

Dean's Directive No. 2/2019

Organization of Studies in PhD Study Programme TEXTILE ENGINEERING, study branch Textile Technics and Materials Engineering P3106 and PhD Study Programme TEXTILE ENGINEERING P0723D270003

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Article 1 Legislative Framework

In accordance with Article 47 of [Act No. 111/1998 Coll., On Higher Education](#) (hereinafter "Act") and Article 15 and 16 Par. 1 of [Study and Examination Rules of the Technical University of Liberec](#) (hereinafter "SER TUL"), the following rules for the organization, process and evaluation of studies including the organization of State Doctoral Exams (hereinafter "SDE") and Defence of PhD Thesis are provided.

Article 2 Study Duties

1. Study in PhD Study Programme (hereinafter "PhD") in accordance with Art. 16 of SER TUL is carried out by an individual study plan (hereinafter "ISP") under the guidance of a supervisor and eventually attended by a consultant appointed and dismissed by the Dean following after the discussion of the Branch Board. The standard length of studies for full time and part time study is 4 years.
2. The ISP provides subjects, their time and content sequence, pedagogical activity, the way of verifying study results of PhD student determined by the Head of the department in accordance with study program, the topic of scientific research or creative activity in the field of research and development, topic framework as a basis for the PhD Thesis, alternatively study and training at other institutions, including stays abroad. ISP is drawn up by the supervisor eventually consultant in agreement with students, no later than 1 month from the enrolment to study. The supervisor submits the ISP of student to the Study Department for approval by Branch Board. (form - [Individual Study Plan of Student of PhD Study Programme](#)). The ISP is after the approval by Branch Board commitment.
3. To meet the study duties, students take exams in the five following areas of study. For drawing up the ISP, it is recommended to keep the listed order of subjects. In topics I to III students choose at least one of the given sub-topics.



I. BASICS OF NATURAL SCIENCE:

- Numerical and Applied Mathematics,
- Probability Theory and Mathematical Statistics

II. BASIC OF APPLIED SUBJECTS:

- Selected Topics from Chemistry,
- Selected Topics from Physics,
- Applied Mechanics.

III. MAIN SUBJECTS OF THE FIELD:

- Textile Materials,
- Textile Technology,
- Metrology.

IV. SPECIALIZATION IN FIELD

The student preferably chooses from the list of accredited subjects of TUL PhD study programmes. The subject shall be determined based on a supervisor's proposal approved by the Branch Board by the Dean of the Faculty, so that the content is related to the topic of the PhD Thesis. The ISP specifies to PhD student: the basic requirements for this examination (the examination topic, eventually the recommended study materials and other requirements) and the topic of the written report, which is usually connected with the topic of the PhD Thesis. It covers approx. 20 pages. The report is available to the Examination Committee at least 14 days prior to the examination date.

V. EXPERIMENTAL TECHNIQUE OF THE TEXTILE

The content of this subject shall be determined by the Dean of the Faculty based on a supervisor's proposal approved by the Branch Board, so that the content is related to the topic of the PhD Thesis and is linked to the execution of foreign and intersectional internships usually out of the parent university. More detailed specifications are contained in Art. 5 of this Directive.

4. The subjects of individual study areas, their contents and study materials are given in IS STAG and generally also in Appendix 1 of this Directive.
5. The students prepare for the prescribed examinations from the ISP subjects by visiting lectures, seminars or workshops in the scope defined for the selected subject or by self-study in accordance with their ISP. In fulfilling the study requirements, the standard time period of study must be respected. For the successful implementation of the study, it is deemed to pass at least three examinations in 24 months and meet study and other requirements in accordance with the ISP. In the case of non-fulfilment of study duties without a justifiable reason, the study is terminated in accordance with Article 56 Par. 1 (b) of the Act and Art. 29, Par. 2 of SER TUL.
6. Examinations are taken before a Committee appointed by the Dean following the supervisor's proposal. The Committee for partial (sub-) examinations consists of a minimum of three members. The guarantor of the subject fulfils the function of the examiner with the attendance of a supervisor, the chairman and if need be other experts. (form - [Proposal for Composition of the Committee for Special Examination of PhD Study](#)). The examination result is put upon record (form - [Registration of Special Examination in PhD Study Programme](#)).
7. ISP is approved by Branch Board.
8. The fulfilment of study duties is continuously checked. Every year, no later than on the 15 September of a calendar year, the students submit an annual evaluation (form - [Annual Assessment of a Student of PhD Study Programme](#)) and they submit updates of their ISP on the prescribed form - [Annual Study Plan of a Student of PhD Study Programme](#)). The results of their work and progress in resolving the PhD Thesis is presented by students at workshops for PhD students, which are organized for that purpose.
9. The annual evaluation of the PhD student made by the student, the supervisor, and the Head of the department and supplemented by Study Department is discussed by Branch Board and consequently submitted to the Dean.
10. In the third year of their studies, the students sign up for the SDE; otherwise their studies will be terminated accordance with Article 56 Par. 1 (b) of the Act and Art. 29, Par. 2 of SER TUL. In exceptional cases, based on the student's request, the Dean can decide on the postponement.



