

Annual report 2020

Technical University of Liberec
Approved by AS FT TUL 03. 05. 2021



CONTENTS

1. Basic information about the faculty	4
1.1 Organisational scheme of the faculty	4
1.2 Composition of the faculty bodies	5
1.3 Activities of FT TUL in connection with the impact of the pandemic	9
2. Educational activities	9
2.1 Accredited study programmes	10
2.1.1 Students	11
2.1.2 Alumni	14
2.1.3 Interest in studying	15
2.1.4 Development of educational activities	17
2.2 Linking educational activities with creative activities	18
2.2.1 Implementation of final student theses	18
2.2.2 Involvement of students in research projects of external providers	19
2.2.3 Involvement of students in Student Grant Competition (SGS) projects	19
2.2.4 Organisation of the Student Scientific and Professional Activity Competition (SVOČ)	20
2.2.5 International Ph.D. Students Day	20
2.2.6 Support for student participation in competitions and exhibitions	21
2.3 Linking educational activities with internationalisation	21
2.3.1 Study programmes in a foreign language	21
2.3.2 Lectureships of foreign experts	22
2.3.3 Participation of students in foreign work experience, internships, conferences, summer schools	22
2.4 Linking educational activities to the third role of the faculty	22
2.4.1 Collaboration in the development of study programmes	23
2.4.2 Experts from the application sphere teaching in accredited study programmes	23
2.4.3 Consultation and guidance of bachelor and diploma theses	23
2.4.4 Professional lectures and seminars for students	24
2.4.5 Excursions to companies	24
2.4.6 Professional practice for students	24
2.5 Motivational events for prospective students / Cooperation with secondary schools	26
3. Academics, staff	27
3.2 Motivational tools for rewarding employees	29
3.3 Support for DSP students and young academics	30



4. Scientific research, development, innovation, artistic and other creative activities	31
4.1 Solved projects	31
4.1.1 EU Operational Programme Projects - Science and Research	31
4.1.2 MIT projects	32
4.1.3 TAČR projects	33
4.1.4 Projects of the Ministry of the Interior - Security Research Programme	33
4.1.5 Projects of the Ministry of Education, Youth and Sports - Inter-Excellence Programme	33
4.1.6 Projects of the Ministry of Education, Youth and Sports - Mobility Programme	33
4.1.7 Projects of the Ministry of Health	33
4.1.8 Projects of the Grant Agency of the Czech Republic	33
4.2 Project applications prepared and submitted	34
4.3 Publication activity - R&D outputs	35
4.4 Exhibition activities - artistic outputs	38
5. Internationalisation	39
5.1 International Excellence FT TUL	39
5.2 Cooperation agreements	42
5.3 Scientific conferences and seminars	44
5.4 Mobility	45
6. The third role of the university / External cooperation processes	50
6.1 Supra-regional and national nature of cooperation	50
6.2 Cooperation with regional governments	51
6.3 Cooperation in R&D	51
6.4 Cooperation in education	52
6.5 Transfer of knowledge into practice	52
7. Quality assurance and evaluation of implemented activities	56
7.1 Management and College meetings	57
7.2 Meeting of the Faculty Scientific Council	57
7.3 Session of the Academic Senate	57
7.4 Branch Council	58
8. Evaluation and conclusion	59

Annex 1: Activities of TUL FT in relation to the impact of the pandemic



1. Basic information about the faculty

Technical University of Liberec, Faculty of Textile Engineering (FT TUL, FT)
 Studentská 2, 461 17 Liberec

www.ft.tul.cz

<https://cs-cz.facebook.com/fakultatextilni>

The main activities of the Faculty of Textile Engineering of the Technical University of Liberec in 2020, especially in the field of pedagogical and creative activities, were implemented in accordance with the Strategic Plan of the Faculty of Textile Engineering of the Technical University of Liberec (which is formulated in the document Long-term plan of educational and scientific, research, development and innovation, artistic and other creative activities of the Faculty of Textile Engineering of the Technical University of Liberec for the years 2016-2020) and the Plan of Implementation of the Strategic Plan for 2020.

1.1 Organisational scheme of the faculty

The organisational composition of the faculty is shown in the following table.

Table 1: Organisational composition of FT

Locations	Abbreviation.	Location
Department of Technology and Structures	KTT	Liberec
Department of Nonwovens and Nanofibrous Materials	KNT	Liberec
Department of Clothing	KOD	Liberec
Department of Design	KDE	Liberec, Jablonec nad Nisou
Department of Materials Engineering	KMI	Liberec
Department of Textile Evaluation	KHT	Liberec

4

The structure of the Faculty as of 31 December 2020 is shown in the following diagram.

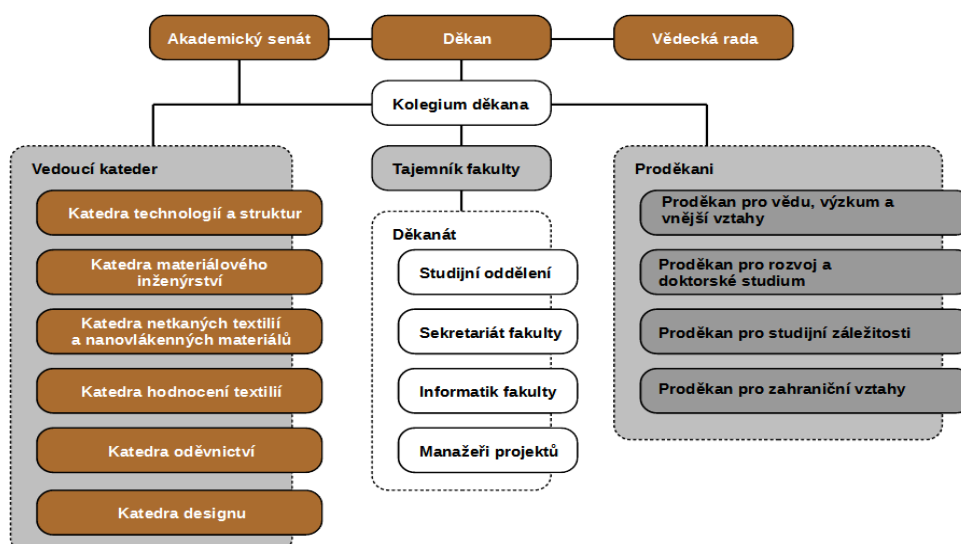


Fig. 1: Organisational chart of TUL as of 31 December 2020



1.2 Composition of the faculty bodies

This chapter lists the personnel composition of the faculty management, the Academic Senate, the Scientific Council and the Disciplinary Council.

Faculty management until 31.10.2020

Dean:	Ing. Jana Drašarová, Ph.D.	
Vice Deans:	Ing. Jindra Porkertová	for pedagogical activities
	Ing. Gabriela Krupincová, Ph.D.	for science and research
	Ing. Pavla Těšinová, Ph.D.	for Foreign Relations
	doc. Ing. Maroš Tunák, Ph.D.	for development
Head of Dean's Office:	Ing. Daniela Brzezinová	

Faculty management from 1.11.2020

Dean:	doc. Ing. Vladimír Bajzík, Ph.D.	
Vice Deans:	Ing. Jana Drašarová, Ph.D.	for RD and External Relations
	Ing. Jindra Porkertová	for Student Affairs
	prof. Ing. Michal Vik, Ph.D.	for Foreign Relations
	Ing. Iva Mertová, Ph.D.	for Development and Doctoral studies
Head of Dean's Office:	Ing. Daniela Brzezinová	

Academic Senate until 14.9.2020

The Chair:	Ing. Renáta Nemčoková (KOD)	
1. The Vice-Chairman:	Ing. Alžbeta Samková (KMI)	
2. The Vice-Chairman:	Ing. Veronika Tunáková, Ph.D. (KMI)	
Chamber staff:	Ing. Vlastimila Bergmanová (KDE)	
	Ing. Irena Lenfeldová, Ph.D. (KTT)	
	Ing. Miroslava Pechočiaková, Ph.D. (KMI)	
	prof. Ing. Jakub Wiener, Ph.D. (KMI)	
Chamber of Students:	Ing. Radek Jirkovec	
	Ing. Michal Martinka	
Secretary:	Ing. Daniela Brzezinová (DFT) - not a member of the Senate	

Academic Senate from 14.9.2020

The Chair:	Ing. Jiří Chaloupek, Ph.D. (KNT)	
1st Vice-Chairman:	Ing. Alžbeta Samková (KMI)	
2nd Vice-Chairman:	Ing. Vlastimila Bergmanová (KDE)	
Chamber staff:	Ing. Miroslava Pechočiaková, Ph.D. (KMI)	
	Ing. Iva Mertová, Ph.D. (KTT) - until 31.10.2020	
	prof. Ing. Jakub Wiener, Ph.D. (KMI) - from 1.11.2020	
	Bc. Ondřej Ludín (KDE)	
	Ing. Petra Komárková, Ph.D. (KOD)	
Chamber of Students:	Ing. Radek Jirkovec (KNT)	
	Ing. Ivana Céeová (KOD)	
Head of Dean's Office:	Ing. Daniela Brzezinová (DFT - not a member of the Senate)	



Members of the Academic Senate of TUL for FT TUL until 22.9.2020

Chamber staff: doc. Ing. Vladimír Bajzík, Ph.D., Ing. Ondřej Novák, Ph.D.
Chamber of Students: Ing. Jakub Erben

Members of the Academic Senate of TUL for FT TUL from 22.9.2020

Chamber staff: Ing. Brigita Kolčavová Sirková, Ph.D., Ing. Ondřej Novák, Ph.D.
Chamber of Students: Ing. Markéta Klíčová

Scientific Council of the Faculty of Textile Engineering of TUL until 31.10.2020

Dean of FT TUL:	Ing. Jana Drašarová, Ph.D.	FT TUL
Internal members:	prof. Ing. Luboš Hes, DrSc.	FT TUL
	prof. RNDr. Oldřich Jirsák, CSc.	FT TUL
	Prof. Dr. Ing. Zdeněk Kůs	FT TUL
	doc. Svatoslav Krotký, ac.mal.	FT TUL
	prof. Ing. Jiří Militký, CSc.	FT TUL
	prof. Ing. Bohuslav Neckář, DrSc.	FT TUL
	prof. Ing. Petr Ursíny, DrSc.	FT TUL
	prof. Ing. Michal Vik, Ph.D.	FT TUL
	prof. Ing. Jakub Wiener, Ph.D.	FT TUL
	prof. Ing. Jaroslav Beran, CSc.	FS TUL
	doc. RNDr. Miroslav Brzezina, CSc.	FP TUL
	prof. Ing. Václav Kopecký, CSc.	FM TUL
	prof. Ing. Jiří Kraft, CSc.	EF TUL
	External members:	prof. RNDr. Jaromír Antoch, CSc.
prof. RNDr. Gejza Dohnal, CSc.		FS CTU Prague
Ing. Libuše Fouňová		CLUTEX - cluster of technical textiles, o.s.
Ing. Petr Janák, CSc.		INOTEX spol. s r.o., Dvůr Kr. n. L.
prof. Ing. Lubomír Lapčík, Ph.D.		UTB Zlín
prof. RNDr. Miroslav Raab, CSc.		Institute of Medical Sciences of the CAS Prague
doc. PhDr. Filip Suchomel, Ph.D.		AMU Prague
prof. Ing. Michal Šejnoha, Ph.D., DSc.		FSv CTU Prague from 6. 10. 2017
prof. Ing. Jaroslav Šesták, DrSc.		FyÚ AV ČR Prague
prof. Ing. Jaromír Šňupárek, DrSc.		FChT UPA
prof. Ing. Miroslav Václavík, CSc.	VÚTS, a.s., Liberec	

Scientific Council of the Faculty of Textile Engineering of TUL from 30.11.2020

Dean of FT TUL:	doc. Ing. Vladimír Bajzík, Ph.D.	FT TUL
Internal members:	prof. Ing. Luboš Hes, DrSc.	FT TUL
	prof. RNDr. Oldřich Jirsák, CSc.	FT TUL
	Prof. Dr. Ing. Zdeněk Kůs	FT TUL
	doc. Svatoslav Krotký, ac.mal.	FT TUL
	prof. Ing. Jiří Militký, CSc.	FT TUL



Faculty of TUL:	prof. Ing. Bohuslav Neckář, DrSc.	FT TUL
	doc. Ing. Maroš Tunák, Ph.D.	FT TUL
	prof. Ing. Jakub Wiener, Ph.D.	FT TUL
	doc. RNDr. Miroslav Brzezina, CSc.	FP TUL
	prof. Ing. Jiří Kraft, CSc.	EF TUL
	prof. Ing. Zdeněk Plíva, Ph.D.	FM TUL
	prof. Ing. Tomáš Vít, Ph.D.	FS TUL
External members:	prof. RNDr. Jaromír Antoch, CSc.	MFF UK Prague
	prof. RNDr. Vladimír Čech, Ph.D.	FCH Brno University of Technology
	prof. Ing. Roman Čermák, Ph.D.	FT UTB Zlín
	prof. RNDr. Gejza Dohnal, CSc.	FS CTU Prague
	Ing. Libuše Fouňová	CLUTEX, o.s. Liberec
	doc. Ing. Zdeněk Horák, Ph.D.	VŠP Jihlava
	prof. Ing. Radim Hrdina, CSc.	FCHT University of Pardubice
	doc. Ing. Tomáš Novák, Ph.D.	FEI VŠB-TU Ostrava
	doc. PhDr. Filip Suchomel, Ph.D.	AMU Prague
	prof. Ing. Michal Šejnoha, Ph.D., DSc.	FSv CTU Prague

Branch Councils for Doctoral Study Programmes

Board of DSP Textile Engineering (P0723D270002), Textile Engineering (P0723D270003)

The Chair:	prof. Ing. Jiří Militký, CSc.	FT TUL
Members:	Prof. RNDr. Jaromír Antoch, CSc.	IFF UK
	doc. Ing. Lukáš Čapek, Ph.D.	FT TUL
	prof. RNDr. Oldřich Jirsák, CSc.	FT TUL
	Prof. Dr. Ing. Zdeněk Kůs	FT TUL
	prof. Ing. Michal Šejnoha, Ph.D., DSc.	FSv CTU
	doc. Ing. Maroš Tunák, Ph.D.	FT TUL
	prof. Ing. Jakub Wiener, Ph.D.	FT TUL

DSP Textile Engineering (P3106) in ČJ and AJ

The Chair:	prof. Ing. Jakub Wiener, Ph.D.	FT TUL
Members:	prof. RNDr. Jaromír Antoch, CSc.	IFF UK
	doc. Ing. Lukáš Čapek, Ph.D.	FT TUL
	prof. RNDr. Oldřich Jirsák, CSc.	FT TUL
	Prof. Dr. Ing. Zdeněk Kůs	FT TUL
	prof. Ing. Jiří Militký, CSc.	FT TUL
	prof. Ing. Michal Šejnoha, Ph.D., DSc.	FSv CTU
	doc. Ing. Maroš Tunák, Ph.D.	FT TUL

DSP Industrial Engineering (P0723D270001)

The Chair:	doc. Ing. Maroš Tunák, Ph.D.	FT TUL
Members:	doc. Ing. Vladimír Bajzík, Ph.D.	FT TUL
	doc. RNDr. Miroslav Brzezina, CSc.	FP TUL
	prof. RNDr. Gejza Dohnal, CSc.	FS CTU



prof. RNDr. Oldřich Jirsák, CSc.	FT TUL
Ing. Karel Kupka, Ph.D.	TriloByte, s.r.o.
prof. Ing. Jiří Militký, CSc.	FT TUL
prof. RNDr. Jan Pícek, CSc.	FP TUL
prof. Ing. Michal Vík, Ph.D.	FT TUL

College of the Dean until 31.10.2020

Dean:	Ing. Jana Drašarová Ph.D.	
Vice Deans:	Ing. Jindra Porkertová	
	Ing. Pavla Těšinová, Ph.D.	
	Ing. Gabriela Krupincová, Ph.D.	
	doc. Ing. Maroš Tunák, Ph.D.	
Chairman of AS FT:	Ing. Renata Nemčoková until 14.9.2020	
	Ing. Jiří Chaloupek, Ph.D. from 14.9.2020	
Secrets:	Ing. Daniela Brzezinová	
Heads of Departments:	Ing. Brigita Kolčavová Sirková, Ph.D.	KTT
	Ing. Jiří Chvojka, Ph.D.	CNT
	Prof. Dr. Ing. Zdeněk Kůs	CODE
	Ing. Blanka Tomková, Ph.D.	KMI
	Ing. Renata Štorová, CSc.	WHERE
	doc. Ing. Vladimír Bajzík, Ph.D.	KHT

College of the Dean from 1.11.2020

Dean:	doc. Ing. Vladimír Bajzík, Ph.D.	
Vice Deans:	Ing. Jindra Porkertová	
	Ing. Jana Drašarová, Ph.D.	
	prof. Ing. Michal Vík, Ph.D.	
	Ing. Iva Mertová, Ph.D.	
Chairman of AS FT:	Ing. Jiří Chaloupek, Ph.D.	
Secrets:	Ing. Daniela Brzezinová	
Heads of Departments:	Ing. Brigita Kolčavová Sirková, Ph.D.	KTT
	Ing. Jiří Chvojka, Ph.D.	CNT
	Prof. Dr. Ing. Zdeněk Kůs	CODE
	Ing. Blanka Tomková, Ph.D.	KMI
	Ing. Renata Štorová, CSc.	WHERE
	Ing. Pavla Těšinová, Ph.D.	KHT

FT TUL representative in the Council of Universities

The faculty representative in the RVŠ (Legislative Working Committee) in 2020 was doc. Ing. Vladimír Bajzík, Ph.D.



1.3 Activities of FT TUL in connection with the impact of the pandemic

*Like society as a whole, the activities carried out at TUL were significantly affected by the impact of the pandemic. FT TUL has acted in accordance with the government measures coordinated by TUL. The measures that have been newly adopted, significantly revised, expanded or reduced in the year are listed in **Annex 2: FT TUL activities in relation to the impact of the pandemic**. For each chapter of this report, FT activities related to the impact of the pandemic are highlighted (in italics in the text). An assessment of the impact and non/success of these activities in the areas of: educational activities, research activities, the third role of the college, including other activities are made in Chapter 9: Assessment and Conclusion.*

2. Educational activities

This chapter summarizes the main parameters related to the first role of the faculty as part of the university, namely educational activities.

These are mainly performance parameters related to the implementation of teaching:

- accredited study programmes
 - Students
 - Alumni
 - Candidates

and descriptive parameters indicating other educational activities:

- linking educational activities with creative activities
 - realization of final student theses
 - involvement of students in research projects of various external providers
 - Involvement of students in specific research projects in the form of Student Grant Competition (SGS)
 - organizing the Student Scientific and Professional Activity Competition (SVOČ)
 - Organizing the International Ph.D. Students Day Workshop
 - support for student participation in competitions and exhibitions
- linking educational activities with internationalisation
 - study programmes in a foreign language
 - lecture internships of foreign experts
 - participation of FT students in foreign internships, placements, conferences, summer schools
- linking educational activities with the third role of the faculty
 - cooperation with future employers
 - cooperation in the development of study programmes
 - experts from the application sphere teaching in accredited study programmes
 - consultation and guidance of bachelor and master theses in cooperation with the corporate sector
 - professional lectures and seminars for students in cooperation with the corporate sector and graduates
 - excursions to companies
 - professional practice for students
 - motivational events for prospective students / cooperation with secondary schools.



2.1 Accredited study programmes

In 2019, all submitted FT study programmes received NAU accreditation for a maximum period of ten years. All study programmes are also accredited in English (with the exception of the DSP Industrial Engineering). In the academic year 2020/2021, first and second year students study according to the newly accredited study programmes. Students in the third year of the Bachelor's degree programmes study under the old accreditation. A potential problem is students who have interrupted their studies (e.g. due to a recognised period of parenthood) in a degree programme on completion of studies ('old accreditation'). These students are monitored and provided with ongoing information to optimise their progression through the programme in accordance with the current regulations. They are informed in the interruption decision about the duration of the accreditation and the rules laid down in the Higher Education Act (§ 56, § 80).

