

1. Goal

1.1. The goal is to

- support doctoral students in setting and achieving their personal development goals both in their academic and non-academic career, ensuring equal, high-quality and motivating conditions for obtaining the knowledge and skills valued in knowledge-based society;
- allow more flexibility in the organisation of doctoral studies, i.e. increase the discretion of the faculty in activities where it is appropriate due to the specifics of the faculty and specialisations;
- consolidate activities that are overly fragmented in the faculty and managed with uneven quality.

1.2. Aspects that need improvement in the organisation of doctoral studies have been revealed by both studies as well as the quality assessments of curriculum groups (e.g., interim report of the assessment of doctoral studies by the Estonian Quality Agency for Higher and Vocational Education):

- untraditionally, the doctoral student is rather seen as a student, not as a starting researcher (small doctoral allowance, the largest known volume of compulsory studies, translating research into credit points and study load);
- doctoral studies prepare mostly for an academic career and not so much for a career outside the university, although a significant part of those who defend their PhD do not remain connected with the university or do so only partly (see figure on p 2);
- in some specialisations, the requirement of three publications does not allow defending the degree within the prescribed time.

Doctoral students at the UT as at 31 March 2018 including those working at the UT			Average number of years from starting studies in the study place until graduation, excl. as an external student					
			2013	2014	2015	2016	2017	
HUM	226	54 (24%)	HUM	6.1	5.4	7.0	6.2	6.6
SOC	221	73 (33%)	SOC	5.5	4.9	5.9	6.1	6.4
MED	225	74 (33%)	MED	4.9	5.5	5.9	7.0	5.2
NAT	501	185 (37%)	NAT	4.6	5.4	5.6	5.1	5.5
UT total	1,173	386 (33%)	UT total	5.1	5.3	5.9	5.6	5.7

1.3. To ensure a study and working environment required for the development of the doctoral student, we must prevent situations where

- the doctoral student cannot meet the doctoral thesis requirements in four years;
- the doctoral student does not need courses for the doctoral thesis, but the courses are compulsory;

The faculty's duty is to discuss the topics raised in the vision and suggest their preferred solution. Suggestions help to take the vision into more detail, get input for amendments to the Higher Education Act and update the Quality Agreement of Estonian Universities.

Groups of questions:

- 1) **Status and income of doctoral students** (section 2)
When giving doctoral students the status of an employee and ensuring their income, what should be considered to make the situation better, not worse? (see also annex 1)
- 2) **Curriculum and the volume of compulsory studies** (section 3)
Whether and how should the volume of compulsory studies be regulated in the curriculum?
What differentiates between curricula and how many curricula does the university need (see the proposal in annex 2)?
- 3) **Responsibility and discretion of different levels** (section 4)
How should the decision-making about the conditions and procedure of doctoral studies be divided between the institute, faculty and university level? (see also annex 3)
- 4) **Ensuring quality** (sections 6 and 7)
Is the system of doctoral students' progress reviews good enough or does it need changing, i.e. how should the reviews of junior research fellows take place? How is the high-quality supervision of all doctoral students ensured or how it will be? For instance, should it be compulsory for each doctoral student to have several supervisors?
- 5) **Funding model**
Which principles are important in funding doctoral studies – for instance, should the internal division of money be based on the same indicators that are used in funding the university?

- the drafting of the doctoral student's individual plan and the progress review are only formal activities;
- the doctoral student really does not get proper supervising, does not belong to any research group or young researchers' community and does not have a second supervisor or mentor to contact for support and advice;
- the doctoral student is in an unequal situation because the supervisor does not have money to support his or her studies and research.

2. Changing the status of doctoral students to junior research fellows

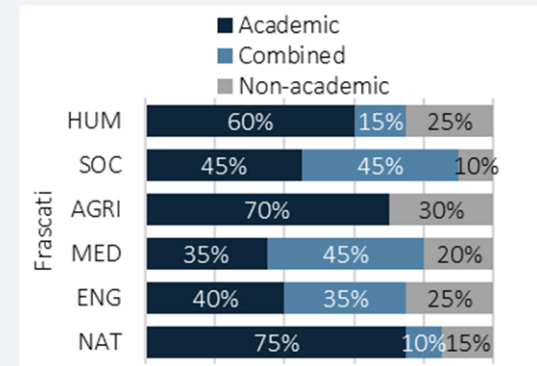
2.1. The draft Higher Education Act, pending in the Riigikogu (parliament) in autumn 2018, will retain the student status of a doctoral student, but allows linking the position of junior research fellow to being matriculated to doctoral studies:

- the university has the right to provide in its bylaws that only a person matriculated to doctoral studies meets the requirements for the position of junior research fellow;
- the university can terminate the employment contract of a junior research fellow upon the person deletion from the matriculation register of doctoral studies (both in the event of graduation or due to insufficient academic progress or other reasons);
- the university can establish the conditions and procedures for terminating the employment contract of a junior research fellow also at the end of the probationary period and, if the student so wishes, deleting him or her from the matriculation register.

