
Environmental Management (1244)																			
Creative Patterning of Textile Materials II (1245)					+		+				+				+				
Strategic Associations in Textile and Fashion (1246)																			
Technical Textiles (1247)																			
Fibre reinforced composites (1248)																			
Total number of courses per LO	4	4	4	2	7	3	6	3	5	10	7	6	5	4	11	5	11	5	10

Table 2.1.a Learning outcomes - explanation

Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb

LO label	Learning outcomes description
DT01	Apply appropriate mathematical, physical and chemical principles and techniques relevant to textile technologies
DT02	Understand the social, ethical and business context of engineering
DT03	Analyze the problem and apply the acquired knowledge in selecting the appropriate analytical methods to solve engineering problems
DT04	Apply appropriate laboratory equipment and methods in the analysis and evaluation of clothing, textile materials and auxiliary agents, and draw conclusions based on the results
DT05	Design changes in the technological process to ensure product quality
DT06	Lead the production, management and marketing of the company in textile industry
DT07	Evaluate knowledge, ability and work experience of the company's employees
DT08	Lead an interdisciplinary team and present the results of independent and/or team work in written and oral form
DT09	Present and popularize contemporary trends in textile and clothing production and present and popularize the profession
DT10	Improve communication methods by applying appropriate professional terminology, including the ability to communicate about the profession in a foreign language, including communication with clients, users and colleagues
DT11	Improve and apply methods of scientific and professional work by monitoring and using scientific and professional literature, databases and other sources of information
DT12	Plan the process of lifelong personal and professional development and define optimal individual learning strategies
DT13	Apply ethical principles, legal regulations and professional standards
DT14	Organize the production of yarns, woven, knitted and non-woven fabrics and technical textiles
DT15	Design new yarns, woven, knitted and non-woven fabrics and technical textiles
DT16	Develop new textile production processes in accordance with sustainable development
DT17	Assess the conditions for the use of modern textile technologies and advise others in their application
DT18	Analyze and evaluate the possibility of introducing and using appropriate textile technologies
DT19	Improve production based on conclusions drawn from the current state of production
DT20	Apply and interpret current technical legislations in the field of quality assurance of yarns, woven, knitted and non-woven fabrics and technical textiles
DT21	Apply and develop modern instrumental and physico-chemical methods of analysis in the characterization of new textile materials and products, textile auxiliary agents, dyes and wastewater
DT22	Analyze and improve textile production, finishing and care processes
DT23	Apply the concept of sustainable development in the entire life cycle of textile products
DT24	Apply current technical legislations in the field of quality assurance and management, as well as environmental protection
DT25	Analyze and evaluate the structure and properties of textile fibers and materials of enhanced properties for specific purposes (composite, technical, medical, protective and smart textiles)

LO label	Learning outcomes description
DT26	Analyze the structure and properties of dyes and textile auxiliary agents at the molecular level, chemism of their activity and binding to material in order to improve textile-chemical processes
DT27	Lead modern textile finishing processes (pre-finishing, dyeing, printing, after-treatment and textile care) and propose their rationalization
DT28	Apply a systematic approach in ensuring the specified quality of textiles and clothing as a strategic category of business performance of the company
DT29	Improve the environmental management system in modern technological processes in accordance with the requirements of sustainable development
DT30	Improve the lifelong cycle of products and manage the environmental impacts of the production process
DT31	Propose and develop professional engineering projects in the field of materials and textile-chemical technology based on ecological and economic principles, with the application of current legal and normative regulations
DT32	Organize industrial clothing production and design production systems of clothing technologies
DT33	Choose measurement methods for determining the process parameters of clothing technologies and modern making up techniques
DT34	Interpret the acquired knowledge from the methods of studying work
DT35	Propose construction and design solutions in the production of conventional and intelligent clothing
DT36	Use the principles of robot programming in garment industry by using knowledge of automated and mechatroronic systems
DT37	Apply 3D body scanner for anthropometric body measurement
DT38	Apply a 2D/3D CAD/CAM system for computer design, construction and 3D simulation of clothing and apply a 3D body scanner for anthropometric measurement
DT39	Realize the importance and interrelation of process parameters of technological processes of clothing production, numerical models, computer simulations and metrology systems
DT40	Choose modern techniques of making up by applying the method of frontal fixation, dry and ultrasonic laminating, sewing, thermal connection by conduction and convection, ultrasonic and high frequency techniques and infrared laser
DT41	Propose a degree of automation in garment industry
DT42	Evaluate the impact of different loads on textile mechanics and recommend regulations and norms to ensure the quality of clothing production
DT43	Create project cycles using modern computer technologies, design and connect the work of constructors in construction preparation and technologists in technological preparation and process of clothing production using CAD/CAM systems
DT44	Integrate different technical subsystems into intelligent clothing
DT45	Apply artistry and creativity in the design, management, analysis and evaluation of fabrics
DT46	Organize the entire process of designing a textile and clothing product at all stages of its lifecycle
DT47	Create a fabric test sample for serial production based on knowledge of textile production technologies
DT48	Initiate own research and implement research results in production innovation
DT49	Analyze the latest developments in science and profession at the local and global level with the aim of applying results in practice and managing projects in the conditions of serial production
DT50	Improve and modernize the current product range in terms of both design and technology, as well as develop a new product range in accordance with the requirements of sustainable development
DT51	Evaluate and assess the possibilities of actualizing the conceptual solution based on understanding the technical and technological possibilities of production, as well as economic and ecological parameters
DT52	Evaluate conceptual solutions based on understanding trends in fashion and industrial textile design, market laws and knowledge about the development and application of modern technologies