Table 2: Newly accredited study programmes

Stud code. program	Name of study programme (or specialisation)		Stand. period	Form of study
B0212A270001	Design	Textile technology and patterning	3	P
		Textile and clothing design		
		Glass and jewellery design		
B0212A270002	Design	Textile Technology and Patterning	3	P-AJ
		Design of Textiles and Clothing		
		Design of Glass and Jewelry		
B0414A270001	Textile marketing		3	P, K
B0414A270002	Textile Marketing		3	P-AJ
B0723A270001	Textile technology materials and nanomaterials	Design and creation of textiles	3	P, K
		Nonwovens and nanofibres		
B0723A270002	Textile Technologies, Materials and Nanomaterials	Construction and Production of Textiles	3	P-AJ
		Nonwovens and Nanofibers		
B0723A270003	Manufacture of clothing and technical clothing		3	P, K
B0723A270004	Production of Clothing and Technical Products		3	P-AJ
N0723A270001	Textile Engineering	Textile technology and materials	2	P, K
		Clothing technology and materials		
		Nonwovens and nanofibrous materials		
N0723A270002	Textile Engineering	Textile Technology and Materials	2	P-AJ
		Clothing Technology and Materials		
		Nonwovens and Nanofiber Materials		
N0723A270003	Industrial Engineering		2	P, K
N0723A270004	Industrial Engineering		2	P-AJ
P0723D270001	Industrial Engineering		4	P, K
P0723D270002	Textile Engineering		4	P, K
P0723D270003	Textile Engineering		4	P, K-AJ



Table 3: Accredited study programmes for completion of existing students

Program code	Name of study programme	KKOV	Name of field of study	Stand. period	Form of study
B3107	Textiles	3107R006	Textile and clothing design	3	P, A
		3107R007	Textile marketing	3	P, K, A
		3106R016	Textile technology, materials and nanomaterials	3	P, K, A
		3107R015	Garment manufacturing and garment shop management	3	P, K, A
M3106	Textile Engineering	3106T012	Textile Engineering	5	P, A
N3106	Textile Engineering	3106T017	Clothing and textile technology	2	P, K, A
		3106T008	Non-woven and nanofibrous materials	2	P, K, A
N3957	Industrial Engineering	3911T023	Quality control	2	P, K, A
		3901T073	Product Engineering	2	P, K, A
P3106	Textile Engineering	3106V015	Textile Technology and Materials Engineering	4	P, K, A

2.1.1 Students

An overview of the number of students as of 31 December 2020 in accredited study programmes is presented in the following table. This is the output from the central SIMS registry.

Table 4: Students in accredited study programmes

Study programme	Students in the study programme								Total students
	BSP		MSP		NMSP		DSP		
	P	K	P	K	P	K	P	K	
B3107 Textile	105	37							142
B0212A270001 Design	73								73
B0212A270002 Design	1								1
B0414A270001 Textile marketing	105	41							146
B0723A270001 Textile technology, materials and nanomaterials	30	21							51
B0723A270003 Manufacture of wearing apparel and technical clothing	27	23							50
N3106 Textile engineering					14	8			22
N0723A270001 Textile engineering					47	30			77
N0723A270002 Textile Engineering					9				9
N3957 Industrial engineering					0	7			7
N0723A270003 Industrial engineering					25	16			41
P3106 Textile engineering							32	8	40
P0723A270001 Industrial engineering							1	1	2
P0723A270002 Textile engineering							7	1	8
P0723A270003 Textile Engineering							7		7
Faculty total	341	122	0	0	95	61	47	10	676
Of which the number of women	237	89	0	0	70	50	20	4	470



Table 5: Students in accredited study programmes by citizenship

Type of study	Students with Czech citizenship	Students with foreign citizenship
Bachelor's Degree Programme (BSP)	349	114
Continuing Master's Degree Programmes (NMSP)	112	35
Doctoral Study Programme (DSP)	24	25
Total FT	485	174

The Faculty of Textile Engineering traditionally hosts a number of foreign students - for example, from Russia (66), Slovakia (30), Ukraine (29), Pakistan (12), Kazakhstan (12), Kyrgyzstan (2), Georgia (1), India (10), Poland (1), Egypt (2), South Africa (1), Turkey 3), China 6), Taiwan 1), Belarus (3), Canada (1), Uzbekistan (1), Serbia (1), Nepal (1), Indonesia (1), Bangladesh (4), Palestine (1), Colombia (1), Vietnam (2), South Africa (1), Republic of Moldova 1). The number of students with foreign citizenship in the DSP is higher than the number of students with Czech citizenship, which is the result of the excellent international activities of the academic staff of FT TUL.

Advice and support for students in accredited study programmes

At the TUL FT, students in the first years of study mainly terminate their studies on their own initiative or due to failure to fulfil their study obligations. A higher failure rate is observed among students of the combined form of study, whose number is traditionally high at FT TUL. For some students in the combined form of study, it is not easy to combine their own teaching and study activities with their work and personal responsibilities, especially nowadays, when companies have a shortage of workers and stop supporting the qualification growth of their employees. The failure of full-time students is most often due to the low level of knowledge and understanding of science that they come from secondary schools with, which is often combined with low motivation to study and low individual diligence.

Table 6: Unsuccessful students in accredited study programmes in %

Type of study programme	P [%]	K [%]	Total [%]
BSP (all disciplines)	65	65	65
MSP (all disciplines)	0	0	0
NMSP (all disciplines)	43	65	50
DSP (all disciplines)	18	0	15
Total			59

Note: * = Study failure rate is the ratio of the number of studies started in year n to the sum of failed studies of this cohort in year n and $n+1$.

In 2020, the study throughput has decreased significantly. This leap is a consequence of the crisis related to the impact of the pandemic and the impossibility to participate in direct laboratory teaching, which, especially in the first year, is also designed as a motivation for studying the field (technology and materials laboratories). Both the students' motivation and technical equipment proved to be a problem, which (especially in the first wave) did not always allow them to make full use of all forms of teaching.



FT TUL strives to reduce the academic failure rate of students. In agreement with the course guarantors, we try to compensate for the uneven entry knowledge of the students with a higher time allocation for exercises and seminars in core courses, where the beginning of the semester can be devoted to repetition without reducing the overall level of the course. Courses with a high failure rate are also scheduled in the following year so that their teaching does not conflict with compulsory courses and the student can fully re-attend them. Within the framework of the ROLIZ project, study guides are being developed for high failure courses in each department. *Thanks to the transition to distance learning, the use of technical means for online teaching (STAG - correspondence module, e-learning, online teaching, teaching recordings) has been expanded. Subjects were taught online, new types of study aids necessary to cope with an exceptional situation were created (tutorials, recorded lectures, tests). Teachers were increasingly involved in individual and group consultations, either on-line or (where rules allowed) face-to-face.*

We try not to encourage prolonged study by, for example, stipulating that only a student who is studying properly during the standard period of study can receive a merit scholarship. In order to prevent prolongation of studies, students are continuously consulted by the staff of the study departments and the vice-dean for pedagogical activities in case of difficulties (academic, health, social). Students are advised to find solutions on the basis of an individual approach. Fees for exceeding the standard period of study by more than one year are prescribed on the basis of the Dean's instruction.

The Vice-Dean for Pedagogical Activities and the clerks of the Study Department work closely with the Academic Counselling Centre and the TUL Support Centre. All teachers are informed about students with specific needs from the Academic Counselling Centre at the beginning of the semester and receive recommendations on how to work with these students individually. Gifted students have the opportunity to participate in scientific work in the departments, to go abroad within the Erasmus plus programme, to participate in a number of student competitions (SVOČ, company scholarships, competitions for the best final theses).

The pandemic and the resulting restrictions placed special demands on the flexibility of information flows, especially at the beginning of the first wave in March and April, when information was promptly transmitted by e-mail and telephone, both in bulk and individually to students. Particular attention was paid to students on trips and also to foreign students (studying in both Czech and AJ study programmes, living in dormitories for long or short periods). For these students, the TUL FT provided information (translations of government regulations, TUL, FT), individual consultations, transport to the country of origin, solving study, personal and health problems, supplying them with drapes and food or hygiene products.



2.1.2 Alumni

In 2020 (in the period from 1 January 2020 to 31 December 2020), a total of 130 students graduated from accredited study programmes. Of these, 100 were women and 21 were foreigners.

Table 7: Graduates of accredited study programmes (period from 1 January 2020 to 31 December 2020)

Study programme / field of study	Graduates in the study programme								Total Graduates
	BSP		MSP		NMSP		DSP		
	P	K	P	K	P	K	P	K	
BSP/TM	13	12							
BSP / TON	25	0							
BSP / VOMO	19	6							
BSP / TTMN	11	6							
Total BSP	68	24							92
NMSP / OTI					9	5			
NMSP / NNM					10	3			
NMSP/RJ					0	1			
NMSP/PI					2	4			
NMSP total					21	13			34
DSP							3	1	
Doctoral total							3	1	4
Total FT									130

Note: Numbers of graduates without successfully completed short-term stays (data - outputs of the central SIMS registry).

Faculty cooperation with alumni

FT TUL supports cooperation with graduates at the departmental level. FT TUL organises tours of existing premises on the occasion of alumni reunions. *In 2020, alumni reunions were planned for early September as part of the celebration of the 60th anniversary of the Faculty, but due to the pandemic they were cancelled and moved to 2021, where 3D tours of the Faculty's premises are planned online.*

Graduates of the doctoral study programme

In 2020, four State Doctoral Examinations (SDZ) were held. Four students successfully passed the SDZ: Details of the examinations can be found on the Faculty's website under the link [State Doctoral Examination](#).

Musaddaq Azeem, M.Sc.,

Ing. Radek Jirkovec,

Manikandan Sivan, M.Sc.,

Ing. Alžbeta Samková.

In the same year, 4 students successfully defended their dissertation and obtained the degree of Ph.D., one doctoral student did not defend his thesis. Details about doctoral procedures can be found on the faculty's website under the link



Dissertation defence.

Ing. Tomáš Kalous topic: Study of technical possibilities of alternating electric softening
 supervisor: doc. Ing. Pavel Pokorný, Ph.D.

Jawad Naeem, M.Sc. topic: Thermal Protective Performance of Firefighter Protective Clothing
 supervisor: prof. Dr. Ing. Prof. Dr. Zdeněk Kůs

Ing. Iva Mertová topic: Meeting of thread in fabric
 supervisor: prof. Ing. Bohuslav Neckář, DrSc.

Promoda Kumar Behera, M.Sc. topic: Influence of High Temperatures on Properties of Geopolymers Filled by Inorganic Fibrous Particles
 supervisor: prof. Ing. Jiří Militký, CSc.

Abdur Razaque, M.Sc. (undefended) subject: Evaluation of Hydrostatic Resistance and Comfort Properties of Breathable Laminated Fabrics
 supervisor: Ing. Pavla Těšínová, Ph.D.

The pandemic affected students' ability to meet the ISP Individual Study Plan primarily in the following aspects:

- a) inability to carry out the planned internship/foreign trip*
- b) impossibility of conducting experiments due to the restriction of access to TUL facilities*
- c) indisposition of teachers (especially from vulnerable health groups) when participating in examinations according to the ISP*

2.1.3 Interest in studying

The following table provides statistical data on the number of students enrolled for studies, the number of students admitted for studies and the number of students enrolled for studies. This information is broken down by study programme.

Table 8: Number of applications

Study programme	Applications submitted ¹⁾	Number of applicants (natural persons)	Acceptance ²⁾	Enrolled ³⁾
Total BSP	441	394	417	253
Total DSP	11	11	11	9
NMSP total	118	116	118	82
SME total	0	0	0	0
TOTAL on FT	570	521	546	344

Note: 1) Applications received by the faculty, 2) successful applications, 3) enrolled students.

Nature of the entrance examination

At FT TUL, admission examinations are provided exclusively by our own resources.

Bachelor's Degree: the Faculty of Textile Engineering accepts applicants on the basis of their high school results. Successful completion of the talent test was a condition for admission to the Bachelor of Design programme.

In 2020, there were no talent tests with personal participation of candidates due to the pandemic. Both rounds of the talent test for the admission procedure were evaluated by an expert committee



on the basis of the submitted presentations of artistic works.

Following a government decision, conditional enrolment was made available to students without a matriculation certificate.

Continuing Master's studies: applicants were admitted to the continuing study programme without entrance examinations on the basis of an assessment of their previous university studies and the recommendation of the admissions committee until the vacant capacity was filled. The first semester of study is designed as an extended admission process, where applicants demonstrate their ability to study their chosen programme at the university.

Doctoral studies: the admission procedure for doctoral studies took place in two rounds last year. Applications were accepted until 15 February 2020 and 24 June 2020. The admission committee meeting took place on 25 February 2020 and 30 June 2020. The assessment of the applicant's overall qualifications for this type of study is based on documented successful completion of a university degree in engineering or master's studies, a structured CV describing the applicant's skills, knowledge and competences, including a motivation letter elaborating on the expected dissertation topic. In the case of foreigners, nostrification of previous educational qualifications was also a prerequisite for admission. Summary information on the number of applicants, admitted and enrolled students is given in the following table.

Table 9: Admissions to the

Admission procedure	CZECH REPUBLIC	FOREIGNERS	total/accepted/not accepted	ENTRY
Round 1	1	2	3/3/0	2
Round 2	7	1	8/8/0	7
Total	8	3	11/11/0	9



2.1.4 Development of educational activities

Teaching activities in 2020 were supported from other sources through MŠMT projects (2 development projects (MŠMT Institutional Support)).

In the field of education, the availability of study materials in electronic form in both Czech and English (using e-learning applications) has been and is being gradually improved. Participation in specialised trade fairs, where the offer of study programmes and cooperation opportunities was presented, was also important for increasing the reputation of the faculty. *Thanks to the transition to distance learning, the use of technical means for online teaching was expanded (STAG - module for correspondence, e-learning, online teaching, teaching records). Subjects were taught online, new types of study aids necessary to cope with exceptional situations were created (tutorials, recorded lectures, tests, videos of technological processes, virtual catalogues of textile materials).*

EU operational programmes

The sustainability of all projects implemented under the OP HC programme has been completed. In 2020, the Faculty of Textile Engineering of TUL continued to actively participate the university-wide project OP VVV RoLiz 4.0 - Development of human resources of TUL for increasing relevance, quality and access to education in the conditions of Industry 4.0, reg. no. CZ.02.2.69/0.0/0.0/16_015/0002329.

The faculty is involved in the key activities KA01 - Project Management, KA02 - Improvement of Educational Activities, KA03 - Creation and Modernization of Study Programmes, KA04 - Labour Market Monitoring, Links to Graduates, KA05 - Internationalization, KA06 - Availability of Counselling and Assistance Services, KA07 - Adaptation of the Learning Environment, KA08 - Quality System and KA09 - Effective Management Principles.

Another of the university projects in which the Faculty of Textile Engineering of TUL participates is the project Effective Technology Transfer Process at TUL, reg. no. CZ.02. The activities implemented in the project were aimed at setting up an effective TT system at TUL. The aim is to support and develop the commercialisation system within TUL. The Faculty supports the involvement of technology scouts and other academic or scientific researchers in projects aimed at developing and actively introducing commercialisation procedures into daily practice.

Within the framework of the International Mobility of Researchers at TUL project, reg. no. CZ.02.2.69/0.0/0.0/16_027/0008493, which was launched in April 2018, the faculty implemented the arrival of researchers from abroad in order to expand and improve international cooperation. The faculty also participated in university-wide projects of the OP VVV aimed at improving material and technical equipment for bachelor and master study programmes/fields - Educational infrastructure of TUL for increasing relevance, quality and access to education in the conditions of Industry 4.0, reg. no. CZ.02.2.67/0.0/0.0/16_016/0002553, Support for the development of the learning environment at TUL, reg. no. CZ.02.2.67/0.0/0.0/17_044/0008541 (completed 20019 - the faculty is involved in monitoring sustainability). Both projects purchased instrumentation and software for the faculty's laboratories and classrooms.

Development programmes

The following projects were addressed in 2020:



1. Innovations in educational activities of the Faculty of Arts of TUL - Ing. Jindra Porkertová (Activities: Processing of secondary raw materials, Textile nanomaterials, Innovation of the courses Textile Patterning - Catalogue, Technology of Clothing Production, Goodsmanship for Clothing, Textile Goodsmanship, Innovation of laboratory exercises in the course Textile Fibers, Support of practical exercises from the courses Refining and Coloristics, Innovation of the course KHT / CTP Comfort and Transport Properties of Textiles)
2. Development of the quality of activities of the Faculty of Science of TUL - Ing. Jana Drašarová, Ph.D. (Activities were planned.) *Due to the impact of the pandemic, some of the set objectives became irrelevant or unfeasible. After the approval of the Rector/Ministry, the indicators were changed: Events for the professional public (plan 1, realization 0), Promotional printed materials (plan 3, realization 2), Summer school (plan 3, realization 1), Realization of selected exhibition, show (plan 2, realization 1), Organization of international conference (plan 1, realization 0). The new objective "To improve the quality of teaching of students, to develop learning supports" will be fulfilled by the indicator Innovation of distance learning system (online workplaces), (plan 0, implementation 14).*

2.2 Linking educational activities with creative activities

The link between educational and creative activities is a condition for continuous curriculum innovation, where it is the duty of every academic to enrich the teaching in his/her field with new knowledge, which he/she contributes to as part of his/her R&D and artistic creative activities. Students (especially SMEs and DSPs) are involved in projects and problem solving in complementary activities. In 2020, FT TUL supported the involvement of students and young academic staff in the main activities based on the Strategic Plan of FT TUL. Bachelors, Masters and PhD students participated in R&D projects, e.g. The students of FT TUL also benefit from the interconnection of R&D and artistic activities with teaching, where they have the opportunity to creatively use new materials and advanced technologies.

2.2.1 Implementation of final student theses

The bachelor's and master's theses are always linked to creative activities carried out by R&D teams or artistic personalities of the faculty. In 2020, the final theses of these students were awarded:

Dean's Award:

Bc. Valeriya Dubrovskaya	Methodology for the verification of clothing products in practical wear tests
Bc. Magdaléna Cenigová	Evaluation of utility properties of polyester textiles
Bc. Eliška Habrová	Ergonomic eyepatch with high comfort of use
Bc. Tereza Koukalová	Patterning textiles using natural materials in a clothing collection
Bc. Tomáš Potštejnský	Study of ozone generation using electrically charged fibre structures and its possible use in the decontamination of pollutants
Bc. Lucie Reslová	Optimization of nanocellulose preparation
Bc. Jan Vinter	Effect of PVB molecular weight on its AC wettability
Ing. Filip Prodanovič	Properties of concretes reinforced with inorganic fibre textiles



Ing. Adriana Novosad Construction of thermoinsulating clothing layers

Award of the Governor of the Liberec Region:

Ing. František Böhm Implementation of a membrane laminate in a building structure

Preciosa Foundation Award:

Bc. Kateřina Novotná Mental crisis of the present

The Rector's Award:

Ing. Maxim Lisnenko Preparation and characterization of PVA-based nanofibrous scaffolds and their functionalization with growth factors

2.2.2 Involvement of students in research projects of external providers

TUL FT continued to use the possibilities of financing students' scientific research activities from scholarship funds, enabling students to be partly employed on externally funded projects and complementary activities (see Chapter 4.1 Projects).

2.2.3 Involvement of students in Student Grant Competition (SGS) projects

In this year, 10 SGS 2020 projects were successfully defended. These were small-scale projects led by PhD students. Supervisors of doctoral students were the guarantors of the substantive and formal level of the solutions and other members of the teams were mostly students, both of the doctoral study programme and master's study programmes of the TUL.

The outputs of the SGS 2020 projects are described in detail in the final reports, which are available on the TUL website in the SGS TUL app.

The student grant competition in 2020 met expectations despite the unfavourable situation related to the complications caused by the global pandemic of COVID-19. Some international conferences where the researchers wanted to present the results of their work were cancelled and moved to the next year, some were held only online. Even so, a number of investigators were able to actively publish (budgets were operationally adjusted based on the Rector's Order 6/2020 - Rules for transferring funds between travel and other SGS projects, dated April 23, 2020).