11. The application for SDE is submitted by the student on the prescribed form to the Study Department (form - [Application Form for PhD Examination](#)). The dates of the SDE are provided and announced by the Study Department.

Integral parts of the application for SDE are:

- a) the opinion of the supervisor: recommended/not recommended taking SDE,
- b) a written theses of PhD Thesis in the prescribed form and format that is available from the website (model – [Theses of PhD Thesis](#))
- c) the list of registered examinations is available in IS STAG, if it is necessary the student add to the application copies of all Registrations of examinations including Experimental Technique of the Textile (work experience).

12. The organization of the SDE is governed by Art. 19 of SER TUL.

13. The request for the defence of the PhD Thesis in the prescribed structure is submitted by the student to the Study Department (form – [Application Form for the Defence of PhD Thesis](#)). The date of the Defence of PhD Thesis is provided and announced by the Study Department.

Integral parts of the application for the Defence of the PhD Thesis are:

- a) three copies of the PhD Thesis in the final version and layout according to the prescribed format in accordance with TUL Directive both in print and electronic form (Model of title pages of final theses)
- b) supported documents for the summary of PhD Thesis in the prescribed structure and according to the model in electronic form (model – [Summary of the PhD Thesis](#)), printing the required number of copies will be ensured by the Study Department,
- c) the opinion of supervisor: recommended/not recommended taking the Defence of PhD Thesis
- d) list of publication of PhD student,
- e) structured curriculum vitae,
- f) the list of registered examinations is available in IS STAG, if it is necessary the student add to the application copies of all Registrations of examinations including Experimental Technique of the Textile (work experience) and SDE.

14. The Defence of PhD Thesis is governed by Art. 20 to 22 of SER TUL. According to Art. 16, Par. 5 of SER TUL, the final deadline for application for the Defence of the PhD Thesis is a period of six years from the enrolment to the study, unless the Dean decides, in exceptional cases, otherwise.

15. A student can re-defend his/her PhD Thesis after having rewritten it only once at least 6 month in accordance with SER TUL Art. 23 Par. 15.

Article 3 Research and Publications

1. The PhD Thesis must contain original research results. The PhD Thesis is the result of solving a specific scientific task, which means participation of the student in the external or internal research projects of a department related to the topic of PhD Thesis.
2. The PhD Thesis also must contain some original results of student research activities in accordance with Art. 20 Par. 3 (d) of SER TUL, especially in peer-reviewed scientific journals. Students consult the publications with their supervisors.
3. The results obtained within the course of solving their PhD Theses are presented by students mainly in magazines, at student scientific conferences and international conferences. When filing the application for the Defence of PhD Thesis, for a minimum of publication activities (within the meaning of original results) the results of three qualifying for inclusion into the information system of research, development and innovation (RIV) will be considered; out of which at least one article must be published in a scientific peer-reviewed journal impact factor with a major proportion of the student's copyright. A list of recommended journals is given in Appendix 2.

Article 4 Pedagogical Activities

1. Pedagogical activities specified in the ISP are important part of study duties. Within the teaching practice, students usually perform four hours (two teaching blocks) per week under the supervision of guarantors or lecturers of the subjects.



2. The student participates on consultations of seminar, bachelor and diploma theses of students studying in bachelor or master study programs.
3. Where it is not possible to set student tutorials at a minimal extent, they are replaced by other activities of a similar range related to the professional activities of the departments. Realized activities are stated by students in their annual evaluation.