LO label	Learning outcomes description
DT53	Analyze and evaluate proposed and realized design projects with the aim of making sound business decisions and better market positioning of textile and clothing products
DT54	Lead design projects and interdisciplinary planning teams in the process of industrial production of textiles and clothing
DT55	Establish successful communication within the team and with other participants of the business process with the aim of improving independent and team work
DT56	Present plans, product development strategy and work results orally, in writing and visually and plan the necessary additional training of team members
DT57	Use acquired knowledge and skills in the design, management, analysis and valorization of clothing collections
DT58	Design garments using classical and computer technology
DT59	Create a prototype garment at the initial stage of its preparation for serial production, based on knowledge and skills on the construction and processes of clothing production

Table 2.1. Learning outcomes at the level of the study programme for the evaluated academic year

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

Learning outcomes* of study programme / Courses	PD01	PD02	PD03	PD04	PD05	PD06	PD07	PD08	PD09	PD10	PD11	PD12	PD13	PD14
Drawing and Painting III A (1108)			+	+						+				+
Aesthetics I (1109)									+		+			
Modern Art and Design/15 (1110)				+	+									
Clothing Production (1111)							+	+						
Making of Historical Textile and Costume (1112)							+	+						
Physical Education III (1113)													+	
Foreign Language IV A - German (1114)										+				
Creativity in Textiles for Clothes (1115)		+			+				+					
Drawing and Painting IV A (1116)				+						+				+
Ethnographical Workshop I A (1117)				+	+						+			
Ethnology of Textiles and Clothing (1118)								+		+				
Clothing Construction II (1119)						+	+	+						
Creative Patterning of Textile Materials I A (1120)	+	+						+						
Drawing of Historical Costume (1121)			+	+						+				
Presentational Practicum (1122)										+		+	+	
Physical Education (1123)													+	
Modelling of Clothing I (1124)						+		+						
Fashion Design I (1125)	+		+	+										
Elements of Clothing Design III (1126)							+	+	+					
History and Theory of Design (1127)														
History of Textile and Clothing II (1128)				+							+			
Dyeing and Printing (1129)								+						
Computer Langauge for Design (1130)											+		+	
Techniques of Knitting (1131)						+	+							
Visual Language (1132)				+	+				+					
History of Art (1133)														
Creativity in Textiles III A (1134)	+	+	+	+										
Sociology of Culture (1135)										+	+			
Foreign Language II A - German (1136)											+			