A total of 11 papers were accepted at international conferences. In addition, one article has been published, four more articles have been accepted for publication after peer review, and five articles are currently under review. In all cases these are journals with impact factor listed in the WOS or Scopus database. Two functional samples have been prepared during the course of the projects: a skin cover made of hydrogel fibres and a device for the production of tubular scaffolds by needle-free electrostatic softening. Another output is one defended master thesis.

Specific Research Projects of the Student Grant Competition:

1. *Study of microplastic burden in the textile industry as part of life cycle definition*, Milica Zorić (21401);
2. *Garment with heating and cooling elements to increase the physiological comfort of the wearer*,
Ing. Michal Martinka (21402);
3. *Development and testing of hydrogel fibres*, Ing. Radek Jirkovec (21403);
4. *Study of energy utilization of geopolymer/cement materials using textile fillers*, Ing. Alžbeta



- Samková (21404);
5. *Development of nano/microfibrous tubular scaffolds for tissue engineering*, Ing. Andrea Klápšt'ová (21405);
 6. *Preparation of PTFE membranes with controlled porosity by electrospinning*, Kai Yang, M.Eng. (21406);
 7. *Color appearance of products under different illumination*, Azmary Akter Mukthy, M.Sc. (21407);
 8. *Advanced carbon fiber surface treatment*, Yuanfeng Wang, M.Eng. (21408);
 9. *Effect of RF plasma treatments on recycled carbon fibres and their subsequent use in the preparation of composites*, Ing. Jana Novotná (21409);
 10. *Effect of fabric construction on thermophysiological properties of elastic knits*, Amany Ahmed Salama Khalil, M.Eng. (21410).

2.2.4 Organisation of the Student Scientific and Professional Activity Competition (SVOČ)

The Faculty of Textile Engineering organised the 11th annual competition in student scientific and professional activities (SVOČ) at the technical faculties of TUL in 2020 within the framework of the Institutional Programme for Public Universities for 2019-2020 (announced by the Ministry of Education and Science) and the Institutional Plan of TUL for 2019-2020, priority objective 2 "Diversity and Accessibility".

The competition was announced in four sections (Textiles, Engineering, Mechatronics, Economics). *Due to the epidemiological situation caused by the pandemic, the traditional student conference was not held, but the submitted competition papers were assessed and evaluated by the expert committee for the section.*

A total of 47 students participated in the competition in the sections (Textile BSP+NMSP, Mechanical Engineering BSP+NMSP+DSP, Mechatronics - Nanotechnology and Applied Sciences, Mechatronics - Information Technology and Automatic Control, Economics BSP and Economics NMSP+DSP).

The results were announced electronically on 22 June 2020, with the individual committees announcing the top 3 entries from each section. The winners received cash prizes.

In the Textile BSP+NMSP section, the first place went to Zuzana OULEHLOVÁ for her work *Development of planar nanofibre layers for new applications in gastrointestinal surgery*. The second place in the section went to Jiřina NAVRÁTILOVÁ for her work *Production of woven structures from glass fibres for technical applications* and the work of Vendula BUREŠOVÁ *Nonwoven fabrics containing horse hair* took the third place. The results of the competition are published on the competition website (<http://svoc.tul.cz/>).

2.2.5 International Ph.D. Students Day

The next edition of the SGS Student Conference took place on 30 November 2020 *online (as a result of the pandemic)*. The principal investigators presented the results of the projects and answered questions from the SGS committee members of the TUL FT and other invited guests (heads of departments, other members of the SGS project team, ...). Based on the vote of the evaluation committee composed of the members of the SGS FT TUL 2020 committee, the members of the SGS FT TUL 2021 committee and the Dean, it was decided to award the three best presentations and to award them with a special scholarship (Andrea Klápšt'ova, Jana Novotná and



Azmary Akter Mukthy). Detailed information is available [on the website](#).

2.2.6 Support for student participation in competitions and exhibitions

BSP Design students actively participated in 4 major **activities (1 of which was abroad)**

- *BAKALAUREATS 2020*. Exhibition of final student works. Exhibited design. Gallery N. Liberec, 2020.
- SERVUSOVÁ, K., *Design.s 2020*. Brno, 2020.
- ROLLEROVÁ, A., *Design.s 2020*. Brno, 2020.
- *Mercedes - Benz Prague Fashion Week*, Collective show. Prague, 2020.
- KROULÍKOVÁ, J., *Masterclass ISPO 2020*, Munich, Germany, 2020.
- FAČKOVCOVÁ E., *Masterclass ISPO 2020*, Munich, Germany, 2020.
- BALGOVÁ, I., *Masterclass ISPO 2020*, Munich, Germany, 2020.

2.3 Linking educational activities with internationalisation

The extent of internationalisation and international excellence of TUL is described in detail in Chapter 5 Internationalisation. The main impacts on educational activities are mentioned here.

In 2020, all activities were marked by a global pandemic. FT TUL focused mainly on information, communication and support for incoming and outgoing students (whether in Czech or English SP) and teachers, see chapter 2.1.1 Students, paragraph Advice and support for students in accredited study programmes. The impact of the epidemiological crisis caused by the spread of the covid virus on internationalisation is assessed in Chapter 5.

21

2.3.1 Study programmes in a foreign language

The Faculty of Textile Engineering has all of its study fields (in bachelor's, master's and doctoral study programmes) accredited in both Czech and English. Studies in English are conducted in the doctoral degree programme "Textile Engineering", in the first and second year of the newly accredited programme "Textile Engineering". In the follow-up Master's programmes - second year students study the programme "Textile Engineering" in the specialisations "Clothing and Textile Engineering" and "Nonwoven and Nanomaterials", and first and second year students study the newly accredited programme "Textile Engineering", specialisation "Nonwovens and Nanofibre Materials". In the Bachelor's degree program we have one student in the third year of the program to complete the degree "Textile", specialization "Textile and Fashion Design". Although there is interest in studying in English, applicants have problems in getting their previous education recognized as well as in obtaining visas. The faculty cooperates with the Rector's Office of International Relations in obtaining self-paying applicants for selected courses of study

Table 10: Self-paying students

	Bachelor's Degree		Master's studies		Continuing Master's studies		Doctoral studies		TOTAL
	P	K	P	K	P	K	P	K	
Self-replicators	1	0	0	0	15	0	10	2	28



2.3.2 Lectureships of foreign experts

2 visits of foreign experts from Italy and Tunisia took place. In addition, 5 online teaching weeks for E-TEAM students took place, see chapter 5.4 Mobility. There was also 1 work placement of a foreign postdoc at the FT. Overview of lectureships:

1. Carmen Visconte, Bergamo University, Italy, 10 - 14 February 2020 - lectures on "Advanced and Specialized Textile Processing - Mechanical", Erasmus+ teaching stay KA103 in the framework of E-TEAM
2. Sofien Ben Ltoufa, University Monastir, Tunisia, 7.3.-17.3.2020 - "Heat and Mass transfer in real conditions of its use" Erasmus+ teaching stay KA107
3. Yordanka Angelova, PhD, postdoctoral fellow in knitting technology. University Gabrovo, Bulgaria, 17.-21.2.2020 - on "Advanced and Specializes Textile Processing - Knitting"

As a result of the pandemic, mobility has been significantly reduced compared to previous years. Only stays in the first quarter were made, the others were cancelled.

2.3.3 Participation of students in foreign work experience, internships, conferences, summer schools

This participation is covered by the Erasmus+ mobility programme KA103, by the contribution of the Foreign Department directly to the students, or by the funds of the faculty and departments (see chapter 5.4 Mobility for details).

In 2020, there were 22 study or work placements abroad during the summer semester of the academic year 2019-20: 11 students under Erasmus+, 11 students under other scholarship activities for a total of 73 months. In addition, 2 foreign study visits within the winter semester of the academic year 2020-21: 2 students under Erasmus+, for a total of 6 months in 2020. Both students continue their stay in 2021. In total, 24 students travelled for 79 person-months in 2020

As a result of the pandemic, the structure of stays changed, fewer students went overall, the duration of the stay was on average one month longer than in 2019, and often the situation did not allow students to return on the planned date. FT TUL communicated with the host institutions to extend the stay, which was co-financed.

2.4 Linking educational activities to the third role of the faculty

The main mission of the activities is to increase the field employment of graduates of TUL. The most important goal is to set up interdisciplinary cooperation. This goal is gradually achieved by innovations in the subject curriculum of accredited programmes with regard to the needs of practice, support for student mobility within the study, diversification of professional practice and soft-skills competences of students, based on feedback from students, graduates and employers. A great benefit for students is the possibility of excursions, study internships or work placements and thesis or bachelor thesis solutions, where the topics are based directly on the companies. Every year, FT TUL gives space to representatives of textile companies to present job opportunities in their companies, either in the framework of workshops in the companies associated with excursions or specialized seminars and job fairs. Job offers are advertised in front of the study department and on the faculty website.



2.4.1 Collaboration in the development of study programmes

FT TUL in cooperation with industrial partners strives to ensure that experts from practice participate in the education of students. The cooperation with companies associated under the Clutex z.s. cluster is based on a long-standing basis, but these companies have also appreciated the more open approach of the faculty, the offer of joint research and development projects and also, for example, the opportunity to comment on newly emerging study programmes and fields of study so that the graduate better meets the requirements of the labour market and to participate in the possible revision of existing study programmes or professional courses in cooperation with FT TUL (involvement in the ROLIZ project). The linkage is implemented through a personnel link. Ing. Krupincová, Ph.D. Vice-Dean for Science and Research of FT TUL is a member of the Administrative Committee of Clutex, participates in regular meetings of the Committee as well as General Meetings and other meetings within Clutex. Ing. Libuše Fouňová Clutex Manager is a member of the Board of Directors of the Faculty of Science of TUL.

Further professional discussions take place at other forums, which are convened for this purpose by regional governments or directly initiated by companies and the management of secondary schools in the textile sector. The discussions are held in accordance with the Sectoral Agreements already signed or under preparation.

2.4.2 Experts from the application sphere teaching in accredited study programmes

In 2020, a number of experts from practice participated in teaching in accredited study programmes by leading and guaranteeing selected courses focused on project-based learning and the transfer of knowledge and R&D results into practice:

- doc. Ing. Václav Klička Ph.D. - Project
- Ing. Petr Štoček - Textile Sales Strategy, Innovative Marketing and Sales Management
- Prof. RNDr. Gejza Dohnal, CSc. - Planning of industrial experiments
- Mgr. Oldřich Palata - Aesthetics, Contemporary Art and
- Mgr. Denisa Smetanová - Interior Design
- Ing. Jiří Koucký, CSc. - Glass and jewellery art
- Ing. Petr Tylínek - Textile stylistics
- Zdeněk Kindl - Computer Graphics 1,2
- MgA. Václav Řezáč - Basics of glass and jewellery design.

2.4.3 Consultation and guidance for bachelor and master theses

Most of the cooperation is not formalized, it is necessary to add consultants from companies to the assignment of the final works. The current best practice, in the case of final student theses solved with a specific industrial enterprise, is the management of the thesis by an academic employee of the TUL FT with the cooperation of an expert from the company as a consultant or opponent of the thesis.

Kristýna Mikutová's bachelor thesis in Textile and Fashion Design was supervised by an external student doc. Emilie Frydecká, ac.mal.



2.4.4 Professional lectures and seminars for students

Experts working in the application sphere (or distinguished graduates) or in other scientific research organisations in the Czech Republic or abroad (see Chapter 3.2.3) were involved in the educational activities of the TUL Faculty of Science in the form of specialised seminars focused on selected topics in accordance with the main objectives of the TUL Faculty of Science and the TUL Faculty of Science. These seminars took place both in the teaching of individual subjects, and separately for different groups of students across the disciplines studied.

- 4 lectures Ing. Milivoj Žák, fa MOO Clothing Store
- 2 lectures Mgr. Novotný, fa Direct Alpine MOO Outsourcing of sportswear production
- 2 transmissions Ing. Havel, fa H+D Prostějov Clothing production in Asia, clothing market in retail chains

Foreign experts are listed in section 3.2.3.

2.4.5 Excursions to companies

In 2020, a professional excursion was organized for students of the Bachelor's degree programme in Design to the Desná glassworks.

Due to the limited travel possibilities due to the covid-19 pandemic, other planned excursions were not held (e.g. the excursion of KDE students and staff to the Glasmuseum Weisswasser gallery with the ongoing opening - planned for 8 April 2020 - was cancelled).

2.4.6 Professional practice for students

At FT TUL, the DSP includes a compulsory professional practice for 6 months. Only 2 students successfully passed the mandatory internship and the final presentation in 2020. *Some DSP students worked at foreign institutions in partial fulfilment of this obligation in accordance with the Individual Study Plan, where completion is planned for a later term of their studies. Unfortunately, some students had their planned placements at foreign institutions cancelled due to restrictions arising from the Covid-19 pandemic.*

Professional practice is compulsory in all newly accredited bachelor's degree programmes. Students must complete a minimum of 80 hours in each of the three years of study. In the first year, 47 students participated in professional practice.

Table 11: BSP student internships in 2020

	Number of students
Total number of practices	47
Work experience in professional firms	28
Practice outside the field	9
Internships in the form of volunteering	7
Practice in written form (alternative)	3





2.5 Motivational events for prospective students / Cooperation with secondary schools

An important activity is the search for and long-term work with gifted individuals in primary and tertiary education, especially those who are likely to become scientists in technical and natural science fields developed at the Technical University of Liberec. In 2020, the following activities were implemented to motivate secondary school students to further their studies in technical fields:

- TUL, FT open days (FT TUL held open days for prospective students in February and November 2020. The November DOD is *organized university-wide, for the first time it was held online* - without direct visits of prospective students.)
- Realization of catalogues for the promotion of the study programme Design (Catalogue of student work across specializations, Catalogue of the course Textile Patterning).
- participation in the key activity Promotion of the HR Award project
- promotion of R&D results (see chapter 7.5 Transfer of knowledge into practice).
- In September 2020 a regular competition Clothing and Textile, Liberec 2020 (7th year) was planned. However, this year's competition was postponed for a year. *The reason for this was the closing of the students' attendance in the second semester, because the participants could not prepare their collections as part of the school activities. The competition is organized by the Association for Organizing the Clothing and Textile Competition, Liberec in cooperation with the Secondary Industrial School of Textiles and FT TUL.* The cooperation will be resumed when the situation permits.



3. Academics, staff

In 2020, there were 118 employees working at the TUL Faculty of Science, of which 102 were academic employees, including science and research staff. There were 8 professors, 11 associate professors, 30 assistant professors, 4 assistant professors and 19 lecturers employed at TUL. An overview of the number of staff is given in the following tables. In 2020, six academic staff with foreign citizenship worked at TUL FT (number of natural persons).

Table 12: Academic, scientific and other staff (headcount)

	Academic staff								Scientific and professional staff			Other employees	TOTAL employees
	TOTAL academic staff	Professors	Associate Professors	Professional assistants	Assistants	Lecturers	R&D staff involved in pedagog. č.	Extraordinary professors	Postdocs ("postdoc")	Researchers not falling into other categories	Other VV staff		
Total	66,38	5,94	11,05	28,62	3,95	16,82			2,10	4,16	20,71	19,58	112,93
of which women	44,45		4,46	23,37	2,49	14,13			1,10	2,16	11,70	16,44	75,85

Table 13: Age structure of academic, scientific and other staff (natural persons)

years	Academic staff														Scientific and professional staff						Other employees		TOTAL	of which women		
	Total academic staff		Professors		Associate Professors		Professional assistants		Assistants		Lecturers		VV staff involved in pedagog. č.		Extraordinary professors		Postdocs ("postdoc")		V Workers not falling into other categories		Other VV staff				Other employees	
	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women			TOTAL	Women
up to 29	1	0						1													3	3			4	3
30-39	12	7					6	3	3	2	3	2					2	1	4	2	5	3	1	1	24	14
40-49	29	24	1		2		19	17			7	7							1	1	5	2	6	6	41	33
50-59	14	10	1		5	3	2	2			6	5									3	2	7	7	24	19
60-69	8	7	1		2	2	3	3			2	2									5	2	2	2	15	11
over 70	8	0	5		2						1										2	1			10	1
OBJECTIVE	72	48	8	0	11	5	30	25	4	2	19	16	0	0	0	0	2	1	5	3	23	13	16	16	11	81



Table 14: Number of academic jobs by range of working hours and highest qualification attained

Time ranges	Academic staff										Researchers		TOTAL	of which women	
	TOTAL	Women	prof.		doc.		DrSc., CSc., Dr., Ph.D., Th.D.		Other		TOTAL	Women			
			TOTAL	Women	TOTAL	Women	TOTAL	Women	TOTAL	Women					
up to 0.3	4	2	2					2	2					4	2
0,31-0,5	4	2						1	1	3	1			4	2
0,51-0,7	6	4	2		1	1		1	1	2	2	2	2	8	6
0,71-1	58	40	4		10	4		26	21	18	15	5	2	63	42
more than 1	0	0												0	0
TOTAL	72	48	8	0	11	5		30	25	23	18	7	4	79	52

In 2020 he was appointed Associate Professor in Textile Technology and Materials Engineering Ing. Petr Henyš, Ph.D. The habilitation lecture Introduction to the finite element method and the defence of the habilitation thesis Multiscale modelling of fibre structures took place at the public meeting of the Scientific Council of the Faculty of Science of TUL on 2 December 2019.

In 2020, 3 selection procedures were held for academic staff and other FT TUL staff.

On 13 January 2020, the selection committee recommended the admission of 1 candidate for the position of assistant for the KNT FT TUL (1 position) and 1 candidate for the position of assistant professor for the KMI FT TUL (1 position).

On 16 December 2020, the selection committee recommended the admission of: 1 candidate for the position of Assistant Professor for the Faculty of Science at TUL (1 position).

Table 15: Number of workers on the register as at 31.12.2020 - natural persons

Work.	Prof.	Doc.	OA	Assist.	lect.	TOTAL ac. work.	Scienc. work.	TOTAL ac.+scientific work.	OT	HSP	The rhyme	TOTAL	Of which women
KTT	2	1	6	0	3	12	0	12	2	1	0	15	10
KMI	3	2	7	0	4	16	2	18	7	1	1	27	22
KHT	1	3	5	0	1	10	2	12	0	1	0	13	9
CODE	1	1	6	1	1	10	2	12	3	1	1	17	11
CNT	1	2	3	3	0	9	4	13	0	1	0	14	5
WHERE	0	2	3	0	10	15	0	15	5	1	0	21	14
DFT	0	0	0	0	0	0	0	0	1	5	0	6	5
SFT	0	0	0	0	0	0	0	0	0	5	0	5	5
Total	8	11	30	4	19	72	10	82	18	16	2	118	81



Table 16: Academic and scientific staff with foreign citizenship (average numbers)

	Academic staff						Scientific and professional staff			Other employees	TOTAL staff
	Academic staff TOTAL	Professors	Associate Professors	Professional assistants	Assistants	Lecturers	Postdocs ("postdoc")	not falling into other categories	Other		
<i>Slovakia</i>	2,00		1,00	1,00						0,01	2,01
<i>other EU countries</i>	0,00						0,50				0,50
<i>other non-EU countries</i>	2,12			2,01		0,11	0,60	2,09	0,08	0,05	4,94
Total	4,12	0,00	1,00	3,01	0,00	0,11	1,10	2,09	0,08	0,06	7,45
<i>of which women</i>	2,05			2,01		0,04	1,10	1,09		0,05	4,28

3.1 Education and training activities for employees

As a result of the pandemic and the need to limit meetings to an online format, the structure and format of training has changed. Most were conducted online and staff made increased use of in-house training to support distance learning.

During the year, educational and training activities for employees were carried out at TUL.

- Extensive individual participation in training events within the Roliz, HR Award projects
- Training of relevant staff on the newly acquired equipment
- Kateřina Hrnčířová: Microscopic Methods in Biomedicine (5 days, organized by the Institute of Molecular Genetics of the CAS)
- training aimed at improving pedagogical skills (internal language school, e-learning, creation of videos, tests, etc.).