2.2. The Ministry of Education and Research (MoER) has made a preliminary commitment to start compiling the new draft initiative with universities in 2019, intending to reform doctoral studies. The ideas proposed for discussion:

- replacing the doctoral student allowance with the salary of a junior research fellow, equal to the Estonian average salary, starting from the 2020/2021 admission. Upon admission to doctoral studies, the student must choose whether to conclude a fixed-term employment contract as a junior research fellow or not, preferring to be a doctoral student besides other duties outside the university. In the latter case, the doctoral student retains all the rights and obligations of a student, including the right to apply for scholarships (international, national and UT) to support his or her studies, but will not receive the national monthly doctoral allowance.
- cease the annual determining of the study load in doctoral studies and agree on the study load, which, in the case of junior research fellows, is the length of the fixed-term employment contract, upon the student's admission, leaving the opportunity to amend this agreement under the conditions and procedures set by the university.

Main career paths after PhD defence



See more in Kindsiko, E., Vadi, M., Täks, V., Loite, K., Kurri, K. (2017) [Eesti doktorite karjääritee ja seda mõjutavad tegurid](#)

- ✓ People take up doctoral studies for different reasons (straight after master's studies or later, i.e. non-linearly), which understandably leads to different expectations to the added value of doctoral studies.
- ✓ The later the person defends the doctoral degree, the shorter the academic career.
- ✓ Those who work outside the university during their doctoral studies will most likely continue non-academic career, and those who have an employment relationship with the university already during their studies will rather opt for the academic career.
- ✓ Companies that have hired PhD-holders in the past will most likely do that in the future.

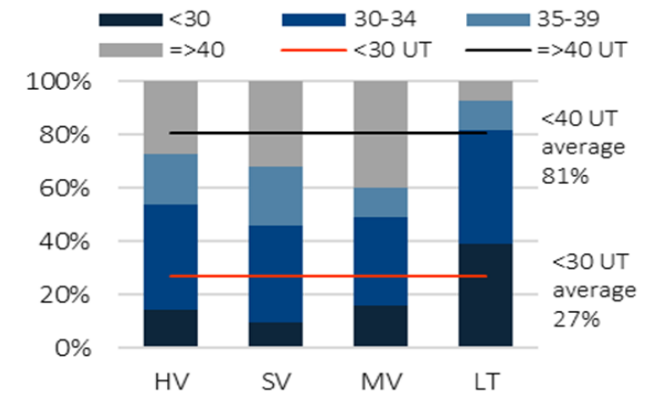
See more [Vadi, Kindsiko, Alas, 2015](#)

[ScienceDirect PhD students mental health](#)

2.3. Recruitment of doctoral students as junior research fellows can start only if the government is prepared to initiate amendments to the Higher Education Act and the Study Allowances and Study Loans Act, i.e.

- replace the doctoral student allowance with the salary of a junior research fellow, i.e. end the situation where a doctoral student working as a junior research fellow is also entitled to the doctoral allowance;
- provide for the allocation of additional funds from the state budget for the transition from the doctoral student allowance to the salary of junior research fellows.

2.4. The salary fund of junior research fellows formed instead of the doctoral allowance fund could become part of the basic funding of the university with the right to use basic funding to cover other expenses of the research group when paying the salary of the junior research fellows from project-based sources.



Average age distribution of UT students defending their PhD in 2013–2017

3. Curricula and the volume of studies

3.1. The goal is to:

- significantly reduce the volume of compulsory studies by treating a doctoral student as a starting researcher rather than a student studying on a curriculum;
- pay greater attention to the development of transferable skills in all activities, not just in courses;
- plan the curricula as much as necessary and as little as possible by prioritising research specialisations instead of the curriculum.