Article 5

Intersectoral and International Mobility

1. Part of the fulfilment of study duties during the standard period of study is to pass a six-month study stay usually out of TUL at other universities, scientific and research partner workplaces, preferably abroad and even better within the frame of Erasmus Program bilateral agreements between the faculty and other foreign institutions. The internship can be separated into several shorter stays.
2. The focus, implementation and administration of their internship are consulted by students with their supervisor, Study Department, or TUL International Office or Erasmus Office. For approval within ISP, the student submits the thematic classification and dates of the internship. For approval within Annual Study Plan the student submits details of the internship - theme, objectives, organizational conditions, method of financing.
3. Before the departure, the following must be submitted:
 - a) the thematic focus of the internship, including work schedule and planned outputs,
 - b) confirmation of the internship by the host organization,
 - c) the method of implementation and financing (dates of departure and arrival, costing financial demands).
4. After the return, the following must be submitted:
 - a) confirmation of the implementation of the internship from the host institution,
 - b) partial travel report, if it is a partial fulfilment of the six-month internship.
5. Presentation of the outcomes of the internship - the outcome is a report dealing with the course of the internship in terms of experimental results and their processing as a part of the solution of PhD Thesis, and benefits of the student's newly acquired knowledge and experience (the recommended range of 20 pages). The study is available at least 14 days prior to the exam **EXPERIMENTAL TECHNIQUE OF THE TEXTILE** at the disposal of the Examination Committee, before which the student presents and defences the obtained results. The student submits the material in a required number of copies and in an electronic form at the Study Department. The Study Department will forward it to the Committee.

Article 6

Obligations of Full- time PhD Students

1. The student is obliged to fulfil the study duties in cooperation with the supervisor, or the consultant and the Head of the department.
2. To expand their theoretical knowledge in the chosen field, students of a PhD programme attend seminars organized for this programme, conferences and other professional events.
3. Full-time PhD course is carried out in the workplace, which guarantees an individual study plan and organizes their work and stay at work. Students during standard study time are obliged to be reachable at TUL according to predefined conditions determined by the Head of a department and the supervisor, with the minimum working hours between 9:00 a.m. to 2:00 p.m. Attendance is recorded by secretaries of individual departments.
4. The student is obliged to report a short absence from the workplace in advance; not only to the supervisor, but also to the Head of the department (by phone or email).
5. In the event that a student is planning to travel abroad for longer than 1 week (conferences, internship, departure on holidays according to the schedule of academic year), it is necessary to notify the supervisor, the Head of the department and the Study Department in writing (preferably by email).
6. Students in full-time and standard time of study can be entitled to scholarship. The amount is specified by a separate Dean's Directive. In case of a failure to fulfil study requirements and other



obligations or a failure to observe binding rules, scholarship may be suspended or reduced by the decision of the Dean.

Article 7

Final Provisions

1. This Directive repeals Dean's Regulation No. 1/2019 version 01.
2. Discussed by the Branch Board of PhD Study Programme of Textile Engineering and Industrial Engineering on 17 June 2020 and the Academic Senate of FT TUL on 28 August 2020.



| Appendix 1a

PhD Study Programme P3106 – Textile Engineering
Branch: Textile Technics and Material Engineering
I. BASICS OF NATURAL SCIENCE

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Mathematical Statistics and Data Analysis	KAP/D02	2+0	Exam	1	WS
Numerical Methods	KAP/D40	2+0	Exam	1	WS
Differential Equations	KAP/D41	2+0	Exam	1	SS

Student chooses 1 subject from the offer.

II. BASIC OF APPLIED SUBJECTS

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Macromolecular Chemistry	KNT/D18	2+0	Exam	1	WS
Mechanics of Fibrous Assemblies	DFT/D43	2+0	Exam	1	WS
Optics of Solids	KMI/D05	2+0	Exam	1	WS
Structural Mechanics of Fibrous Ass.	KTT/D51	2+0	Exam	1	WS
Physical-Chemistry Modelling	DFT/D42	2+0	Exam	1	SS
Heat and Mass Transfer in Porous Media	KHT/D17	2+0	Exam	1	SS
Textile Machines Dynamics	DFT/D44	2+0	Exam	1	SS
Hydrodynamics Process of Spinning	KNT/D53	2+0	Exam	1	WS, SS

Student chooses 1 subject from the offer.