3.2 Motivational tools for rewarding employees

FT TUL does not have a Career Code for its academic staff, but there are Framework Criteria for Habilitation and Appointment to Professor Procedures. The presented criteria can be considered as general recommendations representing the framework requirements for candidates for the habilitation procedure and the procedure for the appointment to professor at TUL FT. The opinion of the habilitation or evaluation committee is considered to be the decisive element in the procedures.

Personal evaluation (according to performance, on a project, monthly, semi-annually) is determined by the head of the department (or faculty department) depending on the results achieved by individual staff members. In 2020, at the proposal of the Dean and after discussion in the Senate, a special annual remuneration was paid to the faculty staff from the economic result. The amount of the individual employee's remuneration was proposed by the head of the department based on the annual summative evaluation.



FT TUL employees take advantage of the opportunities offered by TUL, such as: the possibility of placing a child in the university kindergarten ŠKATULKA and in the children's corner of TUL, accommodation in accommodation facilities (dormitories, hostels, start-up apartments), use of sports and rehabilitation offers of TUL.

3.3 Support for DSP students and young academics

Young researchers and, as prospective future colleagues, DSP students are especially supported. The following activities are financially supported:

- R&D activities from scholarship funds and specific research carried out in the form of Student Grant Competition (SGS);
- workshop for students of the doctoral programme of the Faculty of Textile and Mechanical Engineering of TUL;
- participation in competitions and exhibitions;
- participation in student scientific and professional activities (SVOČ);
- professional practice;
- Publication grants;
- foreign mobility (internships, placements, summer schools, conferences, teaching stays) is supported within the Erasmus+ university mobility programme, Erasmus+ KA107 faculty projects outside the European Union, CEEPUS.

Motivational tools for rewarding students

FT TUL pays merit scholarships to successful BSP and NMSP students. In 2020, scholarships in the total amount of 605 thousand CZK were paid. Out of the total scholarships paid, the total number of scholarships paid was 605,000 CZK, including scholarships for the red diploma.

In order to support students in doctoral study programmes, TUL pays scholarships from the contribution of the Ministry of Education and Science, which in 2020 amounted to CZK 1 985 thousand. CZK 1,985.

In 2020, the faculty paid an accommodation grant of CZK 1 428 thousand. CZK and a social scholarship in the amount of CZK 30.5 thousand. CZK.



4. Scientific research, development, innovation, artistic and other creative activities

FT TUL carries out creative activities according to §1 of Act No. 111/1998 Coll., on higher education in the following areas:

- basic research (funded by a grant, from GAČR funds)
- Applied research (funded by a contribution, TAČR funds, projects of ministries of the Czech Republic, collective research, contract research)
- innovation activities (in the framework of complementary activities, in the form of contracts)
- artistic creative activity.

The creative activities of the Faculty of Textile Engineering are based on the STRATEGIC PLAN OF EDUCATIONAL AND CREATIVE ACTIVITIES OF THE FACULTY OF TEXTILE TECHNICAL UNIVERSITY IN LIBERTY FOR 2021-2030. Support is given in particular to those research activities that are in line with rapidly developing research trends. The scientific and research work is mainly related to those directions in which the faculty has traditionally had a high level and quality personnel background and where there is a high probability of obtaining financial support from various grant competitions. The development of the Faculty of Science in the field of science and research is mainly oriented towards these areas:

1. **New materials**
2. **Metrology and new quality assessment methods**
3. **Advanced textile technology**
4. **Application of nanotechnology**
5. **Applying the results of artistic creativity in product design and innovation**

The following are monitored as the main performance parameters of creative activities:

- projects solved
- publishing activity
- exhibition activities.

The pandemic did not significantly affect the research activities of the faculty. The staff have been actively involved in the production of materials for respiratory protection (see section - third role ...) and thanks to their expertise and experience in textile materials engineering, they are actively expanding their portfolio of R&D projects in the search for solutions and design of new materials for public health protection.

4.1 Solved projects

Scientific research projects focused on basic and applied research including experimental development are an integral part of the Faculty's activities. Funded projects enable extensive development of R&D activities and form a significant part of the Faculty of Science budget. In 2020, the projects of the following providers were addressed: MIT 4, TAČR 5, MZ 1, MŠMT 5, MV 1, GAČR 1. (excluding SGS).

4.1.1 EU Operational Programme Projects - Science and Research

The projects implemented within the framework of the OP R&D&I (pre-seed - Nanofibre materials for tissue engineering and Innovative products and environmental technologies) were completed



in 2015 and are now in the sustainability period (for each monitoring period an update of the Financial Gap and a Sustainability Monitoring Report is submitted for the projects). The five-year sustainability periods for both projects ended on 31 October 2020.

The following OP PIK projects have entered the period of sustainability: project CZ.01.1.02/0.0/0.0/15_019/0004528 SENIOR - Special clothing and textile products of high utility properties based on a new generation of intelligent materials that will increase the efficiency of health and social care for the elderly and project CZ.01.1.02/0.0/0.0/15_019/0004588 Sky Paragliders a.s. - research and development of new technical fabric for air rescue systems. The projects were completed in 2019, the sustainability of OP PIK projects is monitored for 3 years.

The Faculty actively participates in the project OP VVV Educational infrastructure of TUL for increasing relevance, quality and access to education in the conditions of Industry 4.0, reg. no. CZ.02.2.67/0.0/0.0/16_016/0002553, thanks to which a number of new devices are purchased. The activities of the faculty are mainly implemented within KA03 - Material and technical equipment.

The implementation of the project Hybrid Materials for Hierarchical Structures, reg. no. CZ.02.1.01/0.0/0.0/16_019/000843, continues. The project is carried out in cooperation with the Faculty of Engineering and the Institute for Nanomaterials, Advanced Technologies and Innovations. The aim of the project is interdisciplinary research that will help to achieve excellent results.

4.1.2 MIT projects

TRIO programme

1. FV10111 - SeniorTex - smart modular garments and special textile products with integrated electronic microsystems to improve the health care of the aging population and people with disabilities. Principal investigator: the VÚB a.s., co-investigator: the Faculty of Textile Engineering, doc. Ing. Antonín Havelka, CSc.
2. FV20287 - Texderm - fabrics and garments with increased comfort for the specific needs of children with skin problems. Principal investigator: the Faculty of Textile Engineering, doc. Ing. Antonín Havelka, CSc.
3. FV40323 - Vidtex - smart textiles and garments with high performance properties to increase safety in transport, especially visibility. Principal investigator: the Faculty of Textile Engineering, doc. Ing. Antonín Havelka, CSc.
4. FV40025 - Processing of waste and recycled textile fibres - Principal investigator: Rieter CZ s.r.o., co-principal investigator: the Faculty of Textile Engineering, Ing. Gabriela Krupincová, Ph.D.

OP PIK, Cooperation programme (within the Clutex - Technical Textiles Cluster, z.s.)

1. CZ.01.1.02/0.0/0.0/16_079/0008314 - Collective Research - Clutex II. The Faculty of Textile Engineering provided consulting services for the solution of some subprojects.
2. CZ.01.1.02/0.0/0.0/17_103/0011803 - Collective research - Clutex III. The Faculty of Textile Engineering provided consultancy services for some sub-projects.
3. CZ.01.1.02/0.0/0.0/19_263/0018791 - Collective Research - Clutex V. The Faculty of Textile Engineering provided consulting services for the solution of some subprojects.
4. OPPI 5.1 spk 01/001 - Technical Textiles Cluster - 2nd stage provided FT TUL with consulting services for the solution of scientific research projects.



4.1.3 TAČR projects

1. TF06000048 - SMARTTHERM - Intelligent thermoregulating fibres and functional textile coatings based on heat resistant encapsulated PCM. Principal Investigator: INOTEX spol. s r.o., Co-investigator: Faculty of Textile Engineering, prof. Ing. Jiří Militký, CSc.
2. TH04030390 - Complete removal of nitrogen and phosphorus from wastewater using purpose-made textile biomass carriers. Principal investigator: TUL - Faculty of Textile Engineering, Ing. Brigita Kolčavová Sirková, Ph.D., Institute for Nanomaterials, Advanced Technologies and Innovations, co-investigator.
3. TH04010031 - Hollow polymer fibre heat exchangers for the automotive industry. Principal investigator: Brno University of Technology, co-principal investigator: TUL - Faculty of Textile Engineering, Ing. Brigita Kolčavová Sirková, Ph.D.
4. TP011010031 - PROSYKO - Proactive system of commercialization at TU Liberec 2. The Faculty of Textile Engineering deals with partial research projects.
5. TL04000150 - R-DETI - Improving the care of children with skin problems from an ethical, social and health care perspective in times of pandemic crises. TUL - Faculty of Textile Engineering, doc. Ing. Antonín Havelka, CSc., co-supervisor.

4.1.4 Projects of the Ministry of the Interior - Security Research Programme

VI20172020059 - Smart fabrics against CBRN agents. Principal investigator: the State Institute of Nuclear, Chemical and Biological Protection, v.v.i. TUL - Faculty of Textile Engineering - doc. Ing. Pavel Pokorný, Ph.D., Professor of Textiles, Faculty of Textile Engineering, Ph.D.

4.1.5 Projects of the Ministry of Education, Youth and Sports - Inter-Excellence Programme

Inter-Eureka - 170921 - Wearable IoT Solver: GiTy a.s. Masaryk University, TUL - Faculty of Textile Engineering - doc. Ing. Antonín Havelka, CSc.

4.1.6 Projects of the Ministry of Education, Youth and Sports - Mobility Programme

1. 8J19UA011 - Research and development of nanoparticle modified textiles for the protection of human health and electronic devices. Principal investigator: TUL - Faculty of Textile Engineering, doc. Ing. Vladimír Bajzík, Ph.D.
2. 8JCH1064 - Design of multilayer micro/nano fibre structures for air filtration. Principal investigator: TUL - Faculty of Textile Engineering, prof. Ing. Prof. Jiří Militký, CSc.

4.1.7 Projects of the Ministry of Health

NU20J-08-00009 - Prevention of intestinal anastomotic leak and postoperative adhesions using nanofibrous biodegradable materials. TUL - Faculty of Textile Engineering (RNDr. Jana Horáková, Ph.D./Ing. Jiří Chvojka, Ph.D.) Other participants: Charles University, Faculty of Medicine in Pilsen.

4.1.8 Projects of the Grant Agency of the Czech Republic

20-19297S - Nanofibrous polymers with restricted access material functionality for on-line chromatographic extraction of complex matrices. Researcher: Charles University, Faculty of Pharmacy in Hradec Kralove. Other participants: TUL - Faculty of Textile Engineering (Ing. Jiří Chvojka, Ph.D.)



4.2 Project applications prepared and submitted

Table 17: Project applications ready in 2020

Provider	Applicant(s)	Project name	Solver
H2020 - Marie Curie ITN	[P] TUL	NAOMY - Novel Approaches to enhance safety Of Micromobility	doc. Ing. Lukáš Čapek, Ph.D.
GACR - Junior Star	[P] TUL	Advanced structures for thermal insulation in extreme conditions	M. Venkataraman, M.Tech., M.F.Tech., Ph.D.
GP TUL - RISING STARS	[P] Technical University of Liberec	Thermal performance of protective clothing under extreme ambient conditions: focus on Radiation protection and steam burns	Ing. Adnan Ahmed Mazari, Ph.D.
GP TUL - PURE	[P] Technical University of Liberec	Fluid flows induced by high voltage phenomena	doc. Ing. Pavel Pokorný, Ph.D.
TAČR - KAPPA	[P] TUL [D] Norges teknisk-naturvitenskapelige universitet (NTNU)	CO2 capture system designed to ensure indoor air quality	M. Venkataraman, M.Tech., M.F.Tech., Ph.D.
TAČR - KAPPA	[P] TUL [D] ILC FACTORY a.s. [D] Institute for energy technology [D] SUNPHADE AS	SMART hybrid protection systems based on rare earth metal hydrides	doc. Ing. Martina Víková, Ph.D.
TAČR - TREND 2 - Newcomers	[P] Mgr. Robert Šámal [D] TUL	"ECOPLNTEX" - Development of eco friendly sandwich textile structures for hygiene products, especially diapers, nappies and incontinence pads with increased physiological comfort for infants, toddlers and the elderly	Ing. Petra Komárková, Ph.D.
MV - IMPACT	[P] University of Mining and Metallurgy - Technical University of Ostrava [D] TUL	Potential for improving the visibility of objects and IZS units in the night traffic area using lighting parameters of technical infrastructure in order to increase safety	prof. Ing. Michal Vík, Ph.D.
MV - IMPACT	[P] Czech Technical University in Prague [D] University of West Bohemia in Pilsen [D] TUL [D] State Institute of Nuclear, Chemical and Biological Protection, v.v.i.	Professional clothing with modular telemetric sensor system for integrated rescue system	doc. Ing. Antonín Havelka, CSc.
TAČR - Eta	[P] Technical University of Liberec	Online organizational system for teaching and laboratory work of students and teachers in emergency conditions	Ing. Bc. Viera Glombíková, Ph.D.
TAČR - 4th Eta	[P] TUL [D] VÚB a.s. [D] LF HK, UK	R-DETI - Improving the care of children with skin problems from an ethical, social and health care perspective in times of pandemic crises	doc. Ing. Antonín Havelka, CSc.
TAČR - ERA-NET	[P] Sintex a.s. [D] Research Institute of Veterinary Medicine [D] TUL + PL partners	TESCOV - Textile structures combining viral protection and comfort	prof. Ing. Jiří Militký, CSc.
H2020 - FETOPEN-2018-2020	[P] Erich Schmid Institute of Material Science, Austria [D] TUL + partners CH, AU, DE	BREAKIMPLANT - Breakthrough Implant	doc. Ing. Petr Henyš, Ph.D.
TAČR - TREND 3 - Technology Leaders	[P] VUB a.s. [D] TUL [D] University of West Bohemia in Pilsen	MultiTex - Advanced smart textiles with multifunctional effects to improve professional and functional clothing in hazardous environments	doc. Ing. Antonín Havelka, CSc.
MV - BV III/4-VS	[P] SIGMA, research and development institute s.r.o. [D] TUL [D] Centrum hydraulického výzkumu spol. s r.o.	Functional fabrics for new generation filter media	Ing. Jiří Chvojka, Ph.D.
Ministry of Health	[P] 3RD FACULTY OF MEDICINE, CHARLES UNIVERSITY [D] TUL [D] Institute of Animal	Nanofibre implant for glaucoma treatment	Ing. Jiří Chvojka, Ph.D.

	Physiology and Genetics of the CAS		
H2020-FETPROACT-2018-2020	[P] NTNU, Norway [D] TUL + partners PT, GR, SP, RO	ELECTRO - ThermoElectric cement based structures for large-scale thermal energy harvesting and Green Buildings	prof. Ing. Jiří Militký, CSc.
TAČR - 5th Etta	[P] TUL [D] HD a.s.	O-ROUSKY- Societal impacts of the application of protective textile drapes in terms of utility characteristics, in particular wearing comfort and filtering capacity, depending on the time of use, wear and tear, and, where applicable maintenance.	doc. Ing. Antonín Havelka, CSc.
TAČR - 5th Etta	[P] TUL	Web application for online organization of teaching and laboratory work of full-time and combined students, students with special needs and teachers	Ing. Bc. Viera Glombíková, Ph.D.
MIT - OP PIK, Applications	[P] Sintex a.s. [D] TUL [D] Inotex spol. s r.o. [D] Research Institute of Veterinary Medicine v. v. i.	VIRATEX Textile structures combining virus protection and comfort	doc. Dr. Ing. Dana Křemenáková
2020 TOTAL		20 ready-made project proposals	

4.3 Publication activity - R&D outputs

Publication activities of individual faculty members are of great importance in the scientific research and innovation activities of the faculty and are a reflection of its scientific and pedagogical potential. This activity is an important criterion for evaluating the quality and effectiveness of R&D&I activities in general. The evaluation of publication activity serves as a criterion for the allocation of financial resources to the faculty, for accreditation procedures, for the career development of individual staff members, etc. The publication activity of the staff is reported annually in CEP, the RIV database.

The evaluation of selected outputs by the Council's Research, Development and Innovation Department through Expert Panels using remote reviews is one of the bases for the evaluation of research organisations according to the M17+ Methodology under **Module 1**. The published reports summarising the findings of this evaluation by subject group are complemented by detailed comments from the chairs of the Expert Panels and an accompanying list of results. Authors or co-authors from the Faculty of Textile Engineering of TUL were involved in the evaluation of selected results in the evaluation period H17+H18+H19 for 21 submitted results (19 results in Engineering and Technology and 2 results in Natural Sciences; of which 18 results in the criterion "Social relevance" and 3 in "Contribution to knowledge").

5 results were rated as grade 2 (excellent result), 3 results were rated as grade 3 (very good result), 6 results were rated as grade 4 (average result), 6 results were rated as grade 5 (below average result) and 1 result was not rated.

Publications (as of 4 March 2021)

FT TUL proceeded to a detailed evaluation of the results in international rankings. Thomson Reuters' InCites analytical tool (<https://incites.clarivate.com>), based on citations of publications indexed in the Web of Science (WoS), enables advanced analysis of publication activities and the impact of research work at the level of individuals, teams, departments, institutions and individual disciplines.

2020

Technical University of Liberec has 283 outputs recorded in the Web of Science database for 2020.



Fig. 2 shows the 10 most important fields in which it publishes. Materials Science - Textiles is one of the WoS research subfields in which TUL and especially the Faculty of Textile Engineering is active. InCites offers the possibility to compare the scientific outputs of the Faculty of Textile Engineering of the Technical University of Liberec in this research sub-area with organisations not only in the Czech Republic, but also in Europe and the world. In 2020, 37 documents (all authored or co-authored by FT TUL) are recorded for TUL in this sub-area, which ranks FT TUL 15th in the number of documents compared to other (approx. 1879) organisations in the world.

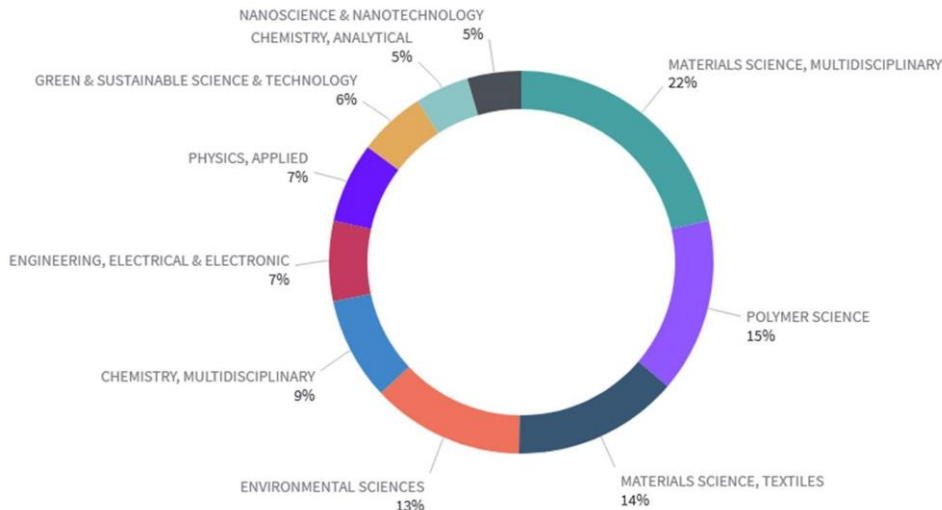


Fig. 2: Share of documents in WoS fields in 2020 of the TUL organisation (top 10).

2016-2020

The Technical University of Liberec has 1794 outputs recorded in the Web of Science database in 2016-2020. Figure 3 shows the share of the top 10 fields in which it publishes. In 2016-2020, TUL (FT TUL) with a total of 277 documents in the research subfield Materials Science - Textiles ranks 7th compared to other (approx. 3312) organizations in the world (45.8% of documents in Q1 and 27.1% in Q2).