3.2. The ideas proposed for discussion in the coordination of the draft Higher Education Act:

- To regulate doctoral studies differently from the first and second level of studies to make doctoral studies more flexible, more based on the individual study plan.
- To waive the obligation to measure the entire doctoral studies, i.e. also the research, development and professional creative activities in addition to studies, in credit points. This would allow implementing a differently planned curriculum and to assess doctoral students similarly to employees, based on the fulfilment of the individual study plan.

3.3. Possible options for the definition of the curriculum and the setting of mandatory conditions

- CURRICULUM WITH FLEXIBLE COURSE VOLUME: only the mandatory volume of transferable skills training (12 ECTS) has been imposed on curricula; if desired, compulsory courses may be prescribed in the curriculum or specialisation, but above all, the choice of courses depends on the knowledge, skills and (career) preferences of the doctoral student; the choice of courses is agreed upon in the individual study plan, the compilation of which is supported by an introductory doctoral course;
- DIFFERENTLY PLANNED CURRICULUM: the doctoral programme consists of compulsory activities to be completed by a certain date: e.g. the student has completed the introductory course of doctoral studies and drawn up a study plan, participated in at least five research seminars or lectures by visiting lecturers during studies, taken at least 12 ECTS of transferable skills training, made a presentation in at least one international seminar, supervised at least one student or taught students in the volume of 2 ECTS, been involved in at least two science popularisation activities, presented an annual review of the progress of his or her research to the evaluation committee, submitted a doctoral dissertation meeting the requirements in force in the given specialisation for defence.

3.4. Based on the current classification, the number of curricula can be cut down to eight. If we want to have four faculty-based curricula (with approved specialisations), we must reach an agreement with the MoER and other universities to classify doctoral students not based on curricula but on the names of academic degrees (specialisations). To this end, the names of the specialisations must be reviewed. There are currently 73 names of specialisations used at the University of Tartu. See also the overview and proposal in Annex 2.

UT good practice of doctoral studies

The university must decide whether to continue the aim to provide the doctoral student mostly with

- ✓ the ability to do scientific research;
- ✓ teaching and supervising skills;
- ✓ management, teamwork and project-writing skills (incl. grant applications);
- ✓ the experience of popularising one's specialisation;
- ✓ knowledge of intellectual property protection;
- ✓ the ability to write a scientific article.

Universities Estonia will renew the [Quality Agreement of Estonian Universities](#) at the beginning of 2019. In the course of this process, also the agreed requirements for doctoral theses will be reviewed.

Examples of differently planned curricula:
[KU Leuven](#) and [Ghent University](#)

The most general possible classification of UT curricula (ISCED-F 2013)

1. education
2. arts and humanities
3. social sciences, journalism and information
4. business, administration and law
5. natural sciences, mathematics and statistics
6. ICT
7. engineering, manufacturing and construction
8. health and welfare

4. Four faculty-based centres for doctoral studies

4.1. The goal is to:

- ensure an integrated organisation of studies, counselling and other support services of uniform quality throughout the faculty;
- give the faculties more freedom to decide on the conditions and requirements for doctoral studies;
- support the development of transferable skills and increase the participation of doctoral students in activities targeted at them.

4.2. A centre for doctoral studies is a faculty-based support unit for the administration of doctoral studies. The tasks of the centre may vary from one faculty to another, i.e. the faculty is free to decide which tasks are to be performed by the faculty's centre and which are decided by the faculty council, and which will remain to be decided by the council of the faculty or institute, the dean or the head of the institute. The overall distribution of responsibilities in the organisation of doctoral studies is as follows:

- the institute is responsible for the efficiency of defending doctoral degrees and the quality of doctoral degrees;
- the faculty is responsible for the general organisation of doctoral studies, the content of courses and the quality of support services (i.e. also for asking feedback from doctoral students and taking it into account).

4.3. Faculty-based centres for doctoral studies cooperate in offering courses and organising events by creating a shared training calendar and indicating courses suitable for students from different centres/faculties (see [the example](#)). Also, university-wide electives are offered in cooperation between centres for doctoral studies.

4.4. The model for financing doctoral studies within the university must also be reviewed and updated when creating the centres and waiving the conversion of research activities into credit points.

5. Doctoral studies in cooperation with a company or institution

5.1. The implementation of the form of doctoral studies supervised in cooperation with a company or public-sector institution requires institute-level partnership with enterprises or institutions in the form of a research and development contract or an ongoing joint project. In such cooperation, the doctoral student's research should be aimed at solving a problem or supporting the development of the company or institution.