Learning outcomes* of study programme / Courses	PD01	PD02	PD03	PD04	PD05	PD06	PD07	PD08	PD09	PD10	PD11	PD12	PD13	PD14
Textile Fibres and Materials (1137)						+	+	+						
Drawing and Painting II A (1139)				+						+				+
Elements of Clothing Design I (1140)							+	+						
Fashion Design II (1141)	+	+										+		
Descriptive Geometry A (1142)										+				
Foreign Language IV A - English (1143)										+				
Foreign Language II A - English (1107)											+			
Physical Education IV (1144)													+	
Drawing and Painting I A (1168)			+							+				+
Creativity in Textiles I A (1145)	+		+	+										
Colour theory (1146)								+			+			
History of Textiles and Clothing I (1147)				+					+					
Foreign Language III A - English (1148)										+				
Creativity in Clothing I A (1149)	+		+	+										
Sociology of Fashion (1150)									+			+		
Foreign Language I A - English (1151)											+			
Clothing Construction I (1152)						+	+							
Elements of Clothing Design II (1153)						+		+						
Design of Fashion Accessories I (1154)	+			+										
Creativity in Textiles IV A (1155)	+				+			+						
Creativity in Clothing III A (1156)	+		+	+										
Weaving Technology (1157)						+	+							
Foreign Language III A - German (1158)										+				
Creativity in Textiles VA (1159)		+		+	+				+					
Physical Education (1160)													+	
Creativity in Textiles II A (1161)	+		+		+									
Creative Patterning of Textile Materials II A (1162)	+	+						+						
Foreign Language I A - German (1163)											+			
Fashion Illustration A (1164)	+			+										
Creativity in Clothing II A (1165)	+		+	+										
Textile Finishing and Care (1166)						+	+							
Creative Patterning of Textile Materials III A (1167)	+	+						+	+					
Total number of courses per LO	14	7	10	18	7	8	10	15	8	13	10	3	6	4

Table 2.1.a Learning outcomes - explanation

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb

LO label	Learning outcomes description
PD01	Competence to find and propose quality design solutions in the field of textile and clothing design
PD02	The ability to design and implement projects in the field of textile and fashion design
PD03	Competence for effective independent and/or teamwork in textile and clothing design
PD04	The ability to analyze and evaluate one's own and other people's design solutions
PD05	The ability to present and interpret the results of one's own research orally and in written form, and to draw conclusions
PD06	Knowledge and understanding of textile and clothing technology
PD07	Knowledge and understanding of key aspects of textile and clothing production
PD08	Ability to apply acquired knowledge in the realization of design projects in accordance with the set requirements and specifications
PD09	Knowledge,understanding,ability to combine and competence to apply artistic creative skills and acquired knowledge in textile and clothing technology and theoretical knowledge in the field of humanities&social sciences in solving design tasks in practice
PD10	Competence to communicate and cooperate with experts in related fields
PD11	Ability to identify, search and use professional literature and all other sources of information
PD12	Knowledge and understanding of social, ethical and business context and competence to evaluate economic potential and applicability of proposed design solutions in practice
PD13	Recognizing the need and willingness to engage in lifelong education and competence to carry out effective independent and/or team work
PD14	Competence to draw and paint by observation

Table 2.1. Learning outcomes at the level of the study programme for the evaluated academic year

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb

Learning outcomes* of study programme / Courses	DD01	DD02	DD03	DD04	DD05	DD06	DD07	DD08	DD09	DD10	DD11	DD12	DD13	DD14	DD15	DD16	DD17	DD18	DD19	DD20	DD21	DD22	DD23	DD24	DD25	DD26	DD27	DD28	DD29	DD30	DD31	DD32	DD33	DD34	DD35	DD36	DD37	DD38	DD39	DD40	DD41	DD42	DD43	DD44	DD45	DD46	DD47	DD48	DD49	DD50	DD51	DD52	DD53	DD54	DD55
Applied Costume Design with Ethnography (1289)														+												+					+			+			+		+																	
Contemporary Art and Design A (1290)													+																													+		+			+	+				+							
20th Century Fashion (1259)																																									+	+	+				+			+	+							
Cultural Anthropology (1291)																																									+			+	+	+	+				+							
Contemporary Fashion (1292)																																									+	+	+		+					+							
Culture of Spectacle (1293)																																									+			+	+	+											
Applied Costume Design II (1294)																									+	+				+		+					+																					
Creative Patterning of Textile Materials II (1276)	+		+					+		+	+																																																
Creativity in Textiles VI A (1295)		+	+			+		+		+					+																																											
Creativity in Clothing IV A (1296)																				+		+																																					
Creativity in Textiles VIII A (1297)	+	+	+			+	+			+	+				+		+																																										
Creativity in Clothing VI A (1298)																				+		+																																					
Fashion Performance (1299)																																+																											
Theory of Fashion I (1261)																																									+		+		+		+		+									
Creative Patterning of Textile Materials IV A (1288)						+				+					+		+	+																																									
Applied Costume Design III (1300)																							+		+				+	+							+	+																			
Creativity in Textiles IX. A (1314)	+	+	+			+					+	+																																															
Modelling of Clothing II (1301)																				+		+																																					
Realization of Clothing (1302)																				+	+																																						
Design of Fashion Accessories II (1303)																						+	+																																				
Creativity in Textiles VII A (1304)	+	+	+			+	+	+		+								+																																										
Fashion Design III (1305)																				+		+	+																																				
Methods of Textile Making II (1306)				+					+										+																																								
Clothing Construction III (1307)																				+																																							
Creative Patterning of Textile Materials V A (1308)						+				+					+		+	+																																										
Presentation of Textile Products (1285)											+		+	+																																												
History of Clothing I/014 (1309)										+				+								+									+																										
Textile Dyeing D (1310)				+	+				+										+																																								