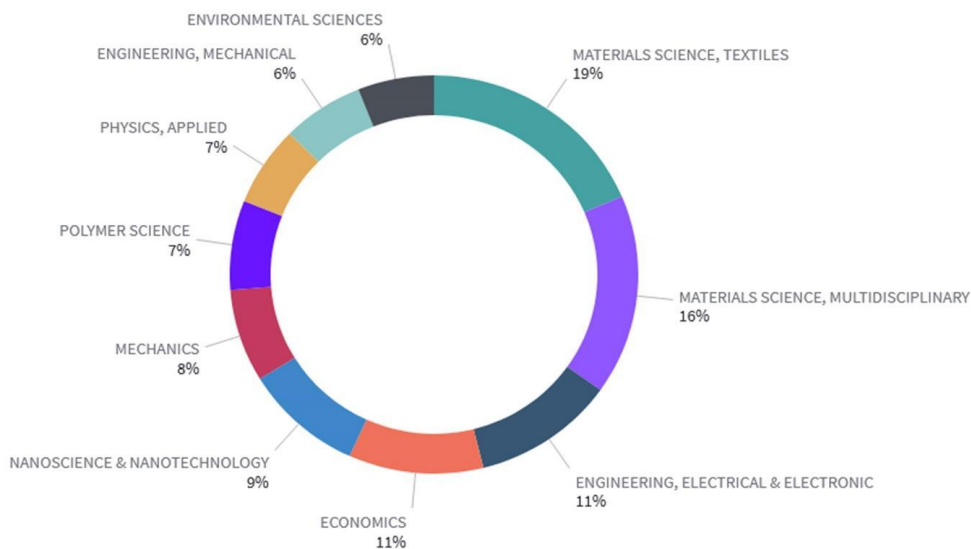


Fig. 3: Share of documents in WoS fields in 2016-2020 TUL (top 10).

1980-2020

The Technical University of Liberec has 4605 outputs recorded in the Web of Science database between 1980 and 2020. Figure 4 shows the share of the 10 most important fields in which it publishes. The total number of papers in Materials Science - Textiles for the Technical University of Liberec in 1980-2020 is 470, ranking the university 21st out of 4217 organizations (32.3% of papers in Q1 and 29.3% in Q2).

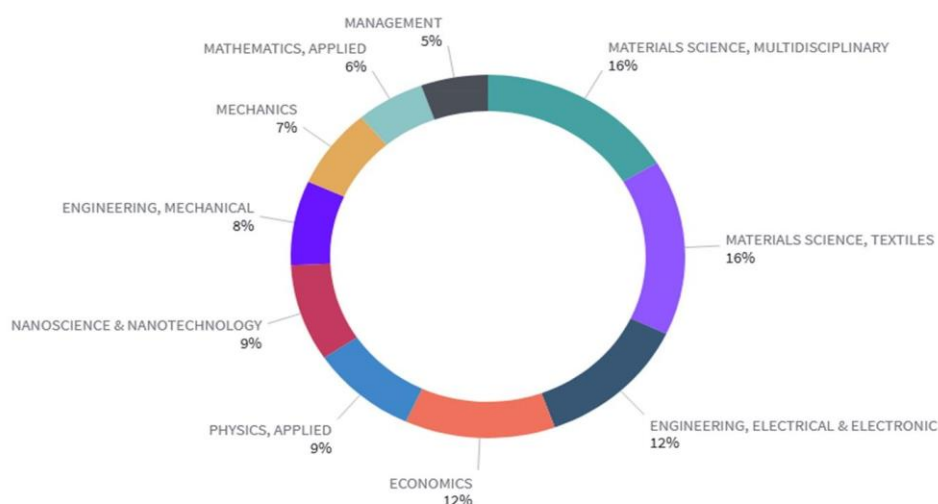


Fig. 4: Share of documents in WoS fields between 1980-2020 TUL (top 10).

The world's most quoted scientists

On January 12, 2021, a list of the 2% most cited scientists in the world for 2019, which includes the SCOPUS database, was published in a summary article on the portal [Vědavyzkum.cz](http://vedavyzkum.cz). At the Technical University of Liberec, 5 scientists are listed, two of whom are from the Faculty of Textile Engineering at TUL (prof. Ing. Jiří Militký, CSc. and doc. Rajesh Mishra, B.Tech. Ph.D.).

Module 3

On 20 - 21 October 2020, the evaluation of MODULE 3 - Social Relevance (Results with economic or social impact, applied research grants; transfer of results into practice, cooperation with the application sphere, technology transfer) was carried out by the International Evaluation Panel (MEP). Due to the epidemiological situation, the MEP members did not visit the university premises, the evaluation of individual units of TUL was carried out online. FT TUL was rated with an overall score of **4-Very good** from a five-point rating scale (1-Inadequate; 5-Excellent). The overall summative evaluation is presented in Chapter 8.1 Quality Assurance and Evaluation of Activities



4.4 Exhibition activities - artistic outputs

The success of the TUL Faculty of Arts and the staff of the Department of Design is obtaining the status of an acceding faculty with the possibility of applying the results of artistic creative activity in the RUV (register of results of creative artistic activity). For the period 2020, 15 artistic outputs in two segments have been submitted for certification for FT TUL: Design (sub-segments: Fashion, Textile, Jewellery and Glass, Porcelain, Ceramics) and Fine Arts (sub-segment: Fine Arts). Information on the results of the individual institutions involved in this project is available from www.iruv.cz. The artistic activities of the academic staff are both original, collective, or as guarantors of larger collective student activities.

Within the framework of artistic creative activities, the Faculty of Design of the Technical University of Ljubljana guarantees the activities of the university's Gallery N in Jablonec nad Nisou, where it organizes exhibitions of its own work, student work and many invited guests. Design Department staff also participate as exhibitors in other exhibition activities. The programme of Gallery N includes various artistic directions, Czech and foreign works and presentation of both well-known authors and student works of other universities.

Within the framework of the activities of Gallery N, the Department of Design of the Faculty of Design of the Charles University in Prague has planned ten exhibitions in 2020 in the fields of: design, applied art, artistic craft, fine art, photography. Unfortunately, due to the pandemic, only 4 exhibitions were held:

- March - REMINISCENCES exhibition. Academics from Academy of Fine Arts Lodz, Poland.
- September - European Heritage Days. The most interesting monuments of buildings, objects, galleries and more.
- September - Exhibition BAKALAUREATS 2020. Exhibition of final works of BSTON
- October - Exhibition FIGURE IN MOTION, by Zuzana Kadlecová, painting.

Academic staff of KDE and students of BSP Design applied the following works as outputs of RUV for 2020 (11 in the Czech Republic and 4 abroad):

- ŠIKOLOVÁ, L., *Schmuck wander*, Collective exhibition. Museum of Decorative Arts in Prague, Prague, Gallery X, Bratislava, 2020.
- ŠIKOLOVÁ, L., *Sibylle Mania*. Collective exhibition. ACC Gallery, Weimar, Germany, 2020.
- KINDL STEFFANOVÁ, M., *Schmuck wander*, Collective exhibition. Museum of Decorative Arts in Prague, Prague, Gallery X, Bratislava, 2020.
- PLÍVA, O., *oldrichpliva-performance*, Author exhibition. Nová síň Gallery, Prague, 2020.
- PLÍVA, O., *Etue*. Work included in the collections of the Museum of Glass and Jewellery, Jablonec n. N., 2020.
- PLÍVA, O., *S.K.L.E.M*, New exposition of glass, Pardubice Castle, 2020.
- VESELÁ, Z, LUDÍN, O., *New working uniform for the Fire Brigade of the Czech Republic*, Realized design, General Directorate of the Fire Brigade Prague, 2020.
- KADLECOVÁ, Z., *Figure in Motion*, Author exhibition. Gallery N, Jablonec n. N., 2020.
- KADLECOVÁ, Z., *Painters of Pojizeří 2020*, Collective exhibition. Museum and Pojizerská galerie Semily, Semily, 2020.
- KADLECOVÁ, Z., *Painters and Sculptors Behind the Department*, Collective Exhibition. Gallery MY, Jablonec n. N., 2020.



5. Internationalisation

In 2020, FT TUL continued its internationalisation, which is based on the long-term supported activities anchored in the Strategic Plan. The Faculty has developed long-term cooperation with most of the foreign universities dealing with textile issues from all over the world. International contacts are deepened by solving joint projects, preparing and organizing mutual meetings, seminars and conferences, preparing joint publications, exchange of students and teachers. Long-term cooperation exists with practically all major textile universities in the world. The following are monitored as the main performance parameters of creative activities:

- international excellence
- cooperation agreements (MOUs)
- organisation of international seminars and conferences
- mobility - departures, arrivals (according to funding - Erasmus+ KA103, Erasmus+ KA107, CEEPUS, Vysegrad funds, bilateral agreements between universities and interstate agreements)
- joint scientific research projects.

5.1 International Excellence FT TUL

The Faculty of Textile Engineering is a full member of the International Association of Textile Faculties "AUTEX". A representative of the Faculty of Textile Engineering is a member of the committee for the revision of the accreditation of the joint study programme of the association Autex called E-Team NMSP "Textile Engineering" accredited in Ghent, Belgium.

As a member of the Association of Textile - Clothing - Leather (ATOK), it participates in the meetings of EURATEX (European Apparel and Textile Confederation). FT TUL participates in activities related to international cooperation with the EU "European Technology Platform - Fibers Textiles Clothing".

Involvement in editorial boards of journals

Materials Science - Textiles is one of the research subareas of Web of Science, in which FT TUL is active and is a key area for the faculty in the field of R&D. There are 24 journals indexed in Journal Citation Reports for 2020 in the Materials Science - Textiles subfield. In eight journals FT TUL has representation on the editorial board (according to AIS 2×Q1, 4×Q2, 2×Q3), i.e. the faculty has representation of academic staff on the editorial boards of prestigious international textile journals covering the whole breadth of the textile field.

FT TUL has been a **co-publisher of the professional journal *Fibres and Textiles*** (Slovakia), ISSN: 1335-0617 (<http://vat.ft.tul.cz>) indexed in the SCOPUS database (<https://www.scopus.com/sourceid/17198>) since 1994. Members of the editorial board - doc. Ing. Maroš Tunák, Ph.D., Ing. Veronika Tunáková, Ph.D., and honorary members of the editorial board - Ing. Jana Drašarová, Ph.D., prof. Ing. Jiří Militký, CSc.

Faculty members are **members of a number of scientific committees of various journals and conferences, professional organizations, and administrative committees:**

doc. Ing. Lukáš Čapek, Ph.D.

- Member of the Société de Biomécanique



- Vice-President of the Czech Society for Biomechanics

Ing. Jiří Havlíček, CSc.

- Member of the Administrative Committee of the Association of Textile, Clothing and Leather Industry ATOK
- Court-appointed expert in Textiles and Economics

RNDr. Jana Horáková, Ph.D.

- Member of the European Society for Biomaterials
- Member of the Society for Bioimplantology ČLS JEP

prof. Ing. Luboš Hes, DrSc.

- Member of the European Committee for Standardization CEN/TC 248, ISO/TC 38 (WG 17)
- Member of the Fiber Society, Princeton, USA
- Member of Textile Institute Manchester
- IMEKO (International Society for Technical Measurements) Prague, Czech Republic, Czech representative in TC 12 (Temperature Measurement)
- Member of the editorial boards of the Journal of Industrial Textiles (USA), Textile Research Journal (USA), Journal of Natural Fibers (USA), Fibers and Textiles in Eastern Europe (Poland), Journal of Engineered Fibers and Fabrics (England), INDUSTRIA TEXTILA (Romania).
- Textile Research Project Evaluator for Hong Kong Research Agency

Prof. Dr. Ing. Zdeněk Kůs

- Member of the Board of the Faculty of Medicine of TUL, Faculty of Science of TUL, ZČU, ZSF of JČU, Board of MU CTU
- Vice-Chairman of the TAČR
- Member of the Monitoring Committee of OP VAVpl
- Member of the OPIE Monitoring Committee
- Member of the Planning Commission of the OP JAK Programme
- Member of the Council of the Engineering Academy of the Czech Republic
- FT representative in SV CTPT

Ing. Petra Komárková, Ph.D.

- member of the editorial board of Tekstilec (Slovenia)

Ing. Roman Knížek, Ph.D.

- Court-appointed expert in Textiles and Engineering

Ing. Gabriela Krupincová, Ph.D.

- Vice President of the Administrative Committee CLUTEX - Cluster of Technical Textiles, o.s.

doc. Dr. Ing. Dana Křemenáková

- Member of the committee of the expert advisory body of the Ministry of Education and Science for mobility within bilateral and multilateral scientific and technical cooperation

prof. Ing. Jiří Militký, CSc.

- president of Czech Monitoring Committee of FEANI Brussels, Belgium
- Honorary Lifetime Contribution Award (TBIS) member
- Vice-Chairman of International Executive Committee, (TBIS)
- Member of editorial boards of journals (The Journal of the Textile Institute (England), Autex Research Journal (Poland), Research Journal of Textiles and Clothing (England), Fibers and Textiles in Eastern Europe (Poland), Przegląd Włokieniczny (Poland), Journal of Fiber Bioengineering & Informatics (Hong Kong), Journal of Textile Engineering (Hindawi), Vlákna a textil (Slovakia), The Information Bulletin of the Czech Statistical Society (Czech Republic).



Ing. Jana Ornstová

- President of the national Czech section of the International Federation of Knitting Technologists

Ing. Hana Pařilová, Ph.D.

- active work in TNK 31 (technical standardization committee), approval of adopted standards, revision of current standards
- external lecturer of the subject "Upholstery".

Ing. Jana Šašková, Ph.D.

- Member of the Board of the Society of Textile Chemists and Colourists

Ing. Renata Štorová, CSc

- Member of the working group (Identity, Promotion, Cooperation) of the project Liberec City Culture Development Strategy, taking into account the intention to be a candidate for the European Capital of Culture 2028.

Ing. Pavla Těšinová, Ph.D.

- FT representative for the meeting of the International Association of Textile Faculties "AUTEX"
- Member of the Committee for the revision of the accreditation of the joint study programme of the Autex Association called E-Team NMSP "Textile Engineering"
- Member of the Editorial Advisory Board of Textile & Leather Review
- Member of the Working Group on Entrepreneurship and Innovation, Research and Development for the preparation of the Development Strategy of the Liberec Region 2021+
- Member of the Working Group on Education, Entrepreneurship and Employment for the preparation of the Development Strategy of the Statutory City of Liberec 2021+

Ing. Blanka Tomková, Ph.D.

- Member of the Editorial Board of the Journal of Testing and Evaluation
- Review articles for Construction and Building Materials, Journal of Industrial Textiles, Journal of Composite Materials, Journal of Engineered Fibers and Fabrics, and for the International Conference on Frontiers of Composite Materials

prof. Ing. Michal Vik, Ph.D.

- Representative of the Czech Republic in Division 1 Vision and Colour of the CIE (International Commission on Illumination)
- CIE TC 1-95 The Validity of the CIE Whiteness and Tint Equations
- member of the Czech National Committee of the CIE (CNK CIE)
- member of CSO (Czech Society for Lighting, z.s.)
- expert assessor CIA (Czech Institute for Accreditation, o.p.s.)
- member of the editorial board of the magazine Světlo
- Member of ICCTM (International Committee on Cotton Testing Method)

doc. Ing. Martina Víková, Ph.D.

- Member of the RSC (Royal Society of Chemistry)
- Member of AIC (International Colour Association)
- Vice-Chairman of the CSO (Czech Society for Illumination, z.s.)
- member of the editorial board of the magazine Světlo

National and international university awards

prof. Ing. Luboš Hes, DrSc.: He received the Honor of the Governor for his lifetime contribution in the field of textile research (more than 65 patents and 400 scientific publications).

Mohanapriya. Venkataraman, M.Tech., M.F.Tech., Ph.D. : International award - Outstanding



presentation award- TBIS 2020

International evaluation of the university or its unit, including foreign accreditation

All study programmes of FT TUL are accredited by the European Federation of Engineering National Associations "FEANI" (graduates can obtain the EURING degree after fulfilling other conditions (engineering practice). The professional organization "The Textile Institute Manchester" accredits the study programmes BSP "Textile", NMSP "Textile Engineering" and DSP "Textile Engineering" until 2021.

5.2 Cooperation agreements

Long-term cooperation exists with virtually all major textile universities in Europe and cooperation with major universities around the world is developing. The following table includes contracts exclusively with FT.

Table 18: International cooperation agreements in force in 2019

The Continent	America	Europe	Asia	Africa	New Zealand
Contracting partners in the EU	-	51	-	-	-
Contracting partners worldwide	1	22	23	6	1

New cooperation agreements (MOUs or Inter-institutional agreements) have been signed with the following institutions:

- Kaiserslautern University of Applied Sciences, Germany
- San Thelmo School of Art, Malaga, Spain
- ESMOD Ecole Superieure des Arts de la Mode, Paris, France
- Polytechnic University of Tirana, Albania

Contracting partners in the EU

1. [Pädagogische Hochschule Wien, Austria](#)
2. [Polytechnic University of Tirana, Albania](#)
3. [Universiteit Gent, Gent, Belgium](#)
4. [KU Leuven, Faculty of Engineering Technology, Belgium](#)
5. [Technical University of Gabrovo, Gabrovo, Bulgaria](#)
6. [Trakia University, Stara Zagora, Bulgaria](#)
7. [University of Zagreb, Croatia](#)
8. [VIA University College, Denmark](#)
9. [TTK University of Applied Sciences, Estonia](#)
10. [Tampere University of Technology, Tampere, Finland](#)
11. [ENSISA, Mulhouse, France](#)
12. [ENSAIT, Rubaix, France](#)
13. [Ecole Nationale d'Ingenieurs de Tarbes, France](#)
14. [Ecole Des Mines D'Ales, France](#)
15. [ESMOD Ecole Superieure des Arts de la Mode, Paris, France](#)
16. [RWTH Aachen University, Aachen, Germany](#)
17. [Albstadt-Sigmaringen University, Albstadt, Germany](#)
18. [Technical University of Dresden, Institut for Textilengineering, Dresden, Germany](#)
19. [University of Applied Sciences, Zwickau, Germany](#)
20. [University of Applied Sciences, Monchengladbach, Germany](#)
21. [Fachhochschule Bielefeld University of Applied Sciences, Germany](#)
22. [Hochschule Hof, Germany](#)
23. [Hochschule Reutlingen, Germany](#)





24. [Kaiserslautern University of Applied Sciences, Germany](#)
25. [Piraeus University of Applied Sciences, Greece](#)
26. [Budapest University of Technology and Economics, Budapest, Hungary](#)
27. [Galway-Mayo Institute of Technology, Ireland](#)
28. [Kaunas University of Technology, Kaunas, Lithuania](#)
29. [Koszalin University of Technology, Koszalin, Poland](#)
30. [Academy of Fine Arts in Wrocław, Wrocław, Poland](#)
31. [Academy of Art Łódź, Łódź, Poland](#)
32. [Łódź University of Technology, Łódź, Poland](#)
33. [Kazimierz Pułaski University of Technology and Humanities in Radom, Poland](#)
34. [Katowice School of Technology, Poland](#)
35. [University of Beira Interior, Covilha, Portugal](#)
36. [University of Minho, Guimarães, Portugal](#)
37. [ESAD, Senhora da Hora, Portugal](#)
38. [Universidade da Madeira, Portugal](#)
39. [Gheorthe Asachi Technical University of Iasi, Iasi, Romania](#)
40. [Aurel Vlaicu University of Arad, Romania](#)
41. [Alexander Dubček University of Trenčín, Trenčín, Slovakia](#)
42. [Academy of Fine Arts and Design Bratislava, Slovakia](#)
43. [University of Maribor, Maribor, Slovenia](#)
44. [University of Ljubljana, Slovenia](#)
45. [Universitat Politècnica De Catalunya, Spain](#)
46. [Escola Massana, Spain](#)
47. [Universitat Politècnica de València, Spain](#)
48. [Escuela de Arte y Superior de Diseño de Burgos, Spain](#)
49. [San Telmo School of Art, Malaga, Spain](#)
50. [Universitat Autònoma de Barcelona, Spain](#)
51. [Textilhögskolan, Högskolan i Borås, Sweden](#)