5.2. The doctoral student may work at the supervising organisation or stay at the company/institution for just one semester (short-term mobility).

5.3. The company or institution must appoint a co-supervisor or consultant responsible for the fulfilment of the goals of the research and development work of the doctoral student. The co-supervisor must have a doctoral degree or equivalent qualification; the consultant does not.

Experience shared at the [Workshop on doctoral studies](#):

- ✓ Doctoral schools commission and offer courses and doctoral students choose courses **based on the competences** that a junior research fellow is expected to acquire.

Example 1: [phdcompetencemodel.nl](#)



Example 2: [Vitae researcher development framework](#)

- ✓ Doctoral schools help to pay more attention to **career counselling**.
Example: [10 career paths for PhDs](#)
- ✓ The EU Structural Funds finance a total of **13 doctoral school projects** in Estonia (2014–2020). The mid-term evaluation of the projects will take place in 2019. Universities must decide how to organise the activities of doctoral schools in the future according to changes in doctoral studies.

5.4. The proposal is not to differentiate the name of an academic degree awarded to a doctoral student who has been supervised in cooperation with a company or public-sector institution (i.e. the title will simply be “PhD”, not “industry PhD” or similar).

6. Supervision

6.1. The goal is to

- ensure high-quality supervision for each doctoral student;
- support the development of supervising skills;
- relieve supervisors from dealing with issues of general nature and counselling, for which online guidelines and services of centres for doctoral studies targeted at all doctoral students can be improved.

6.2. The proposal is to establish a common practice as a general requirement or recommendation that all doctoral students have two supervisors at the university. An alternative solution, though difficult to achieve, would be to ask the faculty councils to determine the conditions for deciding whether an additional supervisor must be appointed to a doctoral student.

6.3. To the work plan of supervisors of doctoral students (required by the senate regulation from 2019), as the basis of their performance assessment and promotion, the head of institute can include the obligation of self-improvement of supervision skills. Opportunities for self-improvement would be mediated by the centre for doctoral studies and the head of the centre may be given the right to make reasoned proposals to impose the obligation of self-improvement on supervisors.

6.4. External evaluators of doctoral studies have recommended drawing up a practical handbook for doctoral studies, including guidelines for supervisors. Examples: [KU Leuven roadmap ta a PhD](#), [KU Leuven practical guide for supervisor](#).

7. Monitoring and supporting progress

7.1. The goal is to

- provide for the individual plan as the basis for studies, the fulfilment of which will be assessed in the progress review;
- create a tool in the SIS to help the doctoral student fulfil the individual plan and the university to evaluate and support the student’s progress;
- take into account the feedback of doctoral students in improving study and working conditions and the quality of doctoral studies.

7.2. The mandatory condition is that the draft of the thesis project has been prepared at the beginning of the studies, confirmed to meet the requirements and be feasible within the agreed time (within the length of the employment contract of junior research fellow).

✓ *Example (Radboud University):*
*In addition to a bilateral PhD supervisor, each PhD candidate **must have a second staff member as a supervisor**, who is very well versed in the research topic. The bilateral PhD supervisor and other supervisors have two roles in relation to the PhD candidate: (a) as academic assessor and (b) as mentor/coach. The first role is primarily aimed at offering feedback on the required quality of a dissertation, while the second role is more focused on the PhD candidate’s own personal development.*

Impact of progress review. 2,754 doctoral students were matriculated to the UT in 2005–2016.

✓ As at November 2017, **8,195 progress review decisions** had been made, including 55 (0.7%) negative and 107 (1.3%) unassessed decisions.

✓ More than 60% of those who went on academic leave less than one month before their first planned progress review have interrupted their studies.

