

Rules and requirements for doctoral study programmes (DSP) at FFWS

Article 1

Introductory Provisions

(1) This Dean's Regulation is valid for the Faculty of Forestry and Wood Sciences (hereinafter FFWS) of the Czech University of Life Sciences in Prague (hereinafter "CZU") and sets Rules and Requirements for Doctoral Study Programmes (hereinafter DSP) at FFWS.

(2) This Regulation is written mainly in accordance with Act No. 111/1998 Col., on Universities, and on amendments and additions to other laws (Act on Universities), as amended (hereinafter "Act"), and a valid Study and Examination Regulation for Doctoral Study Programmes at CZU Prague.

Article 2

Rules and requirements for students of the Doctoral Study Programmes (DSP)

(1) Individual study plan (ISP)

DSP studies are carried out according to an individual study plan (ISP) under the guidance of a supervisor, or with the participation of a consultant.

An ISP consists of compulsory professional subjects, compulsory-optional professional subjects, optional professional subjects, other compulsory subjects, state final examination subjects, foreign internships, contributions to recognized professional forums, scientific conferences, scientific symposia or seminars, and other activities approved by the relevant Field of Study Board (hereinafter "FSB"). ISPs for each study programme are listed in the Appendix to this Regulation.

- Optional specialised subjects must be related to the dissertation thesis (hereinafter "DissT") topic.
- One exam from the professional subject of the accredited DSP which is part of the ISP is usually taken at another CZU faculty or other university. The title of this subject should be identical or with a similar professional focus as subjects specified in the Appendix to the Dean's Regulation "Rules and requirements for DSP at FFWS". Students are obliged to submit a written request for taking the exam at another faculty or university at the FFWS S&R Department. This change must be approved by the FFWS S&R Department Vice-Dean and the student can take this exam only after this approval. If this subject has already been approved by the FSB in ISP, the request is not necessary.

- Subject: Statistical methods – students can take an exam with similar focus at another CZU faculty or another university. In this case, before taking the exam in a similarly focused subject, it is necessary to submit a written request to the FFWS S&R Department to change the exam from the Statistical methods subject to a similarly focused exam at another faculty or university; this change must be approved by the FFWS Vice-Dean for Science, Research and PhD Studies (hereinafter "FFWS Vice-Dean for S&R") and students may take this exam only after this approval.
- Students may take the specialized subject exams after submitting the DissT methodology, but not earlier than three months after enrolment to study.

Further obligations for all study programmes:

- **ISP** must be submitted **within 30 days of commencement of studies**; ISP is approved by a relevant FSB (detailed information in the Study and Examination Regulation for DSP CZU studies and the Rules of Procedure of CZU DSP FSB currently in force),
- the **DissT methodology** must be submitted and signed **electronically** by the supervisor **within three months of the enrolment to studies** (the S&R Vice-Dean may set specific conditions for submitting the DissT methodology in that year). It contains a current overview of the researched topic, established scientific hypotheses, objectives, detailed description of chosen methods, and time schedule. The DissT methodology is about five standard pages (SP), excluding references. DissT methodology is approved by the relevant FSB (according to the Rector's Directive currently in force – the FSB Rules of Procedure),
- Preparing a **literature search** related to the DissT topic and its defence before an expert committee.
Literature search is usually submitted by the end of the academic year, i.e. by 31 August. The specific conditions for a literature search, its form and the date of its defence for 1st year students are determined each year by the relevant FSB.
- **Presenting the results of their work at least once in every study year** at a recognized expert forum, scientific conference, symposium, or seminar. Fulfilment is confirmed by a supervisor in students' annual evaluation.
- **Foreign internship** of a minimum four weeks; after FSB approval, foreign internship may be replaced by students' active participation in an international research project with results published or presented abroad (this obligation applies to students studying in both full-time and combined form of study).
- Students must fulfil the study obligations of CZU DSP according to the current Rector's Directive on **Credit system of CZU DSPs**.
- Students are obliged to **fulfil tasks relevant to their doctoral studies set by their supervisor or Head of Department**.

- Full-time students are obliged to keep **records of their activities** within doctoral studies and, as instructed by the S&R Department, submit these records to their supervisor, Head of Department, and S&R Vice-Dean.