Contracting partners worldwide

1. [Polytechnic University of Tirana, Albania](#)
2. [Vitebsk State Technological University, Belarus](#)
3. [University of Science and Technology of China \(USTC\), Hefei, China](#)
4. [University of Science and Technology of China, Zhejiang, China](#)
5. [Textile School, Wuhan Textile University, Wuhan, China](#)
6. [National Research Institute, Giza, Egypt](#)
7. [Bahir Dar University Institute of Technology for Textile, Garment and Fashion Design, Bahir Dar, Ethiopia](#)
8. [Indian Institute of Technology Delhi, India](#)
9. [Sardar Vallabhbhai Patel Institute of Textile Management, Coimbatore, India](#)
10. [Anna University, Chennai, India](#)
11. [The Technological Institute of Textile and Sciences, Bhiwani, India](#)
12. [NIT Jalandhar, Jalandhar, India](#)
13. [Defence Bioengineering and Electromedical Laboratory, Bangalore, India](#)
14. [Defence Research and Development Organisation, Bangalore, India](#)
15. [DKTE Society's Textile and Engineering Institute, Ichalkaranji, India](#)
16. [Kumaraguru College of Technology, Coimbatore, India](#)
17. [Department of Textile Technology, MLV Textile Engineering College, Bhilwara, India](#)
18. [Governmental College of Engineering and Technology, Serampore, West Bengal, India](#)
19. [Faculty of Textile Science and Technology, Shinshu University, Shinshu, Japan](#)
20. [Kyoto Institute of Technology, Japan](#)
21. [Auezov South Kazakhstan State University, Kazakhstan](#)
22. [University of Mauritius, Réduit, Mauritius](#)
23. [Waikato Institute of Technology, New Zealand](#)



24. [University of Bergen, Norway](#)
25. [National Textile University, Faisalabad, Pakistan](#)
26. [Balochistan University of Information Technology, Engineering and Management Sciences, Quetta, Pakistan](#)
27. [Durban University of Technology, Durban, South Africa](#)
28. [Rajamangala University of Technology, Krungthep, Thailand](#)
29. [Rajamangala Universtiy of Technology Thanyaburi, Thailand](#)
30. [Faculty of Science, Chulalongkorn University, Thailand](#)
31. [National Taipei University of Technology, Taiwan](#)
32. [National Engineering School of Monastir, Tunis](#)
33. [Hacettepe University, Ankara, Turkey](#)
34. [Istanbul Aydin University, Istanbul, Turkey](#)
35. [Uludag University, Bursa, Turkey](#)
36. [Cukurova University, Adana, Turkey](#)
37. [Dokoy Eylul University, Izmir, Turkey](#)
38. [Ege University, Izmir, Turkey](#)
39. [Erciyes Universtiy, Kayseri, Turkey](#)
40. [Mimar Sinan Fine Arts University, Guzel, Turkey](#)
41. [Gaziantep University, Sehirkamil/Geziantep, Turkey](#)
42. [Pamukkale University, Denizli, Turkey](#)
43. [Istanbul Technical University, Istanbul, Turkey](#)
44. [University of Gaziantep, Turkey](#)
45. [Atilim University, Turkey](#)
46. [Bursa University of Technology, Turkey](#)
47. [Marmara University, Turkey](#)
48. [Suleyman Demirel University, Turkey](#)
49. [Faculty of Engineering, Busitema University, Uganda](#)
50. [Birmingham City University, United Kingdom](#)
51. [The Scottish College of Textiles, Edinburgh, United Kindgom](#)
52. [Ukrainian Engineering and Pedagogical Academy, Kharkov, Ukraine](#)
53. [The University of Alabama at Birmingham, Birmingham, USA](#)



Fig. 5: Cooperation agreements in the EU



Fig. 6: Cooperation agreements around the world

5.3 Scientific conferences and seminars

This part of the international activities has been greatly affected by the pandemic. International conferences were mostly postponed and rescheduled for a year later, or held online. Academics



and PhD students, on the other hand, were actively and promptly involved in both the organization and the presentation of R&D papers on the topic - textile-based protective equipment in a pandemic.

Organisation of conferences

23rd International Conference STRUTEX (Structure and Structural Mechanics of Textiles)

December 2-4, 2020 - The biennial international conference with international participation has been postponed to 2022 (<http://strutex.ft.tul.cz/2020/Home/home.html>).

Participation in the organisation of conferences

- prof. Ing. Jiří Militký, CSc. And prof. Ing. Luboš Hes DrSc., Dr.h.c. members of the International Scientific Committee of the Autex 2020 conference, the conference was postponed to 2021, the papers were already processed, the committee worked,
- prof. Ing. Jiří Militký, CSc. member of the International Scientific Committee of the virtual conference TBIS 2020, Combatting COVID-19 pandemic outbreaks with protective and smart textiles.

Summer School - International Summer School of Patternmaking 2020 - The Department of Textile Technology of the Faculty of Textile of the Technical University of Liberec planned to organize the fourth year of the 14-day International Summer School of Patternmaking. Its realization was postponed due to epidemiological measures and the impossibility of attendance of participants in 2020.

Winter school - Winter school Course on Finite Element Method was held in the planned time 30.11. - 1.12. 2020 online (<http://strutex.ft.tul.cz/2020/Course/course.html>) - 9 participants.

5.4 Mobility

Foreign mobility (internships, placements, summer schools, conferences) is supported mainly within the university mobility programme Erasmus+ KA103, faculty mobility programme Erasmus+ KA107, CEEPUS. Furthermore, mobility within the framework of inter-institutional agreements and inter-state agreements are implemented, which in some cases are supported by scholarships from the sending state or the receiving foreign university.

Erasmus+ KA103, Erasmus+ KA107

The Erasmus+ KA 103 projects focus on the mobility of individuals on the basis of inter-institutional agreements between institutions. It is possible to carry out study and work stays for students in the Programme Countries (the 28 EU Member States, the EEA countries Iceland, Liechtenstein and Norway, as well as Turkey and the former Yugoslav Republic of Macedonia). Academics can benefit from teaching stays and, together with research staff, can also be supported in training. Within the Erasmus+ KA107 project, teaching, study and training stays for students and staff can be implemented. All study visits are subject to credit recognition upon return to the home university in the framework of cooperation with Partner Countries (other non-programme countries).



A total of 32 courses were opened for foreign students with teaching in English, mainly for Erasmus+ students in the field of Textile Engineering, and a new course in Design with 10 courses including studio work was also prepared.

Erasmus+ project KA107 application from 2018 for a two-year duration of 8 months for incoming students from Tunisia; 40 days of teacher mobility with Tunisia. Additional funding was approved to support international mobility not approved in the KA107 application with Japan, Mauritius, New Zealand, Taiwan, Ukraine, USA, Kazakhstan, Belarus. These funds will be spent under the same conditions as KA107. In the framework of this application, all funds for mobility with Tunisia have been exhausted in 2020.

The 2019 Erasmus+ KA107 project application for a two-year duration was submitted for mobility with Japan. The application was not approved for capacity reasons. Additional funding was approved to support international mobility for students not approved in the KA107 application under the same conditions of disbursement, including an open call for applications. Mobility with Japan was partially implemented in 2020 with one internship at Kyoto Institute of Technology, the rest of the funds were transferred for disbursement in 2021.

The Erasmus+ KA107 project application from 2020 for a two-year duration was submitted for mobility with Japan, New Zealand, Thailand and Albania. Except for New Zealand, all applications were accepted. Mobility has not yet started with any institution due to epidemiological measures. A contract has already been concluded with the Department of Textile and Fashion, Polytechnic University of Tirana, Albania. Further contracts were in the pipeline for 2020.

All outgoing students are given full credit for the credits they complete at the host institution abroad. Before arrival, students will already receive a proposal for future recognition within the university process maintained in IS STAG by means of a "Learning Agreement of Study" or "Learning Agreement of Traineeship" document. It is an established practice of FT to consult recognition with supervisors of disciplines, courses and relevant Vice-Dean. In particular, compulsory courses, compulsory electives and exceptional courses that are not compatible are recognised under their original designation as electives. The document proving the recognition in IS STAG is called "The sending institution's transcript of records - proof of recognition" and is given to the student together with the record of the completion of the study abroad in IS STAG.

All foreign students coming for full-time study in the Czech language are seamlessly integrated into study groups together with Czech students. Short-term foreign students with teaching or training in English are mainly involved in projects in existing working groups in the departments and are also included in the studies of Czech students in courses taught in English for Czech students, such as "Textile Engineering", "Fundamentals of Clothing Comfort". The university and the faculty provide administrative services throughout the study period and the ESN student club helps to provide leisure activities outside the classroom.

Internships for incoming international students

Based on negotiations with foreign organisations, the FT planned to open its laboratories to their students for joint research projects in 2020 in the form of summer work placements and internships organised individually, funded by Erasmus+ or other scholarships. The topics were in demand, but *the epidemiological situation did not allow the arrival of students in the end.*



CEEPUS

Another mobility programme that was valid in 2019 is CEEPUS, which is a Central European university exchange programme focused on regional cooperation within university networks. FT TUL is involved in the network "Ars-Techne: Design and Development of Multifunctional Products" CIII-SI-0217, which is sponsored by the University of Maribor. Other countries involved are Slovakia, Austria, Serbia, Croatia and Poland. In total, there are 13 universities. *In 2020, due to epidemiological reasons, no stay was implemented.* The scholarship funds have been carried over to 2021.

Hosting students in the E-Team programme

FT participates in regular teaching in the Master in Textile Engineering program sponsored by Ghent University, Belgium within the activities of the Autex Association. In 2020 FT hosted a teaching session in Liberec. The teaching was always conducted throughout the working week and in a form that corresponded to the implemented epidemiological measures both in the Czech Republic and in the country where the teacher was from. *If the teacher's arrival was limited, he or she was connected with students in the classroom online. The students were present in Liberec.* Students attended practical classes in the FT classroom or laboratories.

- In the week of (10/02/2020) Subject: Advanced and Specialized Textile Processing - Mechanical, Teacher: Carmen Visconte; full-time
- In the week of (17/02) Subject: Advanced and Specialized Textile Processing - Mechanical , Teacher: Katarzyna Piekłak, distance learning, Additional involvement of FT teachers Irena Lenfeldová, Alena Frydrychová and Yordanka Angelova who participated in the work of students in the FT laboratories.
- In the week of (24/02) Subject: Advanced and Specialized Textile Processing - Dyeing and Finishing , Teacher: Jakub Wiener, full-time
- In the week of (16/03) Subject: Industrial Information Systems, Teacher: Savvas Vassiliadis, distance learning
- In the week of (23/03) Subject: Biotechnology, Teacher: Vincent Nierstrasz, distance learning
- In the week of (30/03) Subject: elective course - project on the topic of drapes with prof. Militky and doc. Křemenáková
- In the week of (20/04) Subject: Nanotechnology in the Textile Branch, Teacher: Jiří Militký, Dana Křemenáková, distance learning
- In the week of (27/04) Subject: Automation and Process Control, Teacher: Zbigniew Stempień, distance learning
- In the week of (04/05) Subject: Garment Technology, Teacher: Dominique Adolphe, distance learning

In 2020, FT students went on **mobility abroad** to the USA, Japan, Germany, Egypt, Turkey, Spain, UK, Sweden, Portugal, Sweden, Slovenia, Lithuania, Romania. *23 students cancelled or postponed their mobility in direct relation to the epidemiological situation. 5 students had to return from mobility early because it was not possible for them to stay for distance learning in the host country. Of the staff members, 1 staff member was on mobility in Turkey in February 2020. The other staff members were postponed indefinitely.*



2 visits of foreign experts from Italy and Tunisia took place. In addition, 5 online teaching weeks were held for students of the E-TEAM study programme. These lecturers were originally scheduled to come and teach for E-TEAM and interested FT students on a full-time basis. In addition, there was 1 work placement of a foreign postdoc within the TUL project from Bulgaria at FT. The personal presence of this expert and the employment at the FT made it possible to support the full-time teaching of E-TEAM (see chapter 2.3.2 Lecturer placements of foreign experts).

The 2020 students came from Turkey, Poland, Belgium, Spain, Portugal, France, Germany, Taiwan, Tunisia, Croatia, Slovakia, the Netherlands. In addition, one student came as a self-paying student for a semester study stay. One student came supported by ZHR scholarship for building long-term cooperation. *Most of the trainees arrive in the second half of the summer semester, which was not possible due to the epidemiological situation.*

*Table 19a: Student **outgoing***

Provider of financial support	Number of months - request for support	Number of students <i>outgoing</i>	Number of months implemented
Erasmus+ KA103	55	13	51
Support for international mobility of ZHR TUL to compensate for Erasmus+ KA107	-	2	5
CEEPUS CIII-SI-0217-00-1718	13	-	-
Other scholarship support, summer schools (SGS, PGS, departments, etc.)	-	9	23
Total	-	24	79

*Table 19b: Student **incoming***

Provider of financial support	Number of months - request for support	Number of students <i>incoming</i>	Number of months implemented
Erasmus+ KA103	-	27	115
Erasmus+ KA107 No. 2018	12	3	14
CEEPUS CIII-SI-0217-00-1718	13	-	-
Freemover mobility (without specific scholarship support)	-	3	8
Support for international mobility of ZHR TUL to compensate for Erasmus+ KA107	-	1	3
Total	-	34	140



Table 19c: Staff outgoing

Provider of financial support	Number of days - request for support	Number of employees <i>outgoing</i>	Total number of days
Erasmus+ KA103	190	1	5
Erasmus+ KA107 No.2018	26	-	-
CEEPUS CIII-SI-0217-00-1617	20	-	-
Total	-	1	5

Table 19d: Staff incoming

Provider of financial support	Number of days - request for support	Number of employees. <i>incoming</i>	Total number of days
Erasmus+ KA103	-	1	5
Erasmus+ KA107 No. 2018	73	1	11
CEEPUS CIII-SI-0217-00-1617	20	-	-
Total	-	2	16



6. The third role of the university / External cooperation processes

We understand the third role of the university as the intersection of the university world into the external world. The importance of the third role lies in the inseparability of science and education from the third role of the university.

It's being monitored:

- the supra-regional and national nature of cooperation
- cooperation with regional governments
- cooperation in R&D
- cooperation in education
- transfer of knowledge into practice
 - concluded contracts, implemented cooperation
 - professional training for companies
 - popularization and information events.

The epidemiological situation led to the need to move to online communication and to establish cooperation in another form. Thanks to personal contacts in companies, the FT staff provided polymer material for the production of meltblown fabric for the production of drapes for the regional crisis staff, fabric for sewing drapes for the staff and students of TUL without background. Peer consultations were provided on the properties of the materials and their suitability for use on the veils. Purchase of protective equipment for TUL FT staff was made.

6.1 Supra-regional and national nature of cooperation

The Faculty of Textile Engineering of the Technical University of Liberec is the only one in the Czech Republic that provides higher education across the entire textile field. The faculty cooperates extensively with industrial enterprises and deals with a number of projects funded by various types of grants. In the long term, it creates conditions for successful cooperation with many universities and institutions oriented towards textile and material engineering.

The Faculty of Textile Engineering is a member of the Association of Textile, Clothing and Leather Industry ATOK (represented by Ing. J. Havlíček, Ph.D. and Ing. J. Chvojka, Ph.D.), the Czech Technological Platform for Textiles ČTPT z.s. (represented by Prof. Dr. Ing. Z.Kus), Technical Textiles Cluster Clutex z.s. (represented by Ing. G. Krupincová, Ph.D.) It has been cooperating with other members of these groups for a long time.

During the past year, it was necessary to adapt the standard communication to the current situation and to switch to virtual meetings in the online space. According to the current needs, cooperation related to the development and distribution of protective equipment and the preparation and urgent solution of projects aimed at the development and quality testing of protective equipment (protective masks, special filters based on a combination of micro- and nanofibres, protective masks and, above all, their quality testing) were communicated.



6.2 Cooperation with regional governments

FT TUL together with Clutex z.s. participated and participates in updating the documents of the regional strategy RIS 3 in the Liberec, Hradec Králové and Pardubice regions. FT TUL participates in the implementation of the Sectoral Agreement for the textile, clothing, leather and footwear industry in the Hradec Králové, Liberec and Moravian-Silesian regions and together with other actors is working to expand activities to other regions.

In cooperation with Clutex, z.s., FT TUL tries to support and develop cooperation in the field of textile education also at the level of secondary schools and vocational schools within the framework of active participation in the meetings of working educational regional committees and within the framework of meetings of the management of secondary schools and vocational schools focused on textile and clothing issues. For several years now, under the auspices of FT TUL, Clutex z.s. and the Association for the organisation of the Clothing and Textile Competition, Liberec, a competition for young talents has been held in several categories, where thematic designs and collections prepared by pupils of primary schools and secondary schools are selected by a professional jury composed of leading experts, designers, representatives of municipalities and vocational institutions.

As part of the solution to the crisis situation in the first wave (16.3. The Government of the Czech Republic declares a state of emergency and the obligation to wear mouth masks), FT (in coordination with the Rector's Office of TUL) produces non-woven textiles (a mixture of nano and micro fibres). This textile is provided through the regional crisis headquarters to the company that makes the drapes/muffs. The Regional Crisis Staff then handles sterilisation and distribution exclusively and preferably to medical and other emergency facilities at the time. Production at the laboratory facility (meltblown) starts in March 2020 and is completed on 7.5.2020 and more than 40 km of material has been produced. In collaboration with long-term partners (companies led mostly by FT alumni), FT is addressing the supply of polymer for production and testing. FT is also conducting an analysis to answer questions on the quality of materials that are gradually flooding the market.

6.3 Cooperation in R&D

R&D cooperation focuses on searching for topics of possible cooperation in order to obtain joint projects, share research and development capacities, provide consultations, announce joint themes for bachelor and master theses, search for opportunities for internships and student work placements, etc. (see chapter 4.1 Projects addressed).

The cooperation with the companies associated under the Clutex z.s. cluster is based on a long-standing basis, but these companies have also appreciated the more open approach of the faculty and the offer of joint research and development projects. The result is a positive perception of the faculty by the application sphere, more joint R&D projects and better use of R&D results in practice. The information and advisory service is focused on active meetings with potential cooperation partners from the application sphere.



6.4 Cooperation in education

The preparation and direction of the focus of the existing disciplines and study programmes accredited within the bachelor, master and doctoral study programmes implemented at TUL is regularly discussed not only with the members of Clutex z.s., but also with ATOK and CTPT z.s.

FT TUL in cooperation with industrial partners strives to ensure that experts from practice participate in the education of students. A great benefit for students is the possibility of excursions, study placements or internships and the solution of diploma or bachelor theses, where the topics are based directly on textile companies. FT actively supports the mediation of internships. The web interface related to the offer of internships, traineeships and jobs is constantly being updated (<http://www.ft.tul.cz/studenti/praxe/praxe>).

6.5 Putting knowledge into practice

The faculty staff actively develops mutual cooperation with the application sphere with the awareness of the necessity to comply with the implemented standards, especially with regard to IP and its commercialization. Academic staff are now supported by the Centre for Technology Transfer Support, which provides not only consultancy but also legal services and interpretation of internal standards governing this issue. At the same time, FT TUL has been actively involved in the solution of projects such as OP3V Pre-seed or has been and is involved in the solution of projects such as TAČR Gama with professional sub-projects, and FT TUL staff are actively involved in the project OP3V Effective process of technology transfer at TUL CZ.02.2.69/0.0/0.0/16_014/0000631, which aim to develop this part and actively introduce commercialization procedures into daily practice.