Learning outcomes* of study programme / Courses	DD01	DD02	DD03	DD04	DD05	DD06	DD07	DD08	DD09	DD10	DD11	DD12	DD13	DD14	DD15	DD16	DD17	DD18	DD19	DD20	DD21	DD22	DD23	DD24	DD25	DD26	DD27	DD28	DD29	DD30	DD31	DD32	DD33	DD34	DD35	DD36	DD37	DD38	DD39	DD40	DD41	DD42	DD43	DD44	DD45	DD46	DD47	DD48	DD49	DD50	DD51	DD52	DD53	DD54	DD55
Aesthetics II (1311)																																	+												+		+	+							
Applied Costume Design I (1312)																										+	+				+	+		+																					
Theory of Fashion II (1262)																																+									+				+		+				+				
Methods of Textile Making I (1313)				+					+										+																																				
Communication Theory (1315)																																									+			+	+	+	+	+	+		+				
History of Textiles (1266)										+						+																						+																	
Tailoring of the Costume (1316)													+							+		+																																	
Tailoring of the Costume (Workshop) (1317)													+							+		+																																	
Creativity in Clothing V A (1252)																				+		+																																	
Methods of Textile Making III (1318)				+	+				+										+																																				
Practical Elements of Theatre Production/014 (1319)																								+				+		+				+																					
Fashion Design IV (1320)																				+		+	+																																
Anthropology of Fashion (1321)																																									+		+		+		+	+		+					
Semiotics of Fashion (1322)																																											+	+	+	+	+				+				
Fashion Design - Collection I (1323)																				+	+	+	+																																
Applied Costume Construction/014 (1273)																																																				+	+		
History of Clothing II/014 (1324)										+				+								+									+							+																	
Creative Patterning of Textile Materials I (1279)	+		+					+		+	+																																												
Theory of science A (1325)														+											+							+						+	+																
Clothing Construction IV (1326)																				+	+																																		
New Media and Fashion (1255)																																												+	+	+	+	+			+				
History of Clothing III/014 (1327)																						+			+						+	+						+																	
Museology of Fashion (1328)																																									+	+	+				+		+	+	+				
Fashion Design - Collection II (1329)																				+		+	+																																
Portfolio (1330)																							+																																
Ethnographical Workshop II A (1331)	+									+																												+																	
Basic Theory of Theatre Production (1332)																										+			+				+							+															
Drawing and Painting of Costumes /014 (1333)																																																						+	+
Creative Patterning of Textile Materials III (1258)	+		+					+		+	+																																												
Total number of courses per LO	7	4	7	4	2	6	2	5	4	12	6	1	3	5	3	2	3	3	4	13	3	14	6	2	3	5	1	1	1	2	6	5	4	2	1	1	1	8	1	2	9	4	6	6	11	7	12	4	3	4	9	1	1	1	1