(2) State Doctoral Examination (SDE)

The SDE conditions are governed by the law and the Study and Examination Regulations for the CZU DSP in Prague.

Submission of the application for SDE

Students submit the application on a prescribed form at least 60 days before the end of a standard study period at the FFWS S&R Department after fulfilling all requirements of this Regulation and according to the current Study and Examination Regulation for DSP at CZU. Subsequently, the S&R Department, the Chairman of the FSB, and the Dean follow the valid Study and Examination Regulation for DSP at CZU, as amended. If doctoral students do not submit the application for the SDE on time, they can apply for an interruption of studies. In the case of expiry of the period of possible interruption of studies, the doctoral study will be terminated (according to the current Study and Examination Regulation for DSP at CZU).

The SDE consists of professional debate on the researched topic and three professional subjects resulting from the DissT topic. Individual DBs can specify the SDE professional subject. The SDE professional subjects do not have to be a part of the students' ISP.

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(3) Publication activity and DissT

In order to be admitted to the DissT defence, the students must fulfil the following minimum publication requirements:

- in a DissT, DSP students present scientific results which they obtained during their studies,
- a DissT must contain original results published or accepted to be published in at least **two publications, of which at least one must be published in a Web of Knowledge journal** with an assigned impact factor (IF). **The other publication may be published in the SCOPUS database journal** with an assigned non-zero Scientific Journal Ranking Index (SJR) in the year of publication. A publication in SCOPUS may be replaced by publication in a journal of Web of Knowledge database (the minimum requirement for DSP Biology is at least two publications in the journal of the Web of Knowledge database),
- these publications must be flagged "**Article**", "**Review**", or "**Letter**",
- the DSP student must be in **first place in the team of authors**,
- the publication must **relate to the topic** of the DissT,
- the publication must be **sent to the editor during the standard doctoral studies or during an approved study break**,

- the **affiliation** of the PhD student to its training institution, i.e. **FFWS CZU in Prague**, must be mentioned.

In an English version, a valid form of affiliation is set as follows: Czech University of Life Sciences Prague, Faculty of Forestry and Wood Sciences, Kamýcká 129, 165 00 Praha - Suchdol, Czech Republic.

If the article is accepted for publication and it has not yet been published, DSP students submit a statement from the journal's editors in which it must be stated that the manuscript has successfully passed the opposition process and will be published.

Specific requirements for DissT according to FSB

- the minimum extent of the DissT shown in the tables for individual study programmes (Appendix to this Regulation) applies solely to the expert text (not to table of contents, acknowledgements, title page, reference list, appendices, etc.),
- citations in Slovak are not considered foreign language citations,
- all citations must be from demonstrably studied literature – the minimum number of citations for each study programme are given in the tables (Appendix to this Regulation),
- the DissT is submitted in the Czech language (submitting DissT in other languages is possible only upon a submitted application approved by the FFWS Dean). In programmes taught in English, they are submitted in the English language.

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The DissT may also have the form of a commented set of published articles

- the set must contain **at least three publications** published or accepted for publication in a journal of the Web of Knowledge database with an assigned non-zero Impact Factor (IF) or in a journal of the SCOPUS database with an assigned non-zero Scientific Journal Ranking index (SJR),
- **at least two publications in which the student is in first place in the team of authors** must be published or accepted to be published in scientific journals, **of which at least one must be published in a Web of Knowledge journal** with an assigned IF in the year of publication. **The other publication may be published in the SCOPUS database journal** with an assigned non-zero Scientific Journal Ranking Index (SJR) in the year of publication. A publication in SCOPUS may be replaced by publication in a journal of Web of Knowledge database (the minimum requirement for DSP Biology is at least two publications in the journal of the Web of Knowledge database),
- **the third publication may have a form of a manuscript**, in which **the student is at least in second place in the team of authors** (in a journal of Web of the Knowledge database),
- these three publications must be flagged "Article", "Review", or "Letter",

- in other publications or manuscripts, the students may be in other places in the team of authors,
- all publications must relate to the DissT topic,
- an obligatory part of the DissT in a form of a commented set of published articles is a professional text including in particular a literary analysis, summary of work methodology, result synthesis, discussion, conclusions, and recommendations for practical application of the findings or further development of the field of science, to the extent of a minimum of 30 SP.