III. MAIN SUBJECTS OF THE FIELD

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Nanofibres and Nanotechnologies	KNT/D42	2+0	Exam	2	WS
Clothing Comfort	KHT/D52	2+0	Exam	2	WS
Practical Stereology	KNT/D44	2+0	Exam	2	WS
Sorption Processes	KMI/D13	2+0	Exam	2	WS
Structure and Properties of Textile Fibers	KMI/D07	2+0	Exam	2	WS
Structural Theory of Fibrous Assemblies	KTT/D11	2+0	Exam	2	WS
Textile Chemistry	KMI/D24	2+0	Exam	2	WS
Tissue Engineering	KNT/D40	2+0	Exam	2	WS
Chemical and Thermal Technologies of Nonwovens	KNT/D25	2+0	Exam	2	SS
Textiles Projection	KMI/D20	2+0	Exam	2	SS
Simulation of the Apparel Processes	KOD/D15	2+0	Exam	2	SS
Simulation in Material Engineering	KNT/D21	2+0	Exam	2	SS
Theoretical Textile Metrology	KMI/D08	2+0	Exam	2	SS
Image Processing and Analysis	KHT/D54	2+0	Zk	2	LS
Transport Phenomena of Forming	KOD/D16	2+0	Exam	2	WS, SS

Student chooses 1 subject from the offer.



IV. SPECIALIZATION IN THE FIELD

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Specialization in Field	DFT/D30	2+0	Exam	3	SS

Student must comply with the subject.

V. EXPERIMENTAL TECHNIQUE OF THE TEXTILE

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Experimental Technique of the Textile	DFT/D33	2+0	Exam	3	WS

Student must comply with the subject.

INTERSHIPS

optional subjects (C)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Internship in a Company I	DFT/D60	12T	CC	3	WS, SS
Internship in a Company II	DFT/D61	12T	CC	3	WS, SS
Internship Abroad I	DFT/D62	12T	CC	3	WS, SS
Internship Abroad II	DFT/D63	12T	CC	3	WS, SS

CC=Course Credit

Students can choose and study other subjects, which extend their knowledge portfolio and allow them to expand their competencies. These subjects are optional and are not counted to the fulfilment of study duties.



| Appendix 1b

PhD Study Programme P0723D270003 – Textile Engineering
I. BASICS OF NATURAL SCIENCE

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Applied mathematics (selected topics)	KAP/D125	2+0	Exam	1	WS
Physics of polymers	KCH/D132	2+0	Exam	1	WS
Macromolecular Chemistry	KNT/D122	2+0	Exam	1	WS
Mathematical statistics and data analysis	KAP/D126	2+0	Exam	1	WS
Mechanics of the Continuum	KTT/D133	2+0	Exam	1	WS

Student chooses 1 subject from the offer.

II. BASIC OF APPLIED SUBJECTS

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Hydrodynamics Process of Spinning	KCH/D131	2+0	Exam	1	WS, SS
Optics of Solids - Colorimetry	KMI/D118	2+0	Exam	1	WS
Structure and Mechanics of Fibrous Ass.	KTT/D109	2+0	Exam	1	WS
The finite element method in technical practise	KTT/D108	2+0	Exam	1	WS
Heat and Mass Transfer in Porous Media	KHT/D134	2+0	Exam	1	SS
Textile Machines Dynamics	KMP/D135	2+0	Exam	1	SS

Student chooses 1 subject from the offer.

III. MAIN SUBJECTS OF THE FIELD

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Clothing Comfortand its ergonomic aspects	KHT/D107	2+0	Exam	2	WS
Practical Stereology	KCH/D130	2+0	Exam	2	WS
Sorption Processes	KMI/D121	2+0	Exam	2	WS
Structure and Properties of Textile Fibers	KMI/D136	2+0	Exam	2	WS
Structural Theory of Fibrous Assemblies	KTT/D137	2+0	Exam	2	WS
Technology of nanofibers production	KNT/D123	2+0	Exam	2	WS
Textile Chemistry	KMI/D120	2+0	Exam	2	WS
Tissue Engineering	KCH/D138	2+0	Exam	2	WS
Transport Phenomena of Forming	KOD/D139	2+0	Exam	2	WS, SS
Chemical and Thermal Technologies of Nonwovens	KNT/D140	2+0	Exam	2	SS
Textiles Projection	KMI/D141	2+0	Exam	2	SS
Simulation of the Apparel Processes	KOD/D111	2+0	Exam	2	SS
Theoretical Textile Metrology and data processing	KMI/D113	2+0	Exam	2	SS
Image Processing and Analysis	KHT/D106	2+0	Exam	2	SS

Student chooses 1 subject from the offer.



IV. SPECIALIZATION IN THE FIELD

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Specialization in Field	DFT/D30	2+0	Exam	3	SS

Student must comply with the subject.

V. EXPERIMENTAL TECHNIQUE OF THE TEXTILE

compulsory optional subjects (B)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Experimental Technique of the Textile	DFT/D33	2+0	Exam	3	WS

Student must comply with the subject.