Table 2.1.a Learning outcomes - explanation

Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study programme, Zagreb

LO label	Learning outcomes description
DD01	Apply the latest insights on textile design and fashion design in designing and managing own projects
DD02	Apply artistry and creativity in managing, analyzing and evaluating textile design projects realized through various technological procedures for various purposes and consumers
DD03	Organize the entire process of designing a textile product at all stages of its lifecycle
DD04	Create a test sample of fabric based on knowledge in textile manufacturing technologies
DD05	Initiate own research and experimentation based on understanding and applying latest scientific findings and traditional, experimental or modern manufacturing technology
DD06	Analyze the latest trends and developments in the profession at local and global level with the purpose of applying the results in practice
DD07	Improve and modernize textile products and garments in terms of latest achievements in technology and design
DD08	Design and develop new textile products and garments in accordance with the requirements of sustainable development
DD09	Assess and evaluate the possibilities of realization of conceptual design of the product based on the understanding of technical and technological production possibilities, as well as economic and environmental parameters
DD10	Evaluate conceptual solutions based on understanding trends in textile and fashion design
DD11	Analyze and evaluate proposed and realized design projects with the aim of making sound business decisions and better market positioning of products
DD12	Run the business independently and in the team with continuous improvement of independent and team work
DD13	Present product development plans and strategy orally in writing and visually
DD14	Present and promote the results of the paper orally, in writing and visually
DD15	Establish successful communication within the team and with other participants in the business process
DD16	Improve own knowledge in the process of lifelong learning
DD17	Apply own knowledge in the process of educating team members
DD18	Plan the necessary additional training of team members
DD19	Apply ethical principles, legal regulation and common professional standards
DD20	Apply modelling construction techniques and realization of prototype garments in fashion design
DD21	Understand the principle of operation of 3D body scanners and know how to apply 2D/3D CAD/CAM system for computer design and construction and 3D simulation of clothing and production of cutting patterns
DD22	Create a prototype garment based on knowledge and skills on the construction and processes of clothing production
DD23	Organize the entire process of designing a garment at all stages of its lifecycle, based on understanding and applying the latest scientific achievements and traditional, experimental or contemporary computer technology of production
DD24	Design an art project of cooperation of theatrical production and performance of the event, based on acquired knowledge in costume design
DD25	Use theoretical and practical knowledge in interaction between fashion and performing arts in

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DD26	Analyze the concepts of costume design in theatre and media, and practically apply solutions in accordance with rapid changes in esthetic taste and social norms of contemporary audience
DD27	Demonstrate the role of connecting costume design and fashion as a lifestyle in the media in the synergy of the performing arts of film and television
DD28	Analyze the market of corporate communications and the media using information and communication technologies
DD29	Develop elements of strategic management: mission of organizational value, vision and strategic goals in monitoring fashion as a creative industry
DD30	Use the possibilities of applying new knowledge in costume design to create a flexible network of agents in the fashion industry, performing arts, the media and in the market of fashion services and products
DD31	Apply the acquired knowledge in the work on theatrical play, television film, series and in film production
DD32	Use appropriate methods and techniques of analysis and evaluate results and draw conclusions based on the results
DD33	Apply new knowledge in contemporary costume design and performing arts, cultural and visual studies and fashion theory and present fashion and visual culture in the media
DD34	Use the acquired knowledge in the realm of technical organization of work on the scene in theatrical and film staging, in order to set up quality production
DD35	Present costume design as a complex system of performing arts, production of design and fashion scenography in mass media
DD36	Apply modern communication techniques for the purpose of media presentation of fashion and costume design as a set of visual communications and interaction with culture
DD37	Lead an interdisciplinary team and create networks of users of information about costume design and fashion design within contemporary culture
DD38	Improve and apply methods of scientific and professional work by monitoring and using scientific and professional literature databases and other sources of information
DD39	Plan the process of lifelong personal and professional development and define optimal individual learning strategies
DD40	Use knowledge of the basics of theatrical and film terminology in the improvement of costume design profession
DD41	Understand how fashion acts as a complex symbolic system of identification of people with the cultural and social order
DD42	Develop methods of monitoring styles and trends in the development of contemporary fashion
DD43	Analyze the concepts of fashion designers and evaluate the state of fashion in global changes of the society
DD44	Develop ways to evaluate advertising campaigns and corporate communication strategies in creating renowned fashion brands
DD45	Apply knowledge in conceptual representation of fashion as a lifestyle in the media and in creating a new designer product
DD46	Use the possibilities of applying new knowledge in the interdisciplinary field of culture and communication in order to create a flexible network of stakeholders in the fashion industry, media and the market for fashion services and products
DD47	Apply acquired knowledge to solve the theoretical problem of the relationship between modern fashion and the role of fashion design in the post-industrial society of information and communications
DD48	Develop the ability to foster synergies between fashion theory and culture with new insights in the field of creative industries and cultural economics
DD49	Lead an interdisciplinary team and establish interactive networks of users of information about fashion design
DD50	Present and popularize modern trends in fashion and creative industries to a wide range of users
DD51	Improve modern communication techniques for media presentation in the world of fashion design as a set of visual communications and interaction with social and cultural networks of users
DD52	Interpret the specifics of basic design forms using the artistic approach and the given theme

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DD53	Incrust different materials and integrate them into a wholesome unit as true as possible to historical periods and express them in three-dimensional form
DD54	Apply basic drawing and painting techniques strictly related to the historical costume
DD55	Distinguish the specific characteristics of the materials and their conventional significance, as well as apply modern materials and freely approach own presentation of costumes