Procedure for application to defend DissT

After fulfilling all study requirements according to this Regulation and according to Study and Examination Regulation for DSP at CZU, as amended, PhD students submit the following materials through their supervisor to the Chairman of the FSB at least three months before the end of a standard study period or interruption of studies:

- a. an electronic version of DissT,
- b. a list of previously published works.

The FSB Chairman, together with the Head of the Department where the PhD student worked on his/her DissT, sets the date of the DissT discussion at the department. The DissT must be discussed at the department as soon as possible, usually within 14 days of submitting the above-mentioned materials. The students must participate actively in the thesis discussion at the department. A report is made from the discussion, which forms part of the PhD student's application for defence of the DissT before the Dissertation Defence Committee (according to Study and Examination Regulation for DSP at CZU, as amended). The report is signed by all department members who participated at the DissT discussion. The following evaluation must be stated in the report:

- (I) The department recommends submitting the thesis for the defence before the Dissertation Defence Committee,
- (II) The DissT does not meet all requirements for submitting to the Dissertation Defence Committee and the department requires its finalization and subsequent re-submission to the department.

If the students wish to interrupt the studies after the discussion, i.e. before submitting an application for the defence of DissT before the dissertation defence committee, they must submit the application for interruption of studies in good time so that the study is legally suspended 60 days before the end of the standard period of study.

After a successful discussion of the DissT at the department, the students can apply for DissT defence to the FFWS Dean through the FFWS S&R Department. The application includes:

- a. three copies of the DissT; each of which must contain an electronic version,
- b. a list of previously published works,
- c. offprints of published works,
- d. professional CV,
- e. a record of the discussion of the DissT at the department.

The students submit the application at least 60 days before the end of a standard study period. An electronic form of the dissertation is saved in the CZU information system (IS) for purposes of plagiarism check.

After agreement from the FSB Chairman and the Dean, the FSB Chairman proposes the Committee members, the date of the defence, and opponents of the DissT, all according to the Study and Examination Regulation for DSP at CZU, as amended. The FSB Chairman submits the proposal to the FSB members for approval, which can be done *per rollam*.

The FSB adopts a resolution according to the Rules of Procedure of FSBs of CZU DSPs (Rector's Directive) currently in force. The FSB Chairman submits the proposal approved by the FSB to the Dean through the FFWS S&R department a minimum of six weeks before the defence. Subsequently, the Dean appoints members and the Chairman of the Dissertation Defence Committee. Immediately after the Dean's approval of the Committee proposal, the FFWS S&R department sends appointment decrees and an invitation with a date and place of the DissT defence to the members of the Committee and the opponents. It also sends one copy of the DissT to each opponent, requesting an opinion within four weeks of the date of sending the application

Overview of dates for a PhD student

	Date
Submitting the electronic version of DissT and a list of previously published works to the FSB Chairman	Minimum 90 days before the end of a standard study period or interruption of studies
Entering DissT into CZU IS	Immediately after discussion at the department
Submitting the application to defend DissT (including requisites) to FFWS S&R Department	At least 60 days before the end of a standard study period or interruption of studies

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Overview of dates for the FSB Chairman

	Date
Discussing DissT at the Department	Within 2 weeks of submitting DissT
Discussing the date of the defence, Committee members and opponents of DissT with the FFWS Dean	Immediately after discussion at the department At least 9 weeks before the defence date
Submitting the proposal of the date of the defence, Committee members and opponents of DissT to FSB members for approval	At least 8 weeks before the defence date
Submitting the proposal approved by FSB to the Dean through FFWS S&R Department	Minimum of six weeks before the defence

Article 3
Final provisions

(1) This regulation applies to all students of DSPs enrolling in the FFWS from academic year 2022/2023. These students must also fulfil the conditions of Rector's Directive on CZU Credit system of DSPs, as amended.

(2) DSP students who enrolled in the study prior to the validity of this Dean's Regulation are subject to the requirements for ISP, required publication activity, and specific requirements for DissT according to the Regulation in force at the time of the students' enrolment to studies, i.e. No. 10/2019, 11/2018, 3/2017, 6/2016, or 4/2013. SDE subjects, procedure for application for SDE, and procedure for application to defend DissT are as of 1 October 2022 binding for all FFWS DSP students.