Table 20: Transfer of knowledge and research results into practice

	IN THE CZECH REPUBLIC	Abroad	Number TOTAL	TOTAL revenue
Number of new spin-off/start-ups			0	
Patent applications filed			0	
Granted patents	1	0	1	
Registered utility models	4	0	4	
Licence agreements valid as of 31.12.	3	0	3	
Newly concluded licence agreements	0	0	0	
Contract research, consulting and advisory services			17	2 264 750 CZK
Paid training courses for employees of application entities			5	224 970 CZK

Technology and know-how transfer

In the framework of cooperation with industrial partners and R&D&I institutions from the Czech Republic and abroad, contractual cooperation is established related to the solution of contract research according to the partner's requirements, providing consultations and advice with regard



to the partner's requirements and efforts to transfer knowledge and experience into practice, transfer of know-how and IP according to the needs and requirements of the partner, solving specific tasks related to expertise and laboratory analyses according to the current needs of the partner. Contract research is in most cases financed from the sponsors' own funds, only to a limited extent are instruments allowing the use of subsidy support, e.g. in the form of innovation vouchers, used.

The TUL FT prefers to conclude framework cooperation agreements, which allow to cover generally all possible forms of cooperation and then other agreements that correspond to the specific form of cooperation (work contracts, service contracts, contracts for the provision of contract research, co-ownership agreements on joint IP, licensing agreements, lease agreements, agreements on joint project solutions, advertising and joint promotion agreements). FT TUL has 54 active framework cooperation/service agreements with partners, additional follow-on agreements addressing specific assignments as required by both parties, and agreements related to day-to-day operations.

In 2020, 11 framework agreements for cooperation or for the provision of services and consultancy, 3 works contracts, 1 contract research contract, 3 co-sponsorship contracts and several operational contracts were newly concluded.

Another indicator of the success of the cooperation with the application sphere is the volume of income from complementary activities (implementation of expert consultations, processing of laboratory tests including evaluation, provision of expert services, expert market research and innovations in selected areas) in the total amount of CZK 4,692 thousand. CZK.

Contract research

The societal contribution of the TUL FT has an impact across a wide range of companies and institutions with which the cooperation is implemented. FT TUL, in accordance with its mission and vision, focuses on cooperation with textile and clothing manufacturers (e.g. SVITAP, Perla) and also on cooperation with entities that apply fibre structures (e.g. healthcare, automotive, security segments, Jonson Controls, Zentiva, Škoda Auto). The benefits of contract research collaboration for FT TUL are:

- expanding opportunities for collaboration in new application areas;
- growth of opportunities to connect with companies on applied research projects (which companies prefer based on the strategy of the Czech Republic within the framework of the calls of TAČR and MIT);
- thanks to the prestige gained, FT TUL is actively involved in the creation of national strategies for the textile and clothing industry (see Cooperation with associations and platforms of manufacturers ATOK, Clutex, CTPT).
- From the point of view of the mission of the TUL Faculty of Arts, a significant benefit is the expansion of cooperation with future employers (innovation of the subject curriculum of accredited programmes with regard to the needs of practice, support for student mobility within the study, diversification of professional practice and soft-skills competences of students, the possibility of excursions, study internships or work experience and the solution of diploma or bachelor theses, where the topics are based directly on companies).

The scope of contract research is limited by the capacity of the faculty. The volume of funding is increasing slightly. In accordance with the strategy of FT TUL, the capacity is divided among



activities ordered by the Czech sponsor (FT TUL carries out an average of 5 contract research activities per year). Due to its uniqueness within the world scientific community, FT TUL has also a long-term cooperation on activities commissioned by a foreign sponsor. The volume of resources is comparable to national activities and in accordance with the strategy and capacity of FT TUL, both directions of cooperation are coordinated with respect to the staff capacity of FT TUL.

Opportunities are sought on the basis of contacts of individual FT TUL staff in the national and international professional community. The administration of the TUL FT provides consultations and advice (support) for the creation of contracts and negotiation of contractual conditions (legal department, technology transfer department, vice-dean for R&D). The activities are recorded in the annual reports of the TUL FT and also in the central records of the TUL (Human Resources Department, Accounts Department). Profit is accumulated and used to finance the non-economic activities of the TUL FT.

Additional activities

As revenues from non-public sources (other than grants or contract research), the TUL FT records revenues from the following activities (in order of frequency): expert analyses, consultations, testing, royalties and donations for R&D. The total amount of funds received is constant in order of magnitude and, in line with the TUL FT development strategy, proportionate to the size and capacity of the unit under evaluation. The most important benefit of this cooperation is the possibility of establishing new contacts with potential sponsors of contract research and subsequently planning joint projects.

Opportunities are sought on the basis of contacts of individual FT TUL staff in the national and international professional community. The administration of the TUL FT provides consultation and advice (support) for the drafting of contracts and negotiation of contractual terms and conditions (legal department, technology transfer department, vice-dean for R&D). The activities are recorded in the annual reports of the TUL FT and also in the central records of the TUL (Human Resources Department, Accounts Department). Profits are accumulated and used to finance the non-economic activities of the TUL FT.

Professional training for companies

In case of interest of industrial partners, tailor-made trainings are prepared as part of the knowledge transfer, where the emphasis is placed on the needs of the target group, the priorities of the client and the capabilities of the experts of the TUL FT. The concept is prepared so that the interpretation can be supplemented with a practical part. The training takes place on the premises of FT TUL and the practical part is implemented in specialized laboratories and semi-processes of the faculty. Alternatively, the training is carried out at the partner's premises and the practical part is directed to the partner's own premises, taking into account the limitations associated with this. The aim is to refresh or supplement the professional terminology and selected technologies, to familiarize the trainees with new developments in the field and possibilities of mutual cooperation, and to obtain feedback related to selected activities of FT TUL:

- Processing properties, Chemical technology - Schoeller Křešice, s. r. o.
- What is textile, Natural and chemical fibres, Structure of fabrics, knitted fabrics and NT - Texla, a.s.



- Knitting Technology - SSGD International, a.s.
- Quality and processing of clothing/textiles - Adler Czech, a.s.
- Textile fibres, Spinning, Weaving, Knitting, Refining, Textile testing - Lohmann & Rauscher, s.r.o.

Popularization and information events

In addition to organizing and co-organizing professional conferences, seminars and workshops, FT TUL is also actively involved in selected promotional events. Due to the pandemic, not all planned events were implemented. For example, promotion through the 60th anniversary celebrations (see Annex 1), the open day in November was held online, and a number of exhibitions in the gallery were cancelled

FT TUL developed other forms of promotion - especially promotion in the form of "stories" of successful young PhD students and scientists:

The most significant success in this area was the internship of two PhD students, Markéta Klíčová and Jakub Erben, at the prestigious Wyss Institute at Harvard University in Boston. There they worked on the development of so-called organs-on-a-chip with a nanofibre membrane. Unfortunately, a coronary returned home after a few months. From the information about their research FT TUL benefited from further publicity (namely 11 interdependent articles on the web, one session in CRo Plus, four articles in print media). The most interesting articles were:

- Jakub Erben - Award: the Star of the Reflex weekly, for scientific achievements.
- Markéta Klíčová - Forbes: 30 under 30.
- Jiří Chvojka/Oldřich Jirsák - Forbes: a small big thing.

Part of the faculty's strategy is to reach out to international students through foreign colleagues. For example, Mohanapriya. Venkataraman, M.Tech., M.F.Tech., Ph.D. has made it happen:

- Expert lectures and seminars for students Webinar on "Insights into Textile Material Research" - K.S. Rangasamy College of Technology, Coimbatore, India
- Motivational event for prospective students, secondary and primary schools and the public - Panel discussion in "Study in Czech Republic" Alumni group, Czechia

More promotion:

- Activities of the University Gallery N, Jablonec n.N.
- The activity of the faculty "mini-gallery" called G3P (Third Floor Gallery).



7. Quality assurance and evaluation of implemented activities

The Faculty strives to evaluate all its activities and uses established procedures and methodologies partially implemented in the internal regulations of TUL. Feedback is evaluated at all levels of management. Internal audit (specific research, management level) was partly used to ensure the quality of faculty activities. Issues related to the use of financial resources, compliance with management rules and related problems were discussed at meetings of the management, departmental representatives and the Dean's College. The Faculty Senate was actively involved in activities related to the evaluation of the level of relations between the faculty units, quality control of the website and compliance with the collegial relations between teachers or students.

Module 3

On 20 - 21 October 2020, the evaluation of MODULE 3 - Social Relevance (Results with economic or social impact, applied research grants; transfer of results into practice, cooperation with the application sphere, technology transfer) was carried out by the International Evaluation Panel (MEP). Due to the epidemiological *situation*, the MEP members did not visit the university premises, the evaluation of individual units of TUL was carried out online. FT TUL was rated with an overall score of **4 - Very good** on a five-point rating scale (1-Inadequate; 5-Excellent). Overall summative evaluation:

"The FT conducts cutting-edge applied research in the field of textile materials science, as demonstrated by international bibliometric rankings and the faculty's direct involvement with trade associations and government organizations setting standards in the textile industry. Over the evaluation period, numerous research outcomes have been exploited in the form of patents, utility models, prototypes and functional samples. A significant example, special wound dressings based on nanofibrous tissues developed at the Faculty have received several international awards. International projection should be further encouraged by involving FT's staff, especially the younger generations, in new partnerships with foreign research groups and editorial activities."

FT TUL considers the greatest benefits of the external evaluation to be the confirmation of a correct view of oneself and the identification of strengths of which it was not aware (during the internal evaluation). It will continue to strengthen its strengths, which are (among others):

- Uniqueness of professional focus (R&D&I, A&D, education)
- Work on modern and topical R&D topics
- Involvement in the development of national strategies
- Adequate volume of orders resulting from the link with industry

Another benefit of the M3 evaluation is the identification of weaknesses (which are in the evaluation committee report) that the TUL FT is aware of and is preparing strategies to eliminate:

- Failure in European projects (the faculty will continue to support and increase efforts to prepare projects with international participation)
- Lack of involvement of younger professionals in visible activities of the international community. The structure of the report did not allow for more experts to be presented, although it is true that the personalities mentioned stand out above the rest and the FT is aware of the need to ensure continuity and support in involving young and promising colleagues in these activities.



Development of equipment

FT has expanded its premises in 2020 to include laboratories in Building T, namely:

- KHT - Standardization and Maintenance Laboratory. Existing equipment is focused on thermal performance evaluation, surface structure and moisture management. The laboratory has been planned as a fully air-conditioned laboratory so that very accurate measurements can be provided under constant conditions. The laboratory is available for teaching and laboratory work by students at all levels of study and has already been used by students on the BSP Textile Marketing and NMSP Industrial Engineering programmes in the TRP, FCC, COM, CTP subjects and also by DSP students in the preparation of their dissertations.
- KMI - Laboratory of composites and nanocomposites. In this laboratory is available: Preparation of composites using different technologies (hand lay-up, vacuum pressing, vacuum sieving, casting of isotropic materials into a mould). Development of composite materials reinforced mainly with inorganic fibres (glass, basalt, carbon) with respect to specific design criteria for fibre systems. Preparation of composite fillers by means of powerful temperature-controlled grinding, including analysis and characterisation of the size of the ground particles.

7.1 Management and College meetings

The closer management of the TUL FT (dean, vice-deans, secretary) usually met once a week, more often if necessary. The Dean's College usually met once every 14 days, more frequently as needed. The basic legal norms of TUL were demonstrably conveyed at the meetings. Minutes were taken of all meetings of the colleges. The Dean convened operational meetings directly with stakeholders when necessary and to address urgent tasks.

7.2 Meeting of the Faculty Scientific Council

As a rule, the meetings of the TUL FT SC are held twice a year with the physical presence of the members, but due to the pandemic, the TUL FT SC meeting was held only once in 2020. The materials for discussion, including resolutions, are published on the TUL FT website.

The 15th meeting of the SC of TUL was held on 9.9.2020.

Agenda:

- Habilitation proceedings Ing. Brigita Kolčavová Sirková, Ph.D.
- submission of materials for accreditation of the NMSP Design - Textile, Clothing, Glass, Jewellery study programme
- Draft Strategic Plan of Educational and Creative Activities of the Faculty of Arts of TUL
- Different.

The 16th meeting of the TUL FT SC, planned for October 2020, was cancelled due to the pandemic. Matters that were at risk of delay were submitted to the members of the SC FT TUL in the form of PER ROLLAM.

7.3 Session of the Academic Senate

During the year 2020 there were 12 meetings of the AS FT TUL and 3 electronic votes. The topics and resolutions discussed by the Senate are a result of the activities of the Faculty.

AS FT TUL approved:



- Annual reports on the management and activities of the FT for 2019
- allocation of faculty funds for 2020
- Conditions of the admission procedure to the Faculty of Law at TUL for the academic year 2021/2022
- extraordinary investments
- Composition of the Disciplinary Committee of the Faculty of Arts
- Strategic Plan of Educational and Creative Activities of the Faculty of Arts of TUL for the period 2021 -
- proposal of a member of the RCU for the Faculty of Arts of TUL
- New Rules of Procedure of the AS FT TUL
- proposal for the appointment of members of the VR of TUL for the period 2020-2024

AS FT TUL prepared and organized:

- elections to the AS TUL and AS FT TUL, *the schedule of elections to AS FT TUL and AS TUL was changed due to the decision of the Government of the Czech Republic to extend the state of emergency in the Czech Republic until 30 April 2020*
- election of the Dean of the Faculty of Arts, submission of the proposal for the Dean to the Rector of TUL

AS FT TUL discussed the proposals:

- accreditation file NMSP Design - textile, clothing, glass, jewellery
- Guidelines for the organisation of studies in the DSP
- appointment of vice-deans.

7.4 Branch Council

The branch council for the doctoral study programme Textile Engineering P3106, P0723D270002 and P0723D270003 and Industrial Engineering P0723D270001 carried out basic conceptual, control and evaluation activities for the doctoral study programmes, usually using the per rollam voting procedure. At a joint meeting on June 17, 2020, the Sectoral Councils met to discuss the status of the doctoral program, the overview of supervisors and experts with the right to examine at the SDZ and dissertation defenses, the conditions and organization of doctoral studies, the admission procedure, the proposal of new supervisors and consultants, and the overall concept of the prepared accreditation of doctoral programs. Proposals for experts with the right to examine at the SDZ and to be supervisors of doctoral students were also discussed. There are 2 newly enrolled students in Industrial Engineering.



8. Evaluation and conclusion

On the basis of the above information, it can be stated that in 2020, the Faculty of Arts of TUL worked in accordance with the Long-term Plan of Educational and Scientific, Research, Development and Innovation, Artistic and Other Creative Activities of the Faculty of Arts of TUL for the years 2016-2020 and its update.

Educational activities

As of 31 December 2020, there were 676 students (463 BSP, 156 NMSP, 57 DSP) studying at TUL. 344 applicants entered the first year. In 2020 (in the period from 1 January to 31 December), a total of 130 students graduated from accredited study programmes.

Creative activities

The scientific and research work is based mainly on those directions in which the faculty has traditionally had a high level and quality staff background.

In 2020, the projects of the following providers were addressed: the MIT 4, TAČR 5, MZ 1, MŠMT 5, MV 1, GAČR 1. (excluding SGS), 20 project applications were prepared. FT TUL evaluates the quality of outputs of its R&D activities using the M17+ Methodology under Module 1. Module 3 (FT TUL was rated with an overall score of 4 -Very good on a five-point rating scale (1-Inadequate; 5-Excellent)) and by the international analytical tool InCites of Thomson Reuters (<https://incites.clarivate.com>) based on citations of publications indexed on Web of Science. The creative outputs of the FT are evaluated through the RUV certification

Academics, staff

In 2020, there were 118 employees working at TUL, of which 102 were academic employees, including science and research employees (6 with state citizenship).

Internationalisation

FT TUL has long been actively developing a number of international relations and has an excellent prestige. For example, the list of the 2% most cited scientists in the world for 2019 (which includes the SCOPUS database) lists 5 scientists from TUL, two of whom are from FT TUL.

the impact of the pandemic
form volume

The third role of the university

FT TUL is the only one in the Czech Republic providing higher education across the entire textile field. The Faculty of Textile Engineering is a member of the Association of the Textile, Clothing and Leather Industry ATOK, the Czech Technological Platform for Textiles CTPT, the Technical Textiles Cluster Clutex o.s. It has been cooperating with other members of these groups for a long time. FT TUL has 54 active framework contracts on cooperation with partners, other follow-up contracts dealing with specific assignments according to the requirements of both parties and contracts related to current operations.



Impacts of the pandemic on the area:

a. educational activities,

Like the whole society, the activities carried out at TUL FT were significantly affected by the impact of the pandemic. FT TUL acted in accordance with the government measures coordinated by TUL. FT TUL assesses the impact of the pandemic by activity as follows:

Provision of teaching: Thanks to the transition to distance learning, the use of technical means for online teaching (STAG - module for correspondence, e-learning, online teaching, teaching records) has been expanded. Subjects have been taught online, new types of study aids have been developed to cope with exceptional situations (tutorials, recorded lectures, tests). Teachers were increasingly involved in individual and group consultations, either on-line or (where rules allowed) face-to-face.

Ensuring information in a crisis situation: the pandemic and the resulting restrictions placed special demands on the flexibility of information flows, especially at the beginning of the first wave in March and April, when information was promptly transmitted by e-mail and telephone, both in bulk and individually to students. Particular attention was paid to students on trips and also to foreign students (studying in both Czech and AJ study programmes, living in dormitories for long or short periods). For these students, the TUL FT provided information (translations of government regulations, TUL, FT), individual consultations, transport to the country of origin, solving study, personal and health problems, supplying them with drapes and food or hygiene products.

Study pass rate: in 2020, the study pass rate has decreased significantly. This jump is a consequence of the crisis related to the impact of the pandemic and the impossibility to participate in direct laboratory teaching, which is also designed as a motivation for studying the field (technology and materials laboratories), especially in the first year. Both the students' motivation and technical equipment proved to be a problem, which (especially in the first wave) did not always allow them to make full use of all forms of distance learning.

Faculty cooperation with alumni: Alumni reunions were planned for 2020 as part of the celebration of the 60th anniversary of the faculty in early September, but due to the pandemic they were cancelled and moved to 2021, where 3D tours of the faculty premises are planned online.

Doctoral Programs: the pandemic has affected the ability of students to fulfill the ISP Individual Study Plan primarily in the following aspects:

- a) inability to carry out the planned internship/foreign trip
- b) impossibility of conducting experiments due to the restriction of access to TUL facilities
- c) indisposition of teachers (especially from vulnerable health groups) when participating in examinations according to the ISP

Entrance examinations: in 2020, there were no talent examinations with personal participation of candidates due to the pandemic. Both rounds of the talent test for the admission procedure were evaluated by an expert committee on the basis of the submitted artwork presentations.

Enrolment: conditional enrolment has been made available to students without a matriculation certificate, following a government decision.

SZZ: The autumn term of SZZ was newly included in the FT TUL, committees with a lower number of members were formed

Changes in the objectives of **the Development Programmes:** the impact of the pandemic has made some of the stated objectives irrelevant or unfeasible. After the Rector's approval, the indicators were changed.

SGS: The Student Grant Competition in 2020 met expectations despite the unfavourable situation related to the complications caused by the global pandemic of COVID-19. Some international conferences where the researchers wanted to present the results of their work were cancelled and postponed to the next year, some were held only online. Even so, a number of investigators were able to actively publish (budgets were operationally adjusted based on the Rector's Order 6/2020 - Rules for transferring funds between travel and other SGS projects, dated April 23, 2020).

SVOC: Due to the epidemiological situation caused by the pandemic, the traditional student conference did not take place, but the submitted competition papers were assessed and evaluated by an expert committee for the given section.

The SGS Student Conference was held online

Lectureships by foreign experts: the pandemic has significantly reduced mobility compared to previous years.