INTERSHIPS

optional subjects (C)

Course Title	Abbreviation	Scope	Completion	Year	Semester
Internship in a Company I	DFT/D60	12T	CC	3	WS, SS
Internship in a Company II	DFT/D61	12T	CC	3	WS, SS
Internship Abroad I	DFT/D62	12T	CC	3	WS, SS
Internship Abroad II	DFT/D63	12T	CC	3	WS, SS

CC=Course Credit

Students can choose and study other subjects, which extend their knowledge portfolio and allow them to expand their competencies. These subjects are optional and are not counted to the fulfilment of study duties.



Appendix 2

List of Recommended Journals

Think.Check.Submit is a campaign to help researchers identify trusted journals for their research. It is a simple checklist researchers can use to assess the credentials of a journal or publisher.

Recommended impacted journals recorded in the Thomson Reuters database (ISI Web of Knowledge) in the field of **MATERIALS SCIENCE - TEXTILES**.

Journal*	ISSN	IF	AIS	Publisher
<i>Cellulose</i>	0969-0239	3,809	0,702	SPRINGER, NETHERLANDS
<i>Dyes and Pigments</i>	0143-7208	3,767	0,534	ELSEVIER SCI LTD, ENGLAND
<i>Textile Research Journal</i>	0040-5175	1,540	0,288	SAGE PUBLICATIONS LTD, USA
<i>Journal of Industrial Textiles</i>	1528-0837	1,283	0,283	SAGE PUBLICATIONS INC, USA
<i>Fibers and Polymers</i>	1229-9197	1,353	0,223	KOREAN FIBER SOC, SOUTH KOREA
<i>Wood and Fiber Science</i>	0735-6161	0,786	0,216	SOC WOOD SCI TECHNOL, USA
<i>Coloration Technology</i>	1472-3581	1,168	0,196	WILEY, ENGLAND
<i>Journal of the Textile Institute</i>	0040-5000	1,174	0,196	TAYLOR & FRANCIS LTD, ENGLAND
<i>Journal of Engineered Fibers and Fabrics</i>	1558-9250	0,678	0,193	INDA, USA
<i>Journal of Vinyl & Additive Technology</i>	1083-5601	1,131	0,179	WILEY, USA
<i>Autex Research Journal</i>	1470-9589	0,957	0,178	AUTEX, POLAND
<i>Journal of Natural Fibers</i>	1544-0478	1,076	0,158	TAYLOR & FRANCIS INC, USA
<i>Indian Journal of Fiber & Textile Research</i>	0971-0426	0,366	0,144	NATL INST SCIENCE COMMUNICATION-NISCAIR, INDIA
<i>Fibers & Textiles in Eastern Europe</i>	1230-3666	0,577	0,122	INST CHEMICAL FIBRES, POLAND
<i>International Journal of Clothing Science and Technology</i>	0955-6222	0,569	0,102	EMERALD GROUP PUBLISHING LTD, ENGLAND
<i>AATCC Journal of Research</i>	2330-5517	0,340	0,091	AMER ASSOC TEXTILE CHEMISTS COLORISTS - AATCC, USA
<i>Journal of Fibre Science and Technology</i>	2189-7654	0,605	0,089	SOC FIBER SCIENCE TECHNOLOGY, JAPAN
<i>Journal of The American Leather Chemists Association</i>	0002-9726	0,699	0,084	AMER LEATHER CHEMISTS ASSOC, USA
<i>Tekstil ve Konfeksiyon</i>	1300-3356	0,266	0,072	EGE UNIV, TURKEY
<i>Journal of the Society of Leather Technologists and Chemists</i>	0144-0322	0,476	0,067	SOC LEATHER TECHNOL CHEMISTS, ENGLAND
<i>Industria Textila</i>	1222-5347	0,438	0,035	INST NATL CERCETARE-DEZVOLTARE TEXTILE PIELARIE-BUCURESTI, ROMANIA
<i>AATCC Review</i>	1532-8813	0,340	0,091	AMER ASSOC TEXTILE CHEMISTS COLORISTS - AATCC, USA
<i>Fibre Chemistry</i>	0015-0541	0,332	0,021	SPRINGER, RUSSIA
<i>Sen-I Gakkaishi</i>	0037-9875	0,109	0,018	SOC FIBER SCIENCE TECHNOLOGY, JAPAN

* Journal Data Filtered By: Selected JCR Year: 2017 Selected Editions: SCIE, SSCI Selected Categories: 'MATERIALS SCIENCE, TEXTILES' Selected Category Scheme: WoS.