(3) The only exception to the previous point is the condition for publication activity resulting from the Dean's Regulation No. 10/2019; specifically, it is no longer necessary to publish at least 1 publication which must be published in a journal of the Web of Knowledge database with **an assigned IF in the year of publication with a value greater than 1**. This condition is cancelled. Therefore, for students who started their studies from the academic year 2018/2019, the conditions for the required publication activity apply according to the Dean's Regulation No. 11/2018, or this regulation.

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Prague 20 September 2022



prof. Ing. Róbert Marušák, PhD.
FFWS Dean



Summary of subjects and responsibilities for creating of ISP and requirements DissT for DSP

Applied geoinformatics and remote sensing in forestry		
(code UIS - APGISE)		
Subjects must be completed no later than 4th semester		
Individual study plan		
Compulsory professional subjects	DLHX029Y Geographic information systems DLHX028Y Remote sensing in forestry applications	
Compulsory-optional professional subjects	DLHX034Y Cartography and geodesy DLHX039Y Development of software products for open-source GIS DLHX030Y Ecoinformatics DLRX018Y Economic effectiveness of forest management DLHX035Y Forest development modelling DLHX033Y Forest inventory and monitoring DLHX032Y Geodatabases and information systems DLHX031Y Photogrammetry and image analysis DLHX036Y Programming and algorithmization for GIS DLHX038Y Spatial analyses and modelling in GIS DLHX037Y Spatial optimization of forest management DLDX013Y Spectral properties of vegetation	
2 subjects set by Departmental Board FFWS		
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science DLHX040Y Spatial statistics and geostatistics (<i>no later than the 3rd semester</i>)	
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity	
State Doctoral Examination		
Subjects	Professional debate on the researched topic 3 professional subjects resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP	
Specific requirements for DissT		
Minimum range	70 SP	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3
Minimum number of citations	100; 60 % quotations must be included in scientific databases (e.g. WoS, Scopus)	

Forest Biology

(code UIS - XBIOLE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLDX017Y Advanced statistical methods in forest biology (<i>no later than the 3rd semester</i>)
Compulsory-optional professional subjects 1 subject set by Departmental Board FFWS	DLMX007Y Anatomy and physiology of the vertebrates DLPX009Y Forest ecology for doctoral studies DLDX016Y Forest genetics and forest tree breeding DLOX029Y Insect ecology DLDX014Y Physiology of forest tree species for doctoral studies
Optional professional subjects 2 subjects set by Departmental Board FFWS	DLXX007Y Advanced molecular biology and biotechnology DLLX012Y Advanced dendrology DLLX013Y Advanced plant determination DLLX009Y Dynamics of the forest ecosystems DLOX019Y Ecology of vertebrates DLDX020Y Environmental biophysics DLDX021Y Experimental methods in ecophysiology of forest tree species DLDX022Y Genetics of quantitative traits DLDX023Y Chemistry and biochemistry in the physiology of forest tree species DLXX008Y Insect physiology and chemical ecology DLOX032Y Insect systematics DLOX017Y Integrated pest management DLLX014Y Methods in ecology and community classification DLPX012Y Methods in forest stand analyses DLLX011Y Methods in quantitative ecology DLXX009Y Microbiology and basic molecular biology DLXX011Y Molecular laboratory methods DLLX010Y Phytosociology and forest site classification DLDX024Y Population genetics and genomics of forest tree species DLDX025Y Programming and simulations in the R language DLMX008Y Sensory biology of vertebrates DLZX031Y Wood structure and properties
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity
State Doctoral Examination	
Subjects	Professional debate on the researched topic 3 professional subjects resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP
Specific requirements for DissT	
Minimum range	100 SP
Minimum number of citations	100
	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3

Global Change Forestry

(code UIS - GLOBE)