Only first quarter stays were made, others were cancelled

Participation of students in foreign work placements, internships, conferences, summer schools: *as a result of the pandemic, the structure of stays changed, fewer students travelled overall, the duration of the stay was on average one month longer than in 2019, and often the situation did not allow students to return on the planned date. FT TUL communicated with the host institutions to extend the stay, which was co-financed.*

Excursions: *due to limited travel due to the covid-19 pandemic, other planned excursions did not take place.*

Professional practice for students: *some DSP students have worked at foreign institutions in partial fulfilment of this obligation in accordance with their Individual Study Plan, with completion planned for a later date in their studies. Unfortunately, some students had their planned internships at foreign institutions cancelled due to restrictions resulting from the Covid-19 pandemic.*

Motivational events for prospective students / Cooperation with secondary schools: *the open day was held on-line, the regular competition Clothing and Textiles for Primary and Secondary Schools was postponed. The reason for this was the closure of the students' attendance in the second semester, as the participants were unable to prepare their collections as part of the school activities*

Staff training: *as a result of the pandemic and the need to limit meetings to an online format, the structure and format of training has changed. Most were conducted online and staff made increased use of in-house training to support distance learning.*

Mobility in general: *as a result of the pandemic, the structure of stays changed, fewer students travelled overall, the duration of stays was on average one month longer than in 2019, and the situation often did not allow students to return as planned. FT TUL communicated with the host institutions to extend the stay, which was co-financed.*

Internships of incoming foreign students: *based on negotiations with foreign organisations, the FT planned to open its laboratories to their students for joint scientific projects in 2020 in the form of summer internships and internships organised individually, funded by Erasmus+ or other scholarships. The topics were in demand, but the epidemiological situation did not allow the arrival of students in the end.*

CEEPUS: *Another mobility programme that was valid in 2019 is CEEPUS, which is a Central European university exchange programme focused on regional cooperation within university networks. FT TUL is involved in the network "Ars-Techne: Design and Development of Multifunctional Products" CIII-SI-0217, which is sponsored by the University of Maribor. Other countries involved are Slovakia, Austria, Serbia, Croatia and Poland. In total, there are 13 universities. In 2020, due to epidemiological reasons, no stay was implemented. The scholarship funds have been carried over to 2021.*

Visiting students within the E-Tea programme: *the FT participates in regular teaching in the Master's degree programme in Textile Engineering sponsored by Ghent University, Belgium within the activities of the Autex Association. In 2020, FT hosted a teaching session in Liberec in the Autex Association. The teaching was always conducted throughout the working week and in a form that corresponded to the epidemiological measures in place both in the Czech Republic and in the country where the teacher was from. If the teacher's arrival was limited, he or she was connected with students in the online classroom. The students were present in Liberec.*

Erasmus+ students: *23 students cancelled or postponed their mobility as a direct result of the epidemiological situation. 5 students had to return early from mobility because it was not possible for them to stay for distance learning in the host country. Of the staff members, 1 staff member was on mobility in Turkey in February 2020. Other staff members were postponed indefinitely.*

Erasmus+ staff: *Due to the pandemic, mobility has been significantly reduced compared to previous years. Only stays in the first quarter were made, others were cancelled*

b. research activities,

The impact of the pandemic is evaluated by TUL FT according to the following activities:

R&D projects: *the pandemic did not significantly affect the research activities of the Faculty. Staff have been actively involved in the production of respiratory protection materials (see section c - third role) and, thanks to their expertise and experience in textile materials engineering, are actively expanding their*

portfolio of R&D projects in the search for solutions and design of new materials for public health protection.

Scientific conferences and seminars: *This part of the international activities has been greatly affected by the pandemic. International conferences were mostly postponed and rescheduled for a year later or held online. Academic staff and PhD students, on the other hand, were actively and promptly involved in both the organization and presentation of R&D papers on the topic - textile-based protective equipment in a pandemic.*

Exhibition activities of Gallery N: 10 exhibitions were planned, 4 exhibitions were held.

- c. the third role of the university, including other activities (e.g. direct and indirect support for students outside of teaching, psychological counselling, extension/adaptation of library services, etc.).

Communication with partners: *during the past year, it was necessary to adapt standard communication to the current situation and to switch to virtual meetings in the online space. According to the current needs, cooperation related to the development and distribution of protective equipment and the preparation and urgent solution of projects aimed at the development and testing of the quality of protective equipment (protective masks, special filters based on a combination of micro and nanofibers, protective masks and especially testing their quality) were communicated.*

Production and supply of material: *the epidemiological situation led to the need to move to online communication and to establish cooperation in another form. Thanks to personal contacts in companies, the FT staff provided polymer material for the production of meltblown fabric for the production of drapes for the regional crisis staff, fabric for sewing drapes for TUL staff and students without background. Peer consultations were provided on the properties of the materials and their suitability for use on the veils. Purchase of protective equipment for TUL FT staff was made. In order to deal with the crisis situation in the first wave (16.3. The Government of the Czech Republic declares a state of emergency and the obligation to wear mouthguards) FT (in coordination with the TUL Rector's Office) produces non-woven fabric (a mixture of nano and micro fibres). This textile is provided through the regional crisis headquarters to the company that makes the drapes/muffs. The Regional Crisis Staff then handles sterilisation and distribution exclusively and preferably to medical and other emergency facilities at the time. Production at the laboratory facility (meltblown) starts in March 2020 and is completed on 7.5.2020 and more than 40 km of material has been produced. In collaboration with long-term partners (companies led mostly by FT alumni), FT is addressing the supply of polymer for production and testing. FT is also conducting an analysis to answer questions on the quality of materials that are gradually flooding the market.*

Popularisation and information events: *due to the pandemic, not all planned events were implemented. For example, promotion through the 60th anniversary celebrations, the open day in November was held online, and a number of exhibitions in the gallery were cancelled*



Annex 1

Activities of FT TUL in connection with the impact of the pandemic

COVID-19 diseases,
caused by severe acute respiratory syndrome
SARS-CoV-2 coronavirus.

In the Czech Republic, a state of emergency is a state of crisis that is declared when natural disasters, environmental or industrial accidents, accidents or other hazards occur that threaten life, health or property values or internal order and security to a significant extent. In the event of [a pandemic](#), a state of emergency has been declared in the Czech Republic

From	To	Date of announcement	Number of days
12 March 2020	17 May 2020	March 2020	66
5 October 2020	14 February 2021	September 2020	132
15 February 2021	27 February 2021	February 2021	13
27 February 2021	28 March 2021	February 2021	30

Resolutions of the Government of the Czech Republic and other documents

[Rules for entry into the Czech Republic and quarantine measures](#) 14.4.2020

[Exceptions to the ban on free movement in the Czech Republic](#) 14.4.2020

[Extraordinary measures to close schools and educational facilities](#) 15.4.2020

[Extraordinary measure ban on free movement of persons with exceptions](#) 15.4.2020

[Resolution of the Government of the Czech Republic Regime for universities from 23.4.2020](#)

[Resolution of the Government of the Czech Republic Regime of travel from/to abroad from 23.4.2020](#)

[Exceptions and rules for entering the Czech Republic from 27.4.2020](#)

[Resolution of the Government of the Czech Republic on emergency measures of the Ministry of Health of 11.05.](#)

[Annex to the Resolution of the Government of the Czech Republic 1](#)

[Annex to the Resolution of the Government of the Czech Republic 2](#)

[Annex to the Resolution of the Government of the Czech Republic 3](#)

[Annex to the Resolution of the Government of the Czech Republic 4](#)

[Resolution of the Government of the Czech Republic Regime for universities from 11.5.2020](#)

Extraordinary measures of the Ministry of Health of the Czech Republic

[Emergency measure of the Ministry of Health teaching](#) 10.3.2020

[Emergency measure of the Ministry of Health action](#) 10.3.2020



FT TUL acted in accordance with the government measures coordinated by TUL.

Orders and measures of the Rector of TUL (COVID-19 for 2020) (ČJ/AJ)

- 2/2020 Measures to reduce risk of coronavirus infection (ban on foreign business travel; recommendation to limit domestic business travel) (3/3/2020; 3/12/2020)
- 3/2020 Measures to reduce the risk of coronavirus infection, modification of TUL dormitory regime (accommodation of students, possibility of termination of accommodation contract) (3/23/2020)
- 4/2020 Rules for communicating with the media and providing information about the production of nanofibers, nanofiber material and equipment for its production at TUL (3/23/2020)
- 5/2020 Conditions of teaching and operation of TUL and its units in connection with the emergency situation related to the spread of COVID-19 (3/21/2020; 4/8/2020; 4/16/2020; 4/24/2020; 5/11/2020)
- 6/2020 Rules for transferring funds between travel and other SGS projects (4/23/2020)
- 7/2020 Recommendation on TUL employees' trips outside the Czech Republic and arrivals of persons from abroad to TUL in connection with the development of the COVID-19 epidemic (16.6.2020)
- 9/2020 Measures for entry of foreigners into the Czech Republic for the purpose of economic activity (employment) or educational activities at TUL (17.07.2020; 11.11.2020)
- 12/2020 Action on COVID-19, teaching TUL (3/1/2021; 11/25/2020; 11/23/2020)

Milestones in the life of the university/faculty 2020

- 5. 2 FT issues INFORMATION ON MEASURES TO CONSTRAIN THE SPREAD OF NEW CORONAVIRUS (restrictions on travel abroad - in accordance with TUL procedures)
- 8.2. FT Open Day (physically held, premises of Building B are open, departmental staff present, number of visitors approx. 100)
- 24. 2. Graduation of FT graduates - in the auditorium of building G - without restrictions
- 26.2 TUL Rector issues a ban on business travel to high-risk areas (students and staff who have travelled from high-risk areas should respect the 14-day period of home quarantine and not enter the campus)
- 3.3 FT - CLOSURE OF THE PRACTICE DEPARTMENT (from 6.3. 2020 to 20.03. 2020 consultations at the Practice Department are possible only by email and telephone)
- 7.3. The state orders a quarantine for those arriving from anywhere in Italy
- 9. 3 FT - CLOSURE OF THE STUDY DEPARTMENT (due to the measure of the Rector of TUL from 11.3.2020, the SO is closed until further notice. Communication via email and phone)
- 11.3. The personal presence of students at the university is prohibited
- 12.3 The Government of the Czech Republic declares a state of emergency
 State decision to cancel direct instruction - clearing of dormitories, expected to last 2 weeks
 ban on work trips abroad, the canteen goes on holiday
 We ensure operational transfer of information to employees, students in Czech and English, we register students from abroad
 We sew drapes - for FT and TUL employees, foreign students and staff in the dormitories and canteen.
 FT TUL is intensively addressing the possibilities of assistance (material, technological) in connection with the coronavirus outbreak (we produce material using the meltblown laboratory technology). Activities are coordinated with the Crisis Staff of the Liberec Region. (*"At this moment we have mobilised our forces, we are improvising and producing as much material for the shrouds as the speed of the machines and the strength of our staff can handle"*)
- 16.3 FT issues press release FT ACTIVITIES AGAINST THE SPREAD OF CORONAVIRUS
- 19.3 The Governor came to thank for the work done in the production of drapes for the region
- 2.4 TUL has its first positive case of COVID-19. No one else from TUL has been tested yet
- 27.3 Students who leave their dorms in a hurry during an emergency get a discount on their dorm fees
- 27.3 FT issues guidance: ROOF MAINTENANCE - Recommendations for home production and sterilisation of reusable drapes
- 26.3 Please do not call the university. The material for the production of the filters, the masks themselves and the filters are supplied exclusively to the Regional Crisis Staff
- 15. 4. EMERGENCY MEASURE OF THE MINISTRY OF HEALTH OF 15.4.2020
"The prohibition on the personal presence of students [...] does not apply [...] to the personal presence of students in their final year of study:
- in the presence of no more than 5 persons at the consultation or rehearsal,
- for laboratory, experimental or artistic work, in particular for the completion of final theses in the context of studies in a bachelor's, master's or doctoral programme, with a maximum of 5 persons present,
- on clinical and practical teaching and practice."
- FT - SENDING FINAL YEAR STUDENTS (Final year students may return to universities, but most students stay at home. Access to buildings by card and affidavit only, halls of residence also by card only, canteen operates on a limited basis)
- 20.4 FT - ONLINE DISCUSSION WITH INFORMATION FOR FT STUDENTS (with FT management via FB).



- 20.4 The dates of the state final examinations are adjusted. FT also introduces the autumn term of the SZZ.
- 23.4 FT - CURRENT INFORMATION FOR STUDENTS IN THE LAST YEARS OF STUDY (organization of exams, final papers, SZZ, entrance to buildings, accommodation in dormitories)
- 24.4 FT - CURRENT COMMUNICATION FROM THE DEAN OF FT FOR 1ST AND 2ND YEAR BS AND 1ST YEAR NS STUDENTS
- 27.4 Government regulation: students can return... quote from the government regulation: "[...]
 - in the presence of no more than 5 persons at the consultation or rehearsal,
 - for laboratory, experimental or artistic work, in particular for the completion of final theses in the context of studies in a bachelor's, master's or doctoral programme, with a maximum of 5 persons present,
 - for clinical and practical teaching and practice [...]"
 Students of all years can return to the university, but only in a very limited mode, direct teaching at the school is still not possible. On entering the University, students must submit an affidavit of non-infectiousness, must not be quarantined and must disinfect their hands (with disinfectants provided and distributed by the School) before entering the room where the examination or consultation will take place.
- 29.4 FT - UPDATE FOR FT STUDENTS - 2. POSTING (with FT management via FB)
- 29.4. FT - TEACHING - CLOSING OF THE ACADEMIC YEAR 2019/2020 (All direct teaching (except for selected studio-type courses) is completed by DISTANCE FORM. The method of examination (direct examination, distance examination) is determined by the teacher. The conditions of the direct examination (number of persons, hygiene rules) may change according to the current epidemiological situation.
- 7.5 The University has completed the production of nanomaterial and drapes for the regional emergency staff. FT TUL has produced 40 km of material for the production of drapes using the meltblown technology and has supplied 40 km of material for the production of drapes, the crisis staff does not require any more material.
- 11.5 According to a government resolution, direct instruction in universities in groups of up to 15 students can be reinstated. At FT, teaching will continue to be by distance learning (taking into account the health limitations of students and teachers and the long distance students have to travel to attend classes) The method of conducting examinations will be chosen by the teacher.
 For classes, exams and consultations with a maximum of 15 students, the same precautions apply as before: teachers and students must not be quarantined, they will disinfect their hands at the entrance to the building and sign a declaration that they do not have and have not had any symptoms of infectious disease in the previous two weeks.
- 11.5 Due to the coronavirus pandemic, the academic year schedule is changing. The examination period will begin on 1 June as previously scheduled, but the date of the CCE has been moved back by 14 days. Graduation will not take place until September.
- 22.6. SVOC takes place, just without defences
- 3.6 There will be no Movement Weeks this year. For the first time in its 25 years of existence, the suburban camp is not recruiting children.
- 8.9 KDE FT students participate in a fashion show at Prague Fashion Week
- 21.9 Graduation FT: In robes and no handshakes, maximum 30 graduates.
- 21.9 Rector Brzezín received an award from Governor Puta for helping the university in the fight against covid
- 29.9 Start of the semester: the University starts the semester online. Classes are not recommended by the county health department.
"Teaching will be distance learning, except for subjects that require laboratory, experimental or artistic work, where teaching will be divided into smaller groups of up to 15 people," ... testing with a maximum of 10 people present. Students and employees who have tested positive for covid-19 or have been ordered to quarantine are required to report this via a university form.
- 8.10 "Breakfast with the Rector" press conference: *"We have so far had only a handful of infected students and academics or those ordered to be quarantined at the university; according to our internal system, it is up to 1%."*
 For the AR year 19/20, 2/3 of the restrictions on cross-border exits and arrivals are assessed.
- 12.10 Online lessons only! Government measures ban colleges from full-time teaching
"The Government restricts, with effect from 12 October 2020 from 00:00 hours until 25 October 2020 at 23:59 hours, the operation of higher education institutions [...] by prohibiting the personal presence of students attending classes while studying at the university and participants in lifelong learning courses [...]."
 Thus, teaching can no longer take place in laboratories and studios, nor can consultations in smaller groups, and for the time being the vast majority of students' work experience and practical activities must also be discontinued. After the new government measures, the only thing left of full-time teaching at the University of Liberec is practical teaching and professional practice at the Faculty of Health Studies. Nothing else is possible.
 Students are supposed to leave the dorms to go home. Those with experience in health care or education and those called by the state can stay. International students can also stay
- 12.11 TUL Open Day - takes place online in live stream connect



Faculty of Textile Engineering at TUL celebrates its 60th anniversary in 2020 | Ft.Tul.cz

The Faculty of Textile Engineering of the Technical University of Liberec, like all Czech universities and practically the whole Czech society, found itself in an extraordinary regime. In view of this fact, the events associated with the celebration of the 60th anniversary of the founding of the faculty are cancelled.

Monthly schedule of events

Date/location		events
21. 1. 2020 Gallery N	Textiles and clothing from KDE Opening of the exhibition of semester works of 2nd and 3rd year students specializing in Textile and Clothing Design.	was held.
8. 2. 2020 Building B	Open Day	was held.
3. 3. 2020 Gallery N	Reminiscences Various forms of printing not only on textiles. Opening of the exhibition of Polish artists from the Academy of Fine Arts im. The opening of the opening of the Władysław Strzemiński Art Gallery in Łódź.	was held.
15. 3. 2020 Monastery of St. Gabriel, Smichov	Fashion show (work by students of the Department of Design) <i>Mercedes-Benz Prague Fashion Week 2020</i>	Cancelled
1. 4. 2020 FX Šalda Theatre	Giuseppe Verdi Nabucco Meeting of the academic community and friends of the faculty at the gala performance of the opera https://www.saldovo-divadlo.cz/program/detail-predstaveni/r/nabucco	Cancelled
14. 4. 2020 Gallery N	Fashion design studio VIZE Opening of the exhibition of a joint project of students of the Fashion Design Studio, Faculty of Design and Art of the Ladislav Sutnar University of Technology in Pilsen, responding to the work of Ladislav Sutnar.	Cancelled
May 2020 IC building	Working meeting of the Scientific Council of the Faculty of Textile Engineering	was held.
21. 5. 2020 Gallery N	Baccalaureates Fashion show and exhibition of bachelor works of the Department of Design, Faculty of Textile Engineering, TUL.	was held.
22. 5. 2020 18:00 - 24:00 Gallery N	Museum night under Jested Accompanying programme to the museum night with the subtitle "glass". Fashion show, guided tour of the exhibition, workshops, etc.	Cancelled
June 2020 Building G	SVOČ 12th annual competition in Student Scientific and Professional Activities. http://svoc.tul.cz	was held.
9. 6. 2020 Gallery N	Semester of Glass and Jewellery exhibition of semester works of students of Glass and Jewellery Design from the Department of Design of the Faculty of Textile Engineering of TUL with a fashion show of students of Textile and Fashion Design.	Cancelled
10. 8. - 21. 8. 2020 FT TUL	Summer School Fabric Patterning Summer School Patterning. http://www.ft.tul.cz/veda-a-vyzkum/summer-school-2020/summer-school-2020	Cancelled
16. 9. 2020 Building G	Clothing and Textiles Hosting a competition for primary and secondary schools in textile and clothing design. http://www.odevatextil-liberec.cz/	Cancelled
18. - 19. 9. 2020 buildings G/B/D/E	Meeting of the academic community, faculty alumni and friends of textiles, DOD Faculty of Textile Engineering	Cancelled
September 2020 Building B	Scientists' Night	Cancelled
October 2020 IC building	Working Meeting of the Scientific Council of the Faculty of Textile Engineering/ Building G Ceremonial Meeting of the Scientific Council of the Faculty of Textile Engineering	Cancelled
November 2020 G/E buildings	Open Day - TUL	online
30. 11. 2020 Building B	Ph.D. Students Day refer about the scientific results connected to their dissertation work. http://strutex.ft.tul.cz/2020/Phd/phd.html	Passed
30. 11. - 1. 12. 2020 Building B	Winter school Course on Finite Element Method http://strutex.ft.tul.cz/2020/Course/course.html	online
2. 12. 2020 Building B	Flexible Hierarchical Structures, Composite Materials and Structures, Functionalized Nanomaterials International workshop (replaced by online workshop) http://strutex.ft.tul.cz/2020/Hyhi/hyhi.html	Cancelled
2. - 4. 12. 2020 Building B	23rd International Conference STRUTEX http://strutex.ft.tul.cz/	Cancelled