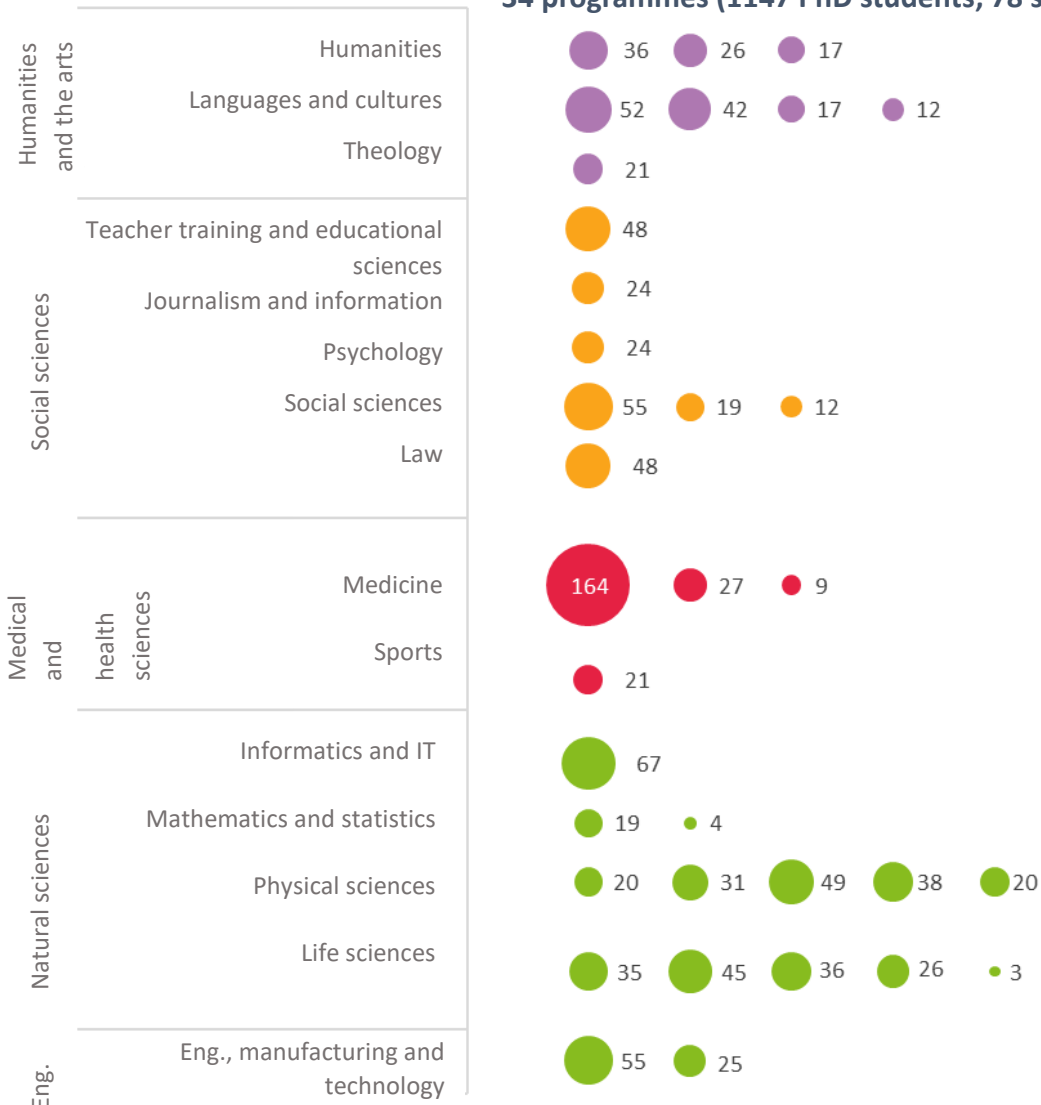
✓ Fewer than 10% of those who went on academic leave less than one month before their first planned progress review have defended their degree (incl. as an external student).

- 7.3. Monitoring and supporting the progress of doctoral students does not need to be the same kind of progress review throughout four years if the law no longer requires the full- and part-time study load to be determined.
- 7.4. Each doctoral student has 48 months for studies. Under the Employment Contracts Act, taking academic leave does not automatically change the duration of a fixed-term employment contract, but the university can formulate the conditions when the employment contract may be suspended by mutual agreement (e.g. parental leave).
- In the case of a doctoral student working under a junior research fellow's employment contract, the agreed period of studies can be extended (which may mean concluding a second fixed-term employment contract) with the consent of the head of institute.
 - The current conditions for calculating the standard period of studies (the right to study part time, take academic leave and get an extension year) will remain in force for doctoral students who do not have a junior research fellow's employment contract (and do not get national allowance).