Subjects must be completed no later than 4th semester

Individual study plan

Studies supporting the scientific discipline	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) Individual study plan DLXX014Y Literary search (at the end of 1st year of study)
Studies in fields of science 3 subjects set by Departmental Board FFWS	DLLX001Y Dynamics of forest ecosystems in the context of climate change DLDX001Y Ecological physiology of plants DLOX001Y Integrated pest management under global change DLRX002Y Socio-economic context of global change DLHX002Y Utilization of outputs of climatic modelling in ecosystem research
Methodological studies in the field of the thesis	METVYZ002 Methodology of research DLHX041Y Statistical methods (<i>no later than the 3rd semester</i>)
Field specific competence	A publication n. 1 as the first author (WoS) A publication n. 2 as the first author (WoS)
Scientific conferences	Scientific conference (<i>every year</i>)
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work Management DLXX002Y Communication and popularization of science
State Doctoral Examination	
Subjects	Professional debate on the researched topic 3 professional subjects resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP
Specific requirements for DissT	
Minimum range	70 SP
Minimum number of citations	100; 60 % quotations must be included in scientific databases (e.g. WoS, Scopus)
	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3

Forest Management

(code UIS - XHUPLEE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLHX042Y Forest management for doctoral studies
Optional professional subjects 2 subjects set by Departmental Board FFWS	DLHX053Y Decision support systems in forestry planning DLHX050Y Forest growth modelling DLHX045Y Forest mensuration for doctoral studies DLHX043Y Forest production for doctoral studies DLHX046Y GIS for doctoral studies DLHX047Y Inventory and monitoring of forest ecosystems DLHX048Y Mathematical programming in forestry DLHX051Y Multifunctional forest planning DLHX049Y Remote sensing in forestry
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science DLHX041Y Statistical methods (<i>no later than the 3rd semester</i>)
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity
State Doctoral Examination	
Subjects	Forest management Professional debate on the researched topic 2 professional subjects resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP
Specific requirements for DissT	
Minimum range	70 SP
Minimum number of citations	70 mostly from foreign sources; 60 % quotations must be included in scientific databases (e.g. WoS, Scopus) The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3

Forest Protection and Game Management

(code UIS - XOCHMYE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLMX005Y Game management DLOX017Y Integrated pest management	
Optional professional subjects 2 subjects set by Departmental Board FFWS	DLMX006Y Animal anatomy DLOX018Y Biological forest protection DLOX019Y Ecology of vertebrates DLOX021Y Forest pathology DLOX024Y Game reproduction DLOX023Y General entomology DLOX028Y GIS in forest protection DLOX020Y Chemical communication in insects DLOX022Y Large-scale disturbances management DLXX016Y Modelling and preventive measures of disturbance in forests DLOX025Y Sensory biology of vertebrates DLOX026Y Systematic entomology DLOX027Y Taxonomy of bark beetles	
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science DLHX041Y Statistical methods (<i>no later than the 3rd semester</i>)	
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity	
State Doctoral Examination		
Subjects	Game management Integrated pest management Professional debate on the researched topic 2 professional subjects resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP	Students select only one subject from the offered compulsory subjects for the programme, with regard to the DissT topic.
Specific requirements for DissT		
Minimum range	60 SP	
Minimum number of citations	100-200 mostly from foreign sources; 60 % quotations must be included in scientific databases (e.g. WoS, Scopus), required use of statistical methods	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3

Silviculture

(code UIS - XPESLEE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLPX009Y Forest ecology for doctoral studies DLPX010Y Silviculture for doctoral studies
Optional professional subjects 2 subjects set by Departmental Board FFWS	DLPX014Y Close-to-nature silviculture for DSP DLRX019Y Economics of forest management for doctoral studies DLDX015Y Forest dendrology DLPX017Y Forest establishment DLDX016Y Forest genetics and forest tree breeding DLHX042Y Forest management for doctoral studies DLHX043Y Forest production for doctoral studies DLDX014Y Physiology of forest tree species for doctoral studies DAPA05Y Forestry soil science for doctoral studies DLLX008Y Phytosociology and forest typology DLPX016Y Silvicultural practices for reforestation in calamity areas and unfavorable sites DLPX013Y Silvicultural practices in forest conversion DLPX015Y Silvicultural practices supporting forest adaptation to climate change
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science Statistical methods (<i>no later than the 3rd semester</i>)
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity
State Doctoral Examination	
Subjects	Forest ecology Silviculture Professional debate on the researched topic 1 professional subject resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP
Specific requirements for DissT	
Minimum range	70 SP
Minimum number of citations	70; 70 % quotations must be included in scientific databases (e.g. WoS, Scopus) The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3

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Fire Protection of Forest, Timber and Wood-Based Materials

(code UIS - POLDE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLXX015Y Forest fire prevention DLZX025Y Theory of burning and fire dynamics	
Compulsory-optional professional subjects 2 subjects set by Departmental Board FFWS	DLZX029Y Effect of thermal stress on wood composition and properties DLZX027Y Fire safety practices for construction of woody buildings - Engineering approaches DLZX028Y Fire protection of wood-based materials DLXX016Y Modelling and preventive measures of disturbance in forests DLZX026Y Risks in technological systems DLZX030Y Selected chapters in materials physics and mechanics DLXX017Y Strategies of forest fire fighting	
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science DLHX041Y Statistical methods (<i>no later than the 3rd semester</i>)	
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity	
State Doctoral Examination		
Subjects	Professional debate on the researched topic Forest fire prevention Theory of burning and fire dynamics 1 professional subject resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP	
Specific requirements for DissT		
Minimum range	70 SP	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3
Minimum number of citations	100; 60 % quotations must be included in scientific databases (e.g. WoS, Scopus)	

Economics and Management of Forestry and Wood Industry

(code UIS - EMLDE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLRX021Y Forestry and Wood Processing Industry Management
Compulsory-optional professional subjects 1 subject set by Departmental Board FFWS	DLRX023Y Economics of Forest Management for doctoral studies DLRX022Y Economics of Wood Processing Enterprises
Optional professional subjects 2 subjects set by Departmental Board FFWS	DLRX030Y Communication in Forestry and Wood Industry DLRX024Y Environmental Economics DLRX028Y Environmental Policy DLRX025Y Forest and Wood Industry Sector Policy DLRX029Y Forestry and Wood Industry Bioeconomy DLRX026Y Marketing and trade in forestry DLRX031Y Socioeconomics Relations in Forestry and Wood Industry DLRX027Y Valuation of Renewable Natural Resources
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science DLHX041Y Statistical methods (no later than the 3rd semester)
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (every year) Publication activity
State Doctoral Examination	
Subjects	Professional debate on the researched topic Economics of forest management/Economics of wood processing enterprises Forestry and wood processing industry management 1 professional subject resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP
Specific requirements for DissT	
Minimum range	70 SP
Minimum number of citations	60
	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3

Wood Processing and Forest Machinery

(code UIS - ZDTLHE)

Subjects must be completed no later than 4th semester

Individual study plan

Compulsory professional subjects	DLTX009Y Forest Harvesting and Wood transport DLZX032Y Wood processing for doctoral studies
Optional professional subjects 2 subjects set by Departmental Board FFWS	DLZX044Y Biomass utilization DLZX042Y Buildings for forest functions fulfillment DLTX014Y Forest Opening-up DLZX037Y Furniture - construction and manufacturing DLZX036Y Chemistry of Wood and Biomaterials DLTX013Y Influence of Forestry Technologies on the Environment DLTX010Y Mechanization of Forestry Operations DLTX011Y Modelling of Forest Production Systems DLZX041Y Sawmill technology DLRX020Y Sectoral economics and enterprise management DLZX040Y Surface protection and gluing of wood DLTX012Y Theory of Machine Construction DLZX035Y Timber construction DLZX033Y Wood anatomy DLZX034Y Wood and Furniture Machines DLZX039Y Wood protection DLZX043Y Wood Science DLZX038Y Wood-based materials
Other compulsory subjects (in the 1st year)	DLXX001Y Academic writing DVPX01Y Didactical and presentation skills (only for full-time study) DLXX019Y Ethics in Scientific Work METVYZ002 Methodology of research DLXX002Y Communication and popularization of science DLHX041Y Statistical methods (<i>no later than the 3rd semester</i>)
Further obligations of the students (Article 2 Para 1)	METDISP002 Dissertation methodology (no later than 3 months from study enrollment) DLXX61Y Foreign internship DLXX014Y Literary search (at the end of 1st year of study) Presenting the results of their work (<i>every year</i>) Publication activity
State Doctoral Examination	
Subjects	Professional debate on the researched topic Forest harvesting and wood transport Wood processing 2 professional subjects resulting from the DissT topic - The SDE professional subjects do not have to be a part of the student's ISP
Specific requirements for DissT	
Minimum range	70 SP
Minimum number of citations	70
	The DissT may also have the form of a commented set of published articles, see Art. 2 Para 3