ANNEX 1. DOCTORAL CURRICULA / DOCTORAL PROGRAMMES

CURRENT SITUATION:

34 programmes (1147 PhD students, 78 specialities)



STARTING FROM 2022:

8 programmes (50 specialities)



FIELD OF RESEARCH, basis for research evaluation (Frascati classification)

STUDY PROGRAMME GROUP, university's area of responsibility

PhD PROGRAMME includes specialities

SPECIALITY is given on the diploma

ANNEX 2. REDUCING THE NUMBER OF DOCTORAL CURRICULA: ISSUES TO DECIDE AND SOLUTIONS

1. **MANAGING OF CURRICULA.** According to the [Statutes of Curriculum](#), the management of a curriculum can be assigned to a faculty or institutes. Although under the current statutes, several institutes can manage a curriculum, one of whom being the coordinating manager, the proposal is to use two options in doctoral studies: the manager of the curriculum is either a faculty (when the curriculum transcends the boundaries of institutes) or, if the faculty council prefers otherwise, an institute (if the curriculum coincides the sphere of responsibility of the institute). It should be agreed whether a curriculum has one programme council or the programme-based curriculum management should be slightly changed in doctoral studies.
2. **SPECIALISATIONS.** When reducing the number of curricula, the term 'specialisation' should be taken into use in the Statutes of Curriculum. The specialisation can be used when distributing student places¹, appointing the councils awarding doctorates, forming progress review committees and RPL committees, appointing supervisors and approving research topics, etc.
3. **CHANGING OF CURRICULA.** According to the current statutes, making changes in the curricula, incl. adding or changing specialisations, is in the competence of the senate. When applying the model of faculty-based centres for doctoral studies, it should be decided which changes in a doctoral curriculum are decided by the senate and which ones by the faculty council. The senate will continue to decide the opening and closing of curricula.
4. **NAME OF THE AWARDED DEGREE.** In Estonia, one name of the degree is used: Doctor of Philosophy, PhD. The diploma will include the following information about the degree: the name of the awarded academic degree and its equivalent in English. The name of the completed curriculum or specialisation under the curriculum (in the nominative case) may be added in brackets to the name of the doctoral degree. Therefore, specialisations could be added to the name of the degree in brackets.
5. **CLASSIFICATION OF CURRICULA.** Curricula are classified according to the international standard classification of education ISCED-F 2013. To reduce the number of curricula, it is necessary to reach an agreement with the Ministry of Education and Research and other universities (to enable by legislation) to classify doctoral curricula, if necessary, not under a specific curriculum group but an interdisciplinary field of study (see [ISCED-F-2013](#), pp 53–56).
6. **LANGUAGE OF INSTRUCTION.** Doctoral curricula are currently taught in Estonian and English or in Estonian and Russian. Based on the statutes of the diploma and diploma supplement, approved by a national regulation, only the language of instruction of the curriculum is included in the diploma supplement, while other languages required to achieve the learning outcomes are not. In the future, the language of instruction may be approved based on specialisations.
7. **COUNCILS AWARDED DOCTORATES.** According to current bylaws, the senate appoints the council that awards doctoral degrees at the time of opening or changing the curriculum. Based on the Procedure for Awarding Doctorates, the right to award a doctoral degree may be granted to the faculty council, the institute council, a joint council of multiple faculties and/or institutes, or a joint council of higher educational institutions. So far, the principle has been in place that there is one such council for a curriculum. It needs to be decided whether a curriculum may have several degree-awarding councils in the future. In that case, the councils would be formed based on specialisations (separately, if necessary, by groups of specialisations, if possible).
8. **ADMISSION MANAGEMENT.** Under the current procedure, one or more competitions are announced for a curriculum based on the research projects or research topics approved by the dean. If desired, the university could take up the specialisation-based competition.
9. **APPROVAL OF SUPERVISORS AND TOPICS.** Based on the current Study Regulations, the supervisor and the topic of the thesis are approved by the faculty council or, by the decision of the faculty council, the council of the institute that manages the curriculum. If the management of the curriculum will remain with the faculty council (or centre for doctoral studies of the faculty), it may be necessary to amend the current regulations so that the faculty council could authorise an institute to approve the supervisor and the topic on other bases besides management. Currently, the faculty councils have actively used the opportunity to authorise the institutes managing the curriculum to approve supervisors and topics.

¹ The distribution of student places by specialisations does not mean that the positions of junior research fellows should be announced by the name of the specialisation.

10. FORMING OF PROGRESS REVIEW AND RPL COMMITTEES. If a curriculum is managed on the faculty level, it is necessary to decide the basis for forming the review committees and RPL committees. For example, whether there are units in charge of the specialisations (“holders of specialisation”).
11. MATRICULATION. The directive for matriculating a doctoral student indicates the institute in which the student starts doctoral studies. Generally, the institute also makes an employment contract for the position of junior research fellow with the doctoral